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## 2017-2018 Bulletin

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## UNDERGRADUATE CATALOG

The character of the University of Dayton is defined by our search for knowledge. Knowledge that changes the way we perceive the world. Knowledge that solves problems and helps make our lives better. Knowledge that creates a more humane and compassionate future for all of us.

Whether you're investing \$23 million of the University's endowment or assisting with research that makes space exploration safer, the University of Dayton's academic programs encourage you to engage the world, developing a critical mind and a compassionate heart.

In the undergraduate academic information section, you can continue your search for knowledge - and locate specifics on various academic areas and the programs and courses they offer.

## GENERAL INFORMATION

There is more to your academic experiences than just the classes you take. The University is known for its innovative approach to blurring the lines between learning and living to create a vibrant, engaging community dedicated to moving the world forward.

Whether you are looking to learn more about admission, student services, student costs and finances or other facets of life that support your academic career, you will find the answers here.

## Academic InformationUndergraduate

The academic requirements and regulations described in this section are those of the University which, unless otherwise noted, take precedence over all others and apply to all undergraduate students. The student is expected to assume full responsibility for knowing and following all pertinent regulations and procedures as set forth in this Catalog and for meeting the standards and requirements expressed herein.

## Academic Honor Code

## The Academic Honor Code

## I. Introduction

As a Marianist, Catholic university committed to the education of the whole person, the University of Dayton expects all members of the academic community to strive for excellence in scholarship and in character. As stated in the University's Student Handbook, "The University of Dayton expects its faculty and administration to be instrumental in creating an environment in which its students can develop personal integrity."

To uphold this tradition, the University community has established an academic honor code for all of its students, except Law students who are governed by the University of Dayton School of Law Honor Code. Students are expected to be aware of and abide by the honor codes.

## II. The Honor Pledge

The University of Dayton Academic Honor Code: A Commitment to Academic Integrity

I understand that as a student of the University of Dayton, I am a member of our academic and social community,
I recognize the importance of my education and the value of experiencing life in such an integrated community,
I believe that the value of my education and degree is critically dependent upon the academic integrity of the University community, and so

In order to maintain our academic integrity, I pledge to:

- Complete all assignments and examinations according to the guidelines provided to me by my instructors,*
- Avoid plagiarism and any other form of misrepresenting someone else's work as my own,

[^0]In doing this, I hold myself and my community to a higher standard of excellence, and set an example for my peers to follow.

Instructors shall make known, within the course syllabus, the expectations for completing assignments and examinations at the beginning of each semester. Instructors shall discuss these expectations with students in a manner appropriate for each course.

* The term instructor may refer to any faculty or staff member.


## III. Standards of Conduct

Regardless of motive, student conduct that is academically dishonest, evidences lack of academic integrity or trustworthiness, or unfairly impinges upon the intellectual rights and privileges of others is prohibited. A non-exhaustive list of prohibited conduct includes:

## A. Cheating on Exams or Other Assignments

Cheating on examinations consists of willfully copying or attempting to consult a notebook, textbook, or any other source of information not authorized by the instructor; willfully aiding, receiving aid, or attempting to aid or receive aid from another student during an examination; obtaining or attempting to obtain copies of any part of an examination (without permission of the instructor) before it is given; having another person take the exam; or any act which violates or attempts to violate the stated conditions of an examination. Cheating on an assignment consists of willfully copying or attempting to copy all or part of another student's assignment or having someone else complete the assignment when class assignments are such that students are expected to complete the assignment on their own. It is the responsibility of the student to consult with the instructor concerning what constitutes permissible collaboration and what materials are allowed to be consulted.

## B. Committing Plagiarism or Using False Citations

Plagiarism consists of quoting or copying directly from any source of material without appropriately citing the source and identifying the quoted material; knowingly citing an incorrect or fabricated source; or using ideas (i.e. material other than information that is common knowledge) from any source of material without citing the source and identifying the borrowed material. Students are responsible for educating themselves as to the proper mode of attributing credit in any course or field. Instructors may use various methods to assess the originality of students' work, such as plagiarism detection software.

## C. Submitting Work for Multiple Purposes

Students are not permitted to submit their own or other's work (in identical or similar form) for multiple purposes without the prior and explicit approval in writing of all instructors to whom the work will be submitted. This includes work first produced in connection with classes at the University of Dayton as well as other institutions attended by the student or at places of employment.

## D. Submitting False Data or Deceptive Information

The submission of false data is a form of academic fraud. False data is that which has been fabricated, altered, or contrived in such a way as to be deliberately misleading or to fit expected results. Deception is defined as any dishonest attempt to avoid taking examinations or submitting assignments at the scheduled times by means such as a forged medical certification of absence. Deception also includes falsifying class attendance records or failing to reveal that someone
falsified your attendance. Extenuating circumstances such as a personal illness, death in the family, etc. must be negotiated with the instructor.

## E. Falsifying Academic Documentation or Grade Alteration

Any attempt to forge or alter academic documentation (including transcripts, letters of recommendation, certificates of enrollment or good standing, and registration forms) concerning oneself or others also constitutes academic fraud. Grade alteration consists of an act which dishonestly modifies a grade obtained for a class assignment, examination, or for the course itself.

## F. Abuse of Library Privileges or Shared Electronic Media

All attempts to deprive others of equal access to any library materials constitute a violation of academic integrity. This includes the sequestering of library materials for the use of an individual or group; a willful or repeated failure to respond to recall notices; and the removal or attempt to remove library materials from any University library without authorization. Defacing, theft, or destruction of books, articles or any other library materials that serve to deprive others of equal access to these materials also constitute a violation of academic integrity. Malicious actions that deprive others of equal access to shared electronic media used for academic purposes constitute a violation of the Honor Code. This includes efforts that result in the damage or sabotage of campus computer systems.

## G. Encouragement or Tolerance of Academic Dishonesty

The quality of campus and community life is dependent upon the commitment of each member of the University to a shared set of behavioral standards and values. Adhering to the Academic Honor Code is not limited to direct actions, but also includes any behavior that supports, encourages, or tolerates academic dishonesty.

## IV. Student Status with Respect to the Academic Honor Code

A. All University of Dayton students, except for Law students who are governed by the University of Dayton School of Law Honor Code, are subject to the Standards of Conduct and procedures of the Academic Honor Code. Note: the following procedures, in Sections IV through VI, apply to the academic honor code and not to "standards of behavior" that are outlined in the University of Dayton Student Handbook.
B. Appropriate consequences for individual academic honor code violations are determined by the course instructor. Normally the maximum consequence identified by the instructor is an $F$ in the course with no provision for a student to receive a W. However, the instructor may identify a lesser consequence when appropriate. The dean of the student's unit may also identify additional consequences. In some circumstances, such as multiple or egregious violations, these additional consequences may include dismissal from the University (see Section V.B).
C. The course instructor will investigate and determine appropriate action for all suspected violations of the academic honor code independent of the time frame in which the suspected violation is identified. Violations identified after a student has withdrawn from or completed the course, after the student leaves the university, or after the student has graduated, will be investigated and appropriate consequences identified and implemented according to the procedure identified for all academic honor code violations. Such consequences may result in the change of a grade or the revocation of a degree or certificate.

## V. Procedure When an Honor Code Violation is Suspected

A. Instructors are required to investigate all suspected violations of academic dishonesty and report all those confirmed to have occurred using the following procedure.

- Initial Notification: Within 10 business days of becoming aware of a possible honor code violation, the instructor will notify the student of the incident via university e-mail and, if possible, in person. The instructor will disclose to the student the requirement of attending a "student meeting" to maintain access to the appeal process.
- Honor Code Violation Incident Report: The instructor will prepare the Honor Code Violation Incident Report describing the incident and the identified consequences in advance of the student meeting. If a student meeting occurs, the report will be shared with the student during the meeting. The student will sign the report in acknowledgement of the report. The student's signature on the report does not represent his/her acceptance of responsibility for the incident, nor does it limit the student's access to the appeal process described in Section VI.
- Student Meeting: The instructor will make a reasonable effort to meet with the student within 5 business days of the initial notification to discuss the situation. If the instructor determines that no honor code violation has occurred, then no further action is taken, and the incident report is discarded. If the instructor determines a violation has occurred, he/she will identify and discuss with the student an appropriate consequence. If the instructor's reasonable efforts fail to result in a student meeting, the instructor will proceed as though a violation did occur.
- Within five business days of the student meeting, or within five business days of the initial notification in the absence of a student meeting, the instructor will forward the Incident Report to the office of the student's dean and send a copy to the chair/program director of the department/program in which the incident took place.
B. Dean's offices are required to review and maintain records of all received Incident Report Forms for academic honor code violations.
- Incident Review: The student's dean's office will review the incident report and any previous violations of the honor code by the student. Appropriate additional consequences, if any, will be identified. In some circumstances, such as multiple or egregious violations, these additional consequences may include dismissal from the University.
- Filing Date: Within five days of receipt of the incident report, the dean's office will notify the student of the filing, any additional consequences, and the details of the appeal process.
- Maintaining Incident Reports: The student's dean's office(s) will maintain a copy of the incident report as part of the student's academic record. Should the student transfer between units, the student's entire academic record, including the incident report will be transferred between the units involved. Disclosure of the existence and content of the report to any internal or external party shall be controlled by the respective dean's office and governed by applicable University policy on disclosure of student academic records.


## VI. Appeal Procedures

A student may appeal the filing of an Honor Code Violation Incident Report and/or any consequences identified by the instructor. The absence of the initiation of, or continuation of, an appeal within identified time frames will be interpreted as the student's acceptance of responsibility for the Academic Honor Code violation and acceptance of
the identified consequences. The student must adhere to the steps and timelines of the appeal procedure.
A. The student's first level of appeal is with the instructor during the student meeting. If the student fails to participate in a student meeting within five business days of the initial notification, no further appeal will be available.
B. If the student meeting results in the filing of an incident report, the student may appeal the action and/or the identified consequences to the chair/program director of the department of the course in which the incident occurred within 10 business days of the Filing Date. (Note: in the event that the department chair/program director, or any other faculty member participating in the appeal process, is also the instructor of the course in question, appropriate arrangements should be made to replace that person during the appeal process.)

- The student must submit a written account of the incident details and an explanation of his/her reasons for an appeal. The student may include written statements from any person relevant to the incident.
- The chair/program director will use reasonable means, including meeting with the instructor and student, to reach an appeal decision within thirty calendar days of the student's written appeal.
- The chair/program director will communicate her/his decision to the student in writing, and send a copy of the decision to the instructor and the student's dean's office.
C. The student or instructor may appeal, in writing, the decision of the chair/program director within ten business days of receiving the written decision.
- The chair/program director will form a department academic misconduct review committee composed of at least two full-time faculty (preferably tenured faculty) and one student. Undergraduates should serve on department misconduct review committees in cases of suspected undergraduate violations, and graduate students should serve in cases of suspected graduate student violations. Students should also note that "department grade appeals" committees should not be used in cases in which grades have been lowered because of academic misconduct.
- The chair/program director will provide a copy of the incident report to the department academic misconduct review committee, and the committee will use reasonable means, including meeting with the instructor and student, to reach an appeal decision.
- The department misconduct review committee will make known its decisions and the reason for its decision in writing to the student, instructor, department chair/program director, and the student's dean's office within thirty calendar days of the student's or instructor's written appeal.
D. The student or instructor may appeal, in writing, the decision of the department review committee to the dean's office of the unit in which the incident occurred within 10 business days of receiving the written decision from the department misconduct review committee.
- The dean's office will obtain a copy of the incident report, as well as the report of the department misconduct review committee, from the department chair/program director of the department in which the incident occurred.
- The dean's office will obtain additional information, as needed, to evaluate the appeal.
- The dean's office will make known its recommendations and the reasons for its recommendations in writing to the student, instructor,
department chair/program director, and the student's dean's office within thirty calendar days of the written appeal.
E. A student may appeal any additional consequences identified by the student's dean's office. The absence of the initiation of, or continuation of, an appeal within identified time frames will be interpreted as the student's acceptance of the identified consequences. The student must adhere to the steps and timelines of the appeal procedure.
- Any appeal of the filing of the incident report and/or instructoridentified consequences must be resolved prior to the initiation of an appeal of any additional consequences from the dean's office.
- The student may initiate an appeal of additional consequences from the dean's office, including dismissal from the university, by meeting with a representative of the dean's office within five business days of the filing date of the incident report or, in situations in which an appeal of the incident report and/or instructor-identified consequences has occurred, within five business days of the final decision on the initial appeal. During the meeting, the student and dean's office representative will discuss the reasons for the identified consequences and the student's concerns.
F. If the student is not satisfied with the results of the meeting with the dean's office representative, a final appeal may be made, in writing, to the Provost within ten business days after the meeting. The Provost must make known his or her decision in writing, to the student, and the student's dean's office, within thirty calendar days. The final authority rests with the Provost.


## Academic Standing

The student's academic standing is determined by the cumulative gradepoint average at the end of each term.

1. To be in good academic standing, a student must have a cumulative grade-point average of (a) at least 1.7 at the end of the first and second terms, (b) at least 1.8 at the end of the third term, (c) at least 1.9 at the end of the fourth term, and (d) at least 2.0 at the end of the fifth and succeeding terms. For part-time and transfer students, a block of 12 semester hours of credit is considered one term. A cumulative grade-point average of at least 2.0 is required for graduation. A 2.0 grade-point average in a student's major and minor is also required for graduation.
2. A cumulative grade-point average below the one required will place the student on academic probation. The student's academic dean will notify the student of his or her probationary status. A student on probation must follow a restricted academic program not to exceed 15 semester hours.
3. It is the responsibility of any student on academic probation to complete a contract with the dean for the purpose of determining the nature and limitations of the student's future academic and extracurricular activities.
4. Students whose academic performance has seriously impaired their ability to succeed academically at the University of Dayton are subject to dismissal. A student who is subject to academic dismissal can be dismissed only by his or her academic dean, who authorizes the dismissal and notifies the student of his or her status. Students who are subject to dismissal include (a) those who fail to achieve good standing at the end of a term on probation and (b) those who have a term point average of less than 1.0, regardless of cumulative grade-point average.
5. The Registrar will post "Academic Dismissal" on the permanent record of any student who is dismissed.

## Awards

Special awards for exceptional scholastic achievement are given annually through the generosity of donors. To be eligible for any of these awards, a student must have a cumulative grade point average of at least 3.0. The awards:

Accounting - Award of Excellence to the Outstanding Senior in Accounting - donated by Jerome E. Westendorf ' 43 and Warren A. Kappeler '41.

Accounting - Award of Merit in Recognition of Outstanding Achievement - donated by The Ohio Society of Certified Public Accountants, Dayton Chapter.

Accounting - Accounting Career Award to a Student Exhibiting Great Potential in the Accounting Profession - donated by the Institute of Management Accountants, Dayton Chapter.

Accounting - The Clark - Eley - Fioriti Award for Outstanding Service to the Department of Accounting - donated by the alumni and faculty of the department of accounting.

Accounting - The Federation of Schools of Accountancy Student Achievement Award in Recognition of Superior Academic Achievement, Leadership and Professionalism in Post-Baccalaureate Accounting Education.

Anthropology - The Margaret Mary Emonds Huth Memorial Award of Excellence to the Outstanding Senior in Anthropology - donated by Dr. Edward A. Huth.

Arts and Sciences - International Learn, Lead and Serve Award - donated in honor of Steven C. Buck, 2003.

Arts and Sciences - The Dean Leonard A. Mann, S.M., Award of Excellence to the Outstanding Senior in the College of Arts and Sciences - donated by Joseph Zusman '65.

Athletics - The Reverend Charles L. Collins, S.M., Award of Excellence to an Athlete for Outstanding Citizenship - donated by Joseph Zusman '65.

Athletics - The Charles R. Kendall ' 29 Memorial Award of Excellence for Achievement in Academic and Athletic Effort - donated by Mrs. Charles R. Kendall and friends.

Athletics - The John L. Macbeth Memorial Award to the Outstanding Scholar-Athlete in Football and Basketball. The recipient must have completed five or more terms and won a varsity letter.

Athletics - The Ann E. Meyers Award of Excellence for Achievement in Academic and Athletic Effort in Women's Basketball and Volleyball.

Biology - The P.K. Bajpai Undergraduate Research Award to the
Undergraduate Student Who Best Represents the Spirit of Undergraduate Research in Biology.

Biology - The John J. Comer Biomedical Undergraduate Research Award to the Undergraduate Student Who Best Demonstrated Research Excellence in Biomedical Science as a Biology Major.

Biology - The John J. Comer Ecological Undergraduate Research Award to the Undergraduate Student Who Best Demonstrated Research Excellence in Ecology as a Biology Major.

Biology - The John E. Dlugos Jr. Memorial Award of Excellence to the Outstanding Senior Majoring in Biology - donated by Mr. and Mrs. John E. Dlugos.

Biology - The Brother Russell A. Joly, S.M., Award of Excellence to the Student Who Best Combines Excellence in Biology and Genuine Appreciation of Nature.

Biology - Learn, Lead and Serve Undergraduate Award of Excellence to the Biology Undergraduate Student Who Completed an Outstanding Experiential Learning Project, which included both Leadership and Service.

Business Administration - Business and Marianist Values Integrated Learning and Living Community Award - to a senior who has made significant contributions to the success of the ILLC.

Business Administration - The Dick Flaute Award for Exceptional Service, Recognizing Exemplary Service by a Graduating Student in a Flyer Enterprises Activity.

Business Administration - The Sam Gould Award for Leadership Excellence, Recognizing Outstanding Leadership by a Graduating Senior in a Flyer Enterprises Management Position.

Business Administration - Outstanding Peer Adviser Award.
Business Administration - The Miriam Rosenthal Award of Excellence to a Graduating Senior in the School of Business Administration - donated by Dean William J. Hoben.

Business Administration - The Mark T. Schneider Award to a Senior in the School of Business Administration Who Has Combined Academic Excellence with Service to the University and the Community - donated by family and friends in his memory.

Campus Ministry - The Nancy Bramlage Award, presented by Campus Ministry's Center for Social Concern, to a Deserving Student or Student Group that have most Effectively used Nonviolent Direct Action to Work for Change.

Campus Ministry - Marianist Award for Voluntary Service to a Graduating Senior Who Has Earned Distinction through Voluntary Service to the Community - donated by the Marianists of the University of Dayton.

Campus Ministry - The Brother Wottle Campus Ministry Award: "An Award of Appreciation for Service to Campus Ministry."

Chemical and Materials Engineering - The Victor Emanuel '15 Award of Excellence to the Outstanding Senior in Chemical Engineering sponsored by the University of Dayton Alumni Association since 1962.

Chemical and Materials Engineering - The Raymond L. Fitz Sr. Memorial Award of Excellence to the Outstanding Sophomore in Chemical Engineering.

Chemical and Materials Engineering - The Edmund J. Rolinski Memorial Award of Excellence to the Outstanding Senior in Leadership and Service.

Chemical and Materials Engineering - The Robert G. Schenck Memorial Award of Excellence to the Outstanding Junior in Chemical Engineering donated by Stanley L. Lopata.

Chemistry - American Chemical Society Analytical Award.
Chemistry - American Chemical Society Award: Patterson College Chemistry Award.

Chemistry - American Chemical Society, Division of Organic Chemistry Award to a Senior Student.

Chemistry - American Institute of Chemists Award.
Chemistry - CRC PRESS Freshman Chemistry Achievement Award to a Deserving First-Year Student Majoring in Chemistry.

Chemistry- Chemistry Faculty Research Award.
Chemistry - The Brother George J. Geisler, S.M., Award of Excellence to the Outstanding Student in Chemistry - donated by Joseph Poelking '32.

Chemistry - The Arlo D. Harris Assistance Fund to a Deserving Student Majoring in Chemistry.

Chemistry - The Bernard J. Katchman Memorial Scholarship/Carl I. Michaelis Scholarship Award to an Entering First-Year Student Majoring in Chemistry.

Chemistry - The Brother John J. Lucier, S.M., Award of Excellence to the Outstanding Junior Majoring in Chemistry - donated by a friend.

Chemistry - The Brother John Lucier, S.M., Summer Research Award.
Chemistry - The Magotti Award for Summer Research.
Chemistry - The Carl I. Michaelis Scholarship Award to a Deserving Junior or Senior Majoring in Chemistry.

Chemistry - The Charles Pedersen Award for Summer Research.
Chemistry - Polymer Education Committee Award for Outstanding Performance in Organic Chemistry.

Chemistry - The Philip Zaidain Memorial Award to a Deserving Student Majoring in Chemistry.

Chemistry- The Verhoff Award for Summer Research.
Civil and Environmental Engineering and Engineering Mechanics - The George A. Barrett '28 Award of Excellence to the Outstanding Junior in Civil Engineering - donated by family and friends in his memory.

Civil and Environmental Engineering and Engineering Mechanics - The Harry F. Finke, 1902, Award of Excellence to the Outstanding Senior in Civil Engineering - sponsored by the University of Dayton Alumni Association since 1962.

Communication - The Joan M. Broskey Memorial Award for Outstanding Academic and Professional Achievements in Public Relations.

Communication - Faculty Award for Academic Excellence to the Senior with the Highest Cumulative and Major Grade Point Averages - donated by the faculty of the department of communication.

Communication - The Bette Rogge Morse Award to the Outstanding Senior Woman in Communication.

Communication - The Dr. Florence I. Wolff Achievement Award for Outstanding Contributions in Academic, Extracurricular and Community Service Activities.

Communication-Broadcasting - The Omar Williams Award of Excellence to the Outstanding Student in Broadcasting - donated by the University of Dayton.

Communication-Debating - The Mary Elizabeth Jones Memorial Award of Excellence to an Outstanding Debater - donated by Dr. D. G. Reilly.

Communication-Journalism - The Ritter Collett Award of Excellence to the Outstanding Senior in Journalism. Awarded annually to the student who best demonstrates in his/her person and writings the qualities of Mr. Collett that the University hopes will serve as an inspiration to the journalism students.

Communication-Journalism - The Brother George F. Kohles, S.M., Award of Excellence in Journalism - donated by a friend.

Communication-Mass Media Arts - The Si Burick Award of Excellence for Outstanding Academic and Cocurricular Achievement in Mass Media Arts - donated by the University of Dayton.

Communication-Public Relations - The PRSA Maureen M. Pater Award of Distinction to the Outstanding Senior in Public Relations - donated by the Dayton-Miami Valley Chapter of the Public Relations Society of America.

Communication-Speech Arts - The Reverend Vincent R. Vasey, S.M., Award of Excellence to the Outstanding Senior in Speech Arts - donated by Reverend Vincent R. Vasey, S.M.

Communication Management - The Ellen M. Murphy Award of Excellence to the Outstanding Senior in Communication Management.

Computer Science - Award for Outstanding Service to the Department of Computer Science.

Computer Science - Chair's Award for Excellence in Computer Science.
Computer Science - The Lawrence A. Jehn Alumni Award for Excellence in the Senior Class.

Computer Science - The Father Thomas Schoen Award for Innovative Programming.

Continuing Education - The Nora Duffy Award to a Re-entry Student Who Has Overcome Significant Obstacles in order to Complete a College Degree.

Cooperative Education - Award of Excellence to the Outstanding Cooperative Education Student in Business Administration - sponsored by the Mead Corporation Foundation.

Cooperative Education - Award of Excellence to the Outstanding Cooperative Education Student in Computer Science/Computer Information Systems - sponsored by the Marathon Oil Foundation.

Cooperative Education - Award of Excellence to the Outstanding Cooperative Education Student in Engineering - sponsored by the Dayton Power and Light Company.

Cooperative Education - Award of Excellence to the Outstanding Cooperative Education Student in Engineering Technology - sponsored by Earl C. Iselin Jr. in honor of his father.

Criminal Justice - The Sheriff "Beno" Keiter Memorial Scholarship Award to the Outstanding Junior or Senior in Criminal Justice - donated by friends of "Beno" Keiter.

Economics - The Dr. E. B. O'Leary Award of Excellence to the Outstanding Senior Majoring in Economics.

Electrical and Computer Engineering - The Thomas R. Armstrong '38 Award of Excellence for Outstanding Electrical Engineering Achievement in Memory of Brother Ulrich Rappel, S.M., and W. Frank Armstrong.

Electrical and Computer Engineering - The Anthony Horvath '22 and Elmer Steger '22 Award of Excellence to the Outstanding Senior in Electrical Engineering - donated by Anthony Horvath and Elmer Steger.

Electrical and Computer Engineering - The Mary C. Millette Endowment Award for the Outstanding Senior Electrical Engineering Student in Memory of Mary C. Millette.

Electrical and Computer Engineering - The Brother Louis H. Rose, S.M. '33 Award of Excellence to the Outstanding Junior in Electrical Engineering.

Electronic Engineering Technology - The Richard R. Hazen Award of Excellence for the Outstanding Graduate of the Electronic Engineering Technology Program - donated by alumni and friends of the department.

Engineering/Humanities - The James L. Heft, S.M., Award of Excellence to the Graduating Senior Who Demonstrates a High Degree of Integration of these Different Fields of Knowledge: Humanities and Engineering donated by Dr. Rocco M. Donatelli.

Engineering Technology - The L. Duke Golden Award of Excellence to the Outstanding Senior in Engineering Technology - donated by the Gamma Beta Chapter of Tau Alpha Pi Honor Society.

English - The Patricia B. Labadie Award for Excellence in Composition.
English - The Brother Thomas P. Price, S.M., Award of Excellence to the Outstanding Senior in English - donated by the University of Dayton Mothers' Club.

Entrepreneurship - Award of Excellence to the Graduating Senior Majoring in Entrepreneurship Who Best Embodies Outstanding Academic Achievement - sponsored by Fifth Third Bank.

Entrepreneurship - Entrepreneurial Leadership Award to the Graduating Senior Majoring in Entrepreneurship Who Exhibits the Greatest Potential for Leadership as an Entrepreneur - sponsored by Robert F. Chelle, Crotty Center founding director.

Environmental Biology - Environmental Biology Award of Excellence to the Outstanding Environmental Biology Major Who Excels in all Areas of Academic Scholarship and Overall Service.

Environmental Biology - Environmental Biology Internship Achievement Award of Excellence to the Environmental Biology Major Who Has Demonstrated Significant Achievement while Pursuing Practical Experience through the Internship Program.

Finance - Award of Excellence to the Outstanding Senior Majoring in Finance.

Finance - Davis Center for Portfolio Management Excellence in Leadership Award to the Outstanding Senior on the Center for Portfolio Management Team.

Finance - Flyer Investment Excellence in Leadership Award to the Outstanding Student on the Flyer Investment Portfolio Management Team.

Finance - The Douglas R. Scott "Best Efforts Award" to the Finance Major Deemed to Have Worked the Hardest Both in and out of the Classroom.

Fitz Center - The Emily M. Klein Student Community Leadership Award.
Fitz Center - The Monalisa Mullins Commitment to Community Award.
Fitz Center- The Charles J. Ping Student Service Award.
General Excellence - The Mary M. Shay Award of Excellence in Both Academic and Extracurricular Activities (Seniors only) - donated by the Poelking Family.

Geology - The George H. Springer Scholarship to the Outstanding Senior in the Geology Department - donated by alumni of the department.

Health and Sport Science - The Thomas J. Frericks Award of Excellence to the Outstanding Senior in Sport Management - donated by the faculty of the School of Education.

Health and Sport Science - The James M. Landis Memorial Award of Excellence for the Outstanding Health and Sport Science Senior in Science Core Courses.

Health and Sport Science - The James B. LaVanche Award of Excellence to the Outstanding Scholar-Athlete Graduating in the Department of Health and Sport Science - donated by the faculty and alumni of the department.

Health and Sport Science - The John L. Macbeth Memorial Award of Excellence to the Outstanding Student in Health and Sport Science donated by Mrs. John L. Macbeth.

Health and Sport Science - The Elizabeth L. Schroeder Award of Excellence to the Outstanding Senior in the Food and Nutrition Program for Academic, Departmental and Professional Performance.

History - The Caroline Beauregard Award of Excellence to the Outstanding Junior Majoring in History - donated by family and friends in her memory.

History - The Dr. Samuel E. Flook Award of Excellence to the Outstanding Senior Majoring in History - donated by Dr. Samuel E. Flook.

History - The Betty Ann Perkins Award for Excellence in Women's and Family History - donated by her family.

History - The Dr. George Ruppel, S.M., Award of Excellence in Historical Research.

History - The Steiner-Beauregard Phi Alpha Theta Service Award for Significant Service Promoting the Activities of the Delta Eta Chapter (Delta Eta Chapter members only) - donated by Dr. Rocco M. Donatelli.

Humanities - The Rocco M. Donatelli Award to the Humanities Senior with the Strongest Quantitative and Qualitative Record in Elective Science Courses.

Human Rights - The Linda Majka Award of Excellence to an Outstanding Senior.

Human Rights - Award of Excellence to an Outstanding Junior.

Industrial Engineering Technology - The James L. McGraw Award to the Outstanding Graduate of the Industrial Engineering Technology Program donated by the Dayton chapter of the Institute of Industrial Engineers.

Industrial Engineering Technology - The Raymond B. Puckett Memorial Award to the Outstanding Junior in Industrial Engineering Technology.

International Business - Award of Excellence to the Graduating Senior Majoring in International Business Who Has Best Combined Academic Achievement with Service to the University and Community.

International Studies - The Dr. Margaret P. Karns Award for Academic Excellence and Service in Global and Local Issues.

International Studies - Outstanding Senior Award for International Studies.

International Studies - International Studies Peer Mentorship Award.
Languages - The Brother John R. Perz, S.M., Award of Excellence to the Outstanding Senior in Modern Languages - donated by the Joseph Poelking Sr. family.

Languages-French - The Brother George J. McKenzie, S.M., Award of Excellence to the Outstanding Senior in Written French - donated by a friend.

Languages-French - The Professor Enrique Romaguera Award of Excellence to the Outstanding Senior in Spoken French - donated in honor of his retirement in May 2005.

Languages-German - The Dr. Elke Hatch Award of Excellence to the Outstanding Senior Majoring in German.

Languages-Spanish - The Dr. James M. Ferrigno Award of Excellence to the Outstanding Senior in Spanish - donated by Enrique Romaguera and Mary A. Ferrigno.

Leadership - Alumni Award in Leadership to the Graduating Senior Majoring in Leadership Who Best Embodies the Principles of Learn, Lead and Serve - sponsored by Charles Huston Brown '20 and Maurice F. Krug '55.

Leadership - Leadership Award of Excellence to the Graduating Senior Majoring in Leadership Who Best Embodies Outstanding Academic Achievement - sponsored by the Reynolds and Reynolds Company and the Standard Register Company.

Leadership - Wall Street Journal Award for General Management to the Graduating Senior in Leadership and/or Entrepreneurship Considered to Have the Greatest Potential for General Management Responsibilities sponsored by Dow Jones and Company.

Library - The Brother Frank Ruhlman, S.M., Award of Excellence for Literary Achievement.

Management and Marketing - Management/Marketing Department Award for Perseverance to the Graduating Senior Majoring in Entrepreneurship, Leadership or Marketing Who Has Displayed the Most Initiative and Perseverance in Pursuing an Undergraduate Education - sponsored by the faculty of the management and marketing department.

Management Information Systems - Management Information Systems Design Project Award to the Team Producing the Best Senior Year MIS Project.

Management Information Systems - Management Information Systems Award to a Graduating Senior in MIS for Outstanding Contributions to the MIS Program.

Management Information Systems - Management Information Systems Scholarship Award to a Graduating Senior in MIS for Outstanding Academic Achievement.

Manufacturing Engineering Technology - Dayton Chapter, Society of Manufacturing Engineers Award of Excellence for Manufacturing Engineering Technology Achievement.

Manufacturing Engineering Technology - Dayton Chapter, Society of Manufacturing Engineers Award of Excellence to the Outstanding Graduating Senior in Manufacturing Engineering Technology.

Marketing - Marketing Award of Excellence to the Graduating Senior Majoring in Marketing Who Best Embodies Outstanding Academic Achievement.

Marketing - Marketing Career Award to the Graduating Senior Majoring in Marketing Who Exhibits the Greatest Potential in Marketing.

Marketing - Marketing Service Award to the Graduating Senior Majoring in Marketing Who Best Embodies the Principles of Learn, Lead and Serve.

Mathematics - Award of Excellence in Support of Mathematics.
Mathematics - Senior Award of Excellence in Mathematics.
Mathematics - Sophomore Award of Excellence in Mathematics.
Mechanical and Aerospace Engineering - Class of 1902 Award of Excellence for Outstanding Mechanical Engineering Achievement donated by Michael J. Gibbons, 1902, in memory of Warner H. Kiefaber, 1905.

Mechanical and Aerospace Engineering - The Professor Henry Chuang Award for Excellence in Energy Conservation and Waste Management.

Mechanical and Aerospace Engineering - The Bernard F. Hollenkamp '39 Memorial Award of Excellence to the Outstanding Senior in Mechanical Engineering - donated by Louise A. and Mrs. Lucille Hollenkamp.

Mechanical and Aerospace Engineering - The Martin C. Kuntz, 1912, Award of Excellence to the Outstanding Junior in Mechanical Engineering - sponsored by the University of Dayton Alumni Association since 1962.

Mechanical and Aerospace Engineering - The Brother Andrew R. Weber, S.M., Award of Excellence for Outstanding Service and Achievement in Mechanical Engineering.

Mechanical Engineering Technology - Dayton Chapter, Society of Manufacturing Engineers Award of Excellence for Mechanical Engineering Technology Achievement.

Mechanical Engineering Technology - The Jesse H. Wilder Award of Excellence to the Outstanding Graduating Senior in Mechanical Engineering Technology - sponsored by the Dayton Chapter, Society of Manufacturing Engineers.

Military Science - Department of the Army Award. The Superior Cadet Award, provided by the Department of the Army, to the Outstanding Cadet of each academic year.

Military Science - The Brian J. Bentz Memorial Scholarship Award to the Outstanding ROTC Cadet Who Exemplifies the Dedication and

Commitment for Further Study in Military Science - donated by his family and friends.

Military Science - The Major John A. Petric Memorial Scholarship Award. To keep the memory of John A. Petric within the University of Dayton community and to give support each year to a selected ROTC cadet pursuing a commission in the United States Army.

Military Science - The Lieutenant Robert M. Wallace '65 Memorial Award of Excellence in ROTC - donated by his family and friends.

Music - Department of Music Senior Award for the Outstanding Collaborative Pianist.

Music - Department of Music Senior Award for Outstanding Contribution to University Concert Bands.

Music - Department of Music Senior Award for Outstanding Contribution to University Athletic Bands.

Music - Department of Music Senior Award for Outstanding Contribution to University Jazz Bands.

Music - Department of Music Senior Award for Outstanding Contribution to the University Orchestra.

Music - Department of Music Senior Award for Outstanding Contribution to the University Vocal Ensembles.

Music - The Brother Joseph J. Mervar, S.M., Award of Excellence to the Outstanding Student Majoring in Music.

Music - NAfME Professional Achievement Award.
Music - The Brother Todd Ridder, S.M., Award of Excellence for Outstanding Service by a Student Majoring in Music.

Music - Phi Mu Alpha College Honor Award for Musicianship, Scholarship and General Contributions to the College Chapter.

Music - Phi Mu Alpha Professional Music Fraternity Scholastic Award to the Chapter's Graduating Senior Who Has Attained the Highest Scholastic Rating.

Music - Sigma Alpha Iota College Honor Award for Musicianship,
Scholarship and General Contributions to the College Chapter.
Music - Sigma Alpha Iota Professional Music Fraternity Scholastic Award to the Chapter's Graduating Senior Who Has Attained the Highest Scholastic Rating.

Operations and Supply Management - Operations Management Outstanding Scholarship Award to a Graduating Senior in OPS for Academic Excellence.

Operations and Supply Management - Operations Management Outstanding OM Senior Project Award to the Team Producing the Best Senior Year OPS Project.

Operations and Supply Management - Operations Management Professional Service Award to a Graduating Senior in OPS for Outstanding Contributions to the OPS Program.

Philosophy - The Reverend Charles Polichek First Award of Excellence to the Outstanding Senior in Philosophy.

Philosophy - The Reverend Charles Polichek Second Award of Excellence to the Outstanding Senior in Philosophy.

Philosophy - The Richard R. Baker Award of Excellence in Philosophy to a Graduating Student Who Has Earned Distinction in the Study of Philosophy through Commitment to Philosophical Inquiry and Assisting Other Undergraduate Students in Their Pursuit of Philosophical Studies.

Philosophy - The Reverend Charles C. Bloemer, S.M., Award of Excellence to the Outstanding Junior Majoring in Philosophy - donated by a friend.

Philosophy - The Raymond M. Herbenick Award of Excellence in Interdisciplinary Integration to a Student Completing the Core Program donated by the department of philosophy faculty.

Physics - The Caesar Castro Award of Excellence to a Sophomore for Outstanding Scholarship in the General Physics Lecture and Laboratory Sequence - donated in memory of Caesar Castro by Mrs. C. C. Castro and the department of physics.

Physics - Sigma Pi Sigma Award of Merit to a Senior in Recognition of Outstanding Academic Achievement and Involvement in Physics sponsored by the department of physics and the Sigma Pi Sigma honor society of the Society of Physics Students.

Political Science - The Brother Albert H. Rose, S.M., Award of Excellence to the Outstanding Senior in Political Science - donated by Joseph Zusman '65.

Political Science - The Eugene W. Stenger ' 30 Memorial Award of Excellence to the Outstanding Junior in Political Science - donated by Mrs. Eugene W. Stenger.

Premedicine - Miami Valley Academy of Family Physicians Award to the Graduating Senior whose Activities Exemplify the Philosophy of Family Medicine.

Premedicine - The Brother Francis John Molz Memorial Award to the Outstanding Senior in Premedicine. Awarded annually to the student who best demonstrates the qualities of unselfishness, community service and academic achievement - sponsored by Alpha Epsilon Delta.

Premedicine - Montgomery County Medical Society Award to the Outstanding Senior in a Premedical Curriculum.

Premedicine - The Joseph E. Scherger, M.D., MPH Leadership in Medicine Award to a Graduating Premedical Student Who Has Demonstrated Leadership Toward Improving the Health of the Public Through Better Health Care.

Psychology - The Charles E. Kimble Research Award to the Graduating Senior Who Best Demonstrated Research Excellence in Psychology.

Psychology - The Kenneth J. Kuntz Award for Outstanding Service donated by the department of psychology faculty.

Psychology - The Reverend Raymond A. Roesch, S.M., Award of Excellence to the Outstanding Student in Psychology - donated by Reverend Raymond A. Roesch, S.M. '36.

Rector - The Maureen E. O'Rourke Marianist Student Award to the Graduating Senior Who Exemplifies the Marianist Charism on Campus.

Religious Studies - The William Joseph Chaminade Award of Excellence, in memory of Mr. and Mrs. George W. Dickson, to the Outstanding Student in Theology - donated by Reverend John Dickson, S.M. '36.

Religious Studies - The Monsignor J. Dean McFarland Award of Excellence to the Outstanding Junior Majoring in Religious Studies.

Social Work - The Joseph Zusman '65 Award of Excellence to the Outstanding Senior in Social Work Studies - donated by Joseph Zusman.

Sociology - The Dr. Edward A. Huth Silver Anniversary Award of Excellence to the Outstanding Student in Sociology - donated by Joseph Zusman '65.

Sociology - The Dr. Martin Luther King Memorial Award in Human Relations for Excellence in Scholarship, Christian Leadership and the Advancement of Brotherhood and Sisterhood - donated by Dr. Edward A. Huth.

Sociology - The Reverend Andrew L. Seebold Award of Excellence to the Outstanding Senior in Sociology.

Teacher Education - The William A. Beitzel Award to the Outstanding Student in Intervention Specialist Education - donated by Dean Emeritus Ellis A. Joseph.

Teacher Education - The Brother Louis J. Faerber, S.M., Award of Excellence to the Outstanding Student in Adolescence to Young Adult Education - donated by the University of Dayton Mothers' Club.

Teacher Education - The Dr. Harry E. Hand Memorial Award of Excellence to an Outstanding Student with Majors in English and Adolescence to Young Adult Education.

Teacher Education - The Kacie Hausfeld Award of Distinction to the Graduating ECE Senior Who Displays the Spirit of Kacie: a Passion for Teaching; a Commitment to Service; a Vibrant and Encouraging Leader; and an Enthusiasm for Life.

Teacher Education - The Raymond and Beulah Horn Award of Excellence to the Outstanding Student in the Area of Intervention Specialist Education - donated by Dean Emeritus Ellis A. Joseph.

Teacher Education - The Dr. Thomas C. Hunt Award for the Outstanding Student Research Activity in the School of Education.

Teacher Education - The Daniel L. Leary Award for the Outstanding Research and Development Activity by a Student Seeking Teacher Licensure in the School of Education - donated by Dean Emeritus Ellis A. Joseph.

Teacher Education - The Frank and Lois New Award for Outstanding Achievement by a Student in the Area of Intervention Specialist Education.

Teacher Education - The George A. Pflaum '25 Award of Excellence to the Outstanding Students in Early Childhood and Middle Childhood Education - donated by George A. Pflaum Jr.

Teacher Education - The Reverend George J. Renneker, S.M., Award of Excellence for Outstanding Achievement in Teacher Education.

Teacher Education - The Brother Joseph W. Stander, S.M., Award of Excellence to an Outstanding Student with a Concentration in Integrated Mathematics.

Teacher Education - The Dr. Mary R. Sudzina Award for Demonstrated Excellence in Case Study Analysis in Adolescence to Young Adult Education.

Theatre - The Dr. "G." Award for Outstanding Commitment to Mainstage Theatre Recognizing a Graduating Senior Who Has Demonstrated a Willingness to Involve Himself/Herself in the Wide Spectrum of Theatrical Productions on the Boll Theatre Mainstage.

University Advancement - Award of Excellence for Contribution of Service to the Community.

University Honors Program - The Daniel P. Arnold Memorial Scholarship Award.

University Honors Program - The Patrick F. Palermo Honors Program Founders Award for the Exemplary Honors Thesis Project Involving International Research, Service and Leadership in Community, or Advances the Realization of a Just Society.

Visual Arts-Fine Arts - The Mary Ann Dunsky Award to the Outstanding Senior in Studio Art.

Visual Arts-Fine Arts - The Bela Horvath Award for Excellence in Representational Art.

Women's Studies - The Joyce Durham Award for the Best Student Essay on the Subject of Women or Gender.

Women's Studies - The Susan R. Hermes Award for Excellence in Women's Studies - donated by Drs. Jane S. Zembaty and Patricia A. Johnson.

## Class Attendance Policy

It is desirable for students to attend all classes. Listening to the lectures of instructors and being involved in classroom discussions should (1) provide guidelines and goals in the course of study, thus lending direction to the study activities of the student; (2) provide instances of the way of thinking and methodology employed by an academic discipline in formulating and solving problems; and (3) stimulate an awareness of/ and interest in the course topics beyond the levels acquired by textbook reading.

Because textbook material is generally beneath the level of the current state of knowledge, instructors acquaint the student with new ideas and integrate this material into the course topics. Students are responsible for being aware of the proceedings and material covered in each class period.

Students must attend all announced tests and submit assigned written work on the date set by the instructor; it is recommended that the instructor announce such tests and assignments at least a week in advance. The action taken as a consequence of missing a test or an assignment will be determined by the instructor and will be based on a consideration of the individual circumstances involved.

To assist first-year students in their transition to college responsibilities, it is felt that a policy of compulsory attendance is necessary. Therefore, first-year students will be permitted only a limited number of absences. For first-year students, the allowable number of absences in the first term or in the second term will be equal to twice the meeting times a week (or four class days in any third-term session).

A student exceeding this number will be referred to the student's dean for possible counseling and appropriate action. Any undergraduate student who has not yet accrued 30 semester hours of credit is considered a firstyear student.

In addition to the first-year student policy, faculty may institute an attendance requirement. This may be done for any course (including seminars, laboratories, performance courses, clinical field-based courses and the like) provided the policy is approved by a faculty committee of the department and/or the department chair. If attendance is used as a grading component, the instructor is obligated to clarify his or her classroom policy regarding absences in writing in the syllabus provided during the first full week of the semester.

In cases where unusual circumstances combine to cause a student to miss any class time for reasons beyond the student's control (i.e., personal illness, death in the immediate family, religious holidays, University-sanctioned activity, emergency limitations on commuter travel in severe weather-related conditions), faculty members should give due diligence to reviewing the student's particular case.

Let it be noted that to insure accuracy of records, every student must be present at class during the first week of each term.

## Class Standing

Freshman: 0-29.9 semester hours completed
Sophomore: 30-59.9 semester hours completed
Junior: 60-89.9 semester hours completed
Senior: 90 semester hours completed and over

## Dean's List

At the conclusion of the Fall, Spring and Summer terms, in both the college and the professional schools, any currently registered, degreeseeking undergraduate student completing a minimum of twelve semester hours with a grade point average of 3.50 or above is named to the Dean's List. For purposes of this list, the total hours completed during the multiple Summer sessions are treated as a single term.

Dean's Recognition List (https://www.udayton.edu/flyersfirst/registrar/ deans-list.php)
At the conclusion of the Fall, Spring and Summer terms, in both the college and the professional schools, any currently registered, degreeseeking undergraduate student completing no less than six semester hours and not more than eleven and one-half semester hours with a grade point average of 3.50 or above is named to the Dean's Recognition List. For purposes of this list, the total hours completed during the multiple Summer sessions are treated as a single term.

## English Composition Placement

The English composition requirement at UD consists of ENG 100 Writing Seminar I and ENG 200 Writing Seminar II. All incoming first-year students are placed in ENG 100 unless:

- they are designated as Honors - placed in ENG 200H*;
- they receive EM credit for ENG 100 - placed in ENG 200 . For an AP score of 5 they receive EM credit for ENG 100 and ENG 200;
- they have an SAT (VB) score of 750 or above or ACT (EN) of 35 or above - exempt from taking English composition;
- they have an SAT(VB) score below 450 or ACT (EN) below 17 - placed in ENG 100A and ENG 100B;
- they are in the CORE program (ASI 120 counts as ENG 200H).
*Students admitted to the University Honors (p. 17) program and students with sufficiently high verbal scores on the SAT and ACT are placed in ENG 200 H . ENG 200 H is a one-semester course which satisfies the University's Common Academic Program (p. 91) requirement in composition. Students who are placed in ENG 200 H do not receive credit for ENG 100 but are free to take elective course work in place of the waived First-Year Humanities Commons composition.


## Final Exam Policy

To protect and strengthen the academic integrity of the final examination week at the University of Dayton, the following policy on final examination week has been adopted effective for the 2004-05 academic year.[1]

1. Final examination week is defined as the sum of one full week of scheduled examinations, the weekend immediately preceding and a minimum of one study day. Multiple study days are preferred.
2. Every course of study, undergraduate and graduate, must conclude with an academically rigorous culminating learning experience, normally a final examination. A culminating learning experience may involve traditional in-class examinations, presentations, performances, critiques, portfolios or other similar experiences. Laboratory, studio or similar courses may be regularly exempt from this requirement, with the approval of the department chair and a designated administrator in the office of the dean.
3. No new material may be introduced in a course after the last scheduled class meeting. No final examination may be scheduled at a time other than the time prescribed by the Registrar during final examination week, with the sole exception of block examinations. No final examination of any kind may be given prior to final examination week. Any exceptions must receive the approval of the department chair.
4. A block examination is a common examination that covers several sections of the same class, taught by different instructors, for the purpose of establishing a uniform scale of achievement. Such examinations are scheduled through the registration office. Multiple sections of a class, taught by the same instructor, are not eligible to give block examinations unless they are part of a class taught by more than one instructor.
5. Grades for all students, including graduating students, will be reported by a single deadline, as determined by the Registrar.
6. When a student has three or more final examinations scheduled for the same day, faculty are encouraged to accommodate the individual student on an alternative day agreeable to both the student and the instructor. The student must make the request by the last scheduled class meeting.

- When a student with a disability has two or more final exams scheduled for the same day, faculty are encouraged to accommodate the individual student on an alternative day agreeable to both the student and the instructor which may include use of an alternative testing site. The student must make the request by the last scheduled class meeting.[2]

7. Students must have access to graded examinations for a period of six months after the examination has been given.
8. Any on-going or regular exception to the final examination policy requires the approval of the department chair and a designated administrator in the office of the dean.
9. The School of Law is exempt from this policy due to its independent academic calendar.
[1] Approved by the Academic Senate December 12, 2003, document number I-03-10, Final Examination Week.
[2] Amendment to Academic Senate document number I-03-10, Final Examination Week, approved February 6, 2004.

## First-Year Experience Program

The University First-Year Experience Program includes a course for all first-year students in the College of Arts and Sciences, the School of Business Administration, the School of Education and Health Sciences, and the School of Engineering. This course is combined with selected programs and services offered by Student Development, Campus Ministry and academic support programs. First-year students entering in January and transfer students will be offered an alternative program to meet their needs.

The First-Year Experience Program:

- Introduces the distinctive nature of the Catholic/Marianist educational experience as a foundation for learning and life.
- Provides an academic foundation that helps students develop as connected learners, acquire general competencies necessary for their success, understand the nature and requirements of chosen and/or potential programs of study and be aware of a range of opportunities for enriching their academic experience on campus, across the nation and around the world.
- Prepares students in critical reflection on the moral and ethical dimensions of their lives, challenges students to treat each individual with equality and respect, fosters the recognition of individual rights and responsibilities of each member of the community, and establishes integrity as central to professional and career decisions.
- Promotes the development of self-understanding and skills that enable students to take responsibility for their academic success and lifelong learning.
- Promotes and supports, both in and out of the classroom, the physical, emotional, spiritual and psychological health of all students.
- Nurtures students' creativity and varied talents, and leads to enriched lives of learning, leisure, solitude, leadership and service.


## First-Year Experience Course

Every first-year student entering in the fall term must complete the FirstYear Experience course offered by the academic division. The First-Year Experience course will not count against the eighteen credits per term limit covered by full-time tuition.

For first-year students entering the University in the spring term and for transfer students, each division will develop a plan to meet the goals of the First-Year Experience while serving the specific needs of these students.

The First-Year Experience courses offered by each division and units within divisions must include common elements as approved by the University. Beyond these common elements the divisions and academic units offering the course will have a great deal of flexibility in how the course is offered and what will be included in the syllabus.

## General Requirements

All bachelor's degrees granted by the University of Dayton require a minimum of 120 semester hours of credit with a cumulative grade point average of at least 2.0.

Specific requirements for the various degrees are listed under the schools granting the degrees. For more information, visit the sections on the four divisions.

One year (thirty semester hours) of residence is a minimum requirement for any bachelor's degree. The semester hour is the unit by which the University measures its course work, and the number of semester hours is determined by the number of in class hours a week and the number of weeks in the session. One semester hour is assigned to a class which meets fifty minutes a week over the period of one term.

Students enrolled in the University as candidates for degrees should not take courses at other colleges or universities without first obtaining written permission from their respective deans. If the permission is granted, the dean will request "transient status" for such students at designated institutions. The University reserves the right not to accept credits for such courses when this procedure has not been followed.

The Bachelor of Science in Education may be awarded to holders of nonprofessional degrees from the University of Dayton with the completion of a minimum of thirty semester hours prescribed by the School of Education and Health Sciences beyond the requirements of the nonprofessional degree. The Bachelor of Arts or Bachelor of Science may be awarded to holders of professional degrees from the University of Dayton upon the completion of the requirements for such degrees. Any student wishing to obtain a second bachelor's degree may do so by completing the requirements for the second degree as determined by the faculty of the college or school in which this degree is offered.

Ordinarily, a student who earned a first bachelor's degree or an associate degree at another institution must complete six semester hours of philosophy and/or religious studies at the University of Dayton. Such a student may be required to complete the prescribed twelve semester hours of philosophy and/or religious studies, if in the judgment of the dean, equivalent coursework had not been earned as a part of the program leading to the first degree.

All students following four-year programs are required to complete successfully the University requirements in the Common Academic Program.

## Grade Appeals

Procedures for the appeal of grades differ for the College of Arts and Sciences and the Schools of Business Administration, Education and Health Sciences, and Engineering. The student should consult the appropriate dean's office for the grade appeal procedure which would apply to the student's discipline.

## Grades and Scholarship

Final grades are submitted at the end of the term, and these are made part of a student's permanent record. A progress report of every first-year student in each registered class is submitted to the Registrar by every instructor at the middle of each term.

Undergraduate students are permitted a selection from two alternative grading options. The course grading options are as follows:

- Option 1: A, A-, B+, B, B-, C+, C, C-, D, F
- Option 2: S (Satisfactory grade C- or higher) / NC (No Credit grade D,F).

In addition to those courses which must be taken under Option 2, a student may take a maximum of fifteen semester hours under Option 2 within the hours required for graduation in the degree program. A student may take any course beyond the minimum hours required for graduation in the degree program under Option 2. All courses that are used to fulfill the Common Academic Program must be taken under Option 1. The college/school or department may place further restrictions on the use of Option 2. Exceptions to this policy may be made by the dean (or the dean's designee) of the college/school in which a student is enrolled. NOTE: Studies have shown that Satisfactory/No Credit grades (Option 2) on one's academic record may be a negative factor in the evaluation of application for transfer to some undergraduate schools, for admission to most professional schools (law, medicine, etc.) and many graduate schools, and for employment in some fields.

The official marks with their meanings and quality-point values are as follows:

- A - Excellent; for each semester hour, 4.0 quality points are allowed.
- A- - For each semester hour, $3.6667 q u a l i t y ~ p o i n t s ~ a r e ~ a l l o w e d . ~$
- B+ - For each semester hour, 3.3333 quality points are allowed.
- B - Good, for each semester hour, 3.0 quality points are allowed.
- B- - For each semester hour, 2.6667 quality points are allowed.
- C+ - For each semester hour, 2.3333 quality points are allowed.
- C - Fair; for each semester hour, 2.0 quality points are allowed.
- C- - For each semester hour, 1.6667 quality points are allowed.
- D - Poor but passing; for each semester hour, 1.0 quality point is allowed.
- F - Failed. This mark indicates poor scholastic work, or failure to report withdrawal from a course. In such cases, required courses must be repeated or retaken, preferably at the next opportunity.
- S - Satisfactory. This mark indicates credit given for a course taken under grading Option 2, C- or higher; or for a class for which credit by examination has been given. The $S$ credit shall be counted as hours only and shall not be considered in determining a student's cumulative point average.
- NC - No Credit. This mark indicates no credit given for a course taken under grading Option 2, below C-. In such cases, required courses must be repeated or retaken, preferably at the next opportunity.
- I - Incomplete. This grade indicates that the student has obtained the instructor's recommendation, subject to the chairperson's approval, to complete some portion of the work of the term that for reasons beyond the student's control was not completed before the end of the term, provided that the rest of the work has been of satisfactory grade. An I must be removed within thirty days from the date listed on the grade report, or it will be changed to an F or NC (option 2) on the student's permanent record. The time limit may be extended under exceptional circumstances, with the approval of the dean, if application for the extension is made within the thirty-day period noted.
- W - Withdrawn. During the first three weeks of a full term (or the first eight class days of a split term) a student may withdraw from a class without record by obtaining a drop (withdrawal) form, having it signed
by the academic advisor and processing it. Beginning with the fourth week of the term and continuing through the fourth week after midterm (or the ninth class day of a split term and continuing through the fourth week of the split term), a student may withdraw with a W by the same process, except that the drop form must have the approval signature of the instructor as well as that of the advisor. For the remainder of the term, until the last day of classes, a student may withdraw with a W only by making a formal request to the dean, who consults with the student's instructor before granting such a request. During this period, a W will be permitted only for special nonacademic reasons. These include, but are not limited to, financial difficulties and matters of personal or family health. Documentation may be required. When a student finds it necessary to withdraw from the University, for any reason whatsoever, it is important that the dean be notified immediately. Financial adjustments, if allowed, will be made only from the date on the withdrawal form. Total withdrawal from all classes requires the processing of the drop form. This requires one signature from the student's Academic dean. It is the student's responsibility to initiate and process all withdrawals; the faculty do not initiate withdrawals for students except for auditors. In addition, the student is urged to process the withdrawal as soon as possible after deciding to drop a course. Students cannot assume that withdrawals are granted automatically if they stop attending class. Any failure to process the drop (withdrawal) form will incur a grade of F for the course or courses involved. The F's so accumulated are always included in the cumulative grade-point average.
- IP - In Progress. This symbol is used in lieu of a grade for a course which has not terminated at the end of a term or summer session. A grade with corresponding credit and quality points (see grading Options 1 and 2) will be assigned when the course has been completed.
- N - No grade was reported by the instructor.
- K - Credit. This mark is used only for credits accepted as transfer credit from other institutions. No quality points are allowed. K credit is not allowed for English courses taken at institutions in countries where the native language is other than English.
- X-Audit. This mark indicates that the student has registered to audit the course. No credit hours or quality points are awarded for this mark. Any course taken for audit may not be retaken for credit. If, in the opinion of the instructor, a student has not attended and participated in a sufficient number of classes, the instructor will assign a W.
- AP - This mark indicates University of Dayton credit given to a student on the basis of the Advanced Placement Program of the CEEB University. The required level of achievement on these examinations is determined by the department in which the course is taught. This credit shall be assigned only on authorization of the registrar. No quality points are allowed. A student must be registered at the University of Dayton to obtain credit. AP credit is limited to 24 semester hours (exclusive of AP and CLEP General Examination credits).


## Retake Policy (revised 2016)

Students may retake any courses taken at the University of Dayton for up to 12 semester credit hours.

- A student can retake any course. The higher of the grades earned will be used in the calculation of the student's cumulative GPA. The lower grade will remain on the transcript with an "E" (grade excluded) notation, and credits for the excluded course will apply against the student's allotment of 12 course retake credits.
- When a course is taken for the third time, Dean's approval is required. The lower of the first two grades will be excluded and the other attempted grades earned as a result of the retake will be factored into the calculation of the cumulative GPA.
- The student will only receive N credit hours toward his or her degree. The credits for the excluded course will apply against the student's allotment of 12 course retake credits.
- When a student reaches 12 semester credit hours, all further attempted course grades will be factored into the calculation of the cumulative GPA.

Credit can be earned only once for a course unless the course is specifically identified as allowing additional credit when retaken.

If students retake a course in which the topics vary, it must be demonstrated that the retaken course contains sufficiently similar content as the original course for which the students received a different grade.

Courses taken by students prior to the initiation of this revised policy, and before completion of an undergraduate degree, may be retaken within the guidelines of this revised policy.

Students and advisors should be aware that their UD calculated GPAs are UD GPAs. Graduate, Law, Medical, Dental, or Professional, or other undergraduate programs, as part of their admissions process may calculate students' GPAs from the recorded grades of the UD transcript separate from the UD calculation including retake courses.

No grade changes are permitted after thirty days from the date listed on the grade report.

The University reserves the right to change the grading system.

## Grade-Point Averages

Semester Grade-Point Average:
Is the total number of quality points divided by the total number of semester credit hours carried by the student under Option 1.

Cumulative Grade-Point Average:
Is the total number of cumulative quality points divided by the total number of cumulative credit hours carried by the student under Option 1. If a course is repeated, the grade points for both the original grade and the new grade are computed. If a course is retaken (see $R$ ) and the subsequent grade is higher than or equal to the previous grade, the previous grade will not count towards the student's CGPA henceforth. Marks of I, K, IP, S, W, X and NC are disregarded in the computation of the CGPA.

## Graduation

Commencement at the University of Dayton is formal recognition of students who are graduating from the University. Consequently, University policy limits participation in commencement to students who have completed all the requirements for their degree. Undergraduate students, however, who are short not more than seven credit hours prior to the May commencement may, with the approval of their dean, participate in the May graduation ceremony. Such students must be registered for sufficient hours to complete degree requirements during the subsequent summer terms at UD, or have attained approval to fulfill their remaining requirements at another institution, and must provide official documentation of work completed no later than the official date
for submission of grades at the conclusion of UD's second summer session. Any exceptions to this policy are the decision of the dean of the student's academic unit. After all degree requirements are met, the degree will be conferred on the next conferral date as noted on the official university academic calendar.

If the student is declaring candidacy for Graduation, a graduation application must be completed online (https://porches.udayton.edu). If a student is receiving two degrees, two separate graduation applications, one for each degree, must be completed. For further information visit the Graduation website (http://www.udayton.edu/flyersfirst/graduation).

After the summer of 2002, students completing their degree requirements during the summer term will receive a diploma and their academic transcript will denote an August graduation date, but they will have to wait until December to participate in a graduation ceremony.

## Honors

1. To graduate with honors, a student must have completed a minimum of 60 semester hours at the University of Dayton and have an academic degree program grade-point average at the University of Dayton of 3.50 or higher, based on a 4.00 scale. The academic degree program grade-point average includes all courses taken at the University of Dayton under grading Option 1 and accepted as graduation credits by the student's academic unit, i.e. school or college. Determination of a student's initial honors category recognized in the graduation program is made on the basis of the student's academic record at the conclusion of the term preceding the student's last term at the University or on the basis of the student's academic record at the conclusion of his or her last term.
2. If a student qualifies for honors or moves into a different category of honors on the basis of his or her academic degree program gradepoint average, the diploma issued will note the appropriate honor category and notation will be made on the transcript and permanent record. Due to time constraints no adjustments/corrections can be made to the actual printed graduation program.
3. Honors status will be determined by the academic degree program grade-point average and will include only those courses completed at the University of Dayton. Students who transfer to the University of Dayton under the terms of an articulation agreement with a community college may be eligible for honors at graduation even if they have not completed the minimum of 60 semester hours at the University provided that they have met all terms of the articulation agreement.
4. The notation of honors is made in the commencement program, on the student's diploma, on the student's permanent record and on the student's transcript, as follows:

- Cum Laude - if the academic degree program grade point average is greater than or equal to 3.50 but less than 3.70.
- Magna cum Laude - if the academic degree program grade point average is greater than or equal to 3.70 but less than 3.90.
- Summa cum Laude - if the academic degree program grade point average is greater than or equal to 3.90 .

5. Any exceptions to this procedure are the decision of the dean of the student's academic unit.

## Non-Disability Related Course Waiver Policy

Students may make a request to their department or dean to waive certain required courses. In such cases, students may be required to submit proof of prior knowledge in the subject area (diplomas, certificates, portfolios, auditions, transcripts, etc.). At the request of the dean's office or department, students may be asked to complete departmental exams or to submit additional documentation and records of consultation.

Waiving a course does not confer credit. Students replace a required course (the one which has been waived) with another course that carries the same or more number of credit hours and is at an equal or higher course level. Determination of the appropriate course must take place in consultation with the department and dean's office. This policy applies to all waived courses, including those waived by means of placement exams. In addition, this policy does not apply to students with disabilities who require a course substitution due to a disability. Students with disabilities should consult appropriate university policy for course substitution due to disability.

Any exceptions to this policy are made at the discretion of the appropriate dean's office.

## Student Records

The Family Educational Rights and Privacy Act of 1974 (FERPA) is a federal law. This policy serves to notify students of their rights regarding their education records in accordance with the FERPA and provide University of Dayton constituents guidelines for maintenance of, access to and release of such records. A complete policy statement on student records in accordance with the requirements of FERPA can be found here (https://udayton.edu/fss/registrar/policies/ferpa-policy.php).

## Transcripts

A transcript of the permanent academic record is a confidential document to be released in compliance with the regulations of the Family Educational Rights and Privacy Act of 1974 as amended. The Registrar will issue transcripts upon a request signed by the student provided that no outstanding financial obligation to the University exists. All transcripts so requested require payment in advance. For more information, please visit https://www.udayton.edu/fss/registrar/requests-services-forms/ transcript-request.php.

## Transfer Policies

## Transfer of Credit Policy

All transfer coursework completed by current UD students for UD credit must be approved in writing by the dean's office prior to registration for the course. At a minimum, the approval process will include a review of the institution, course descriptions and course syllabus. Additionally, a vita of the professor and/or a copy of the textbook used in the course may be reviewed. Consideration for credit will only be given to transfer courses with a grade of C - or better.

Courses taken in the U.S. must be completed at a regionally accredited institution. Courses taken in a foreign country must be completed at an institution recognized by the foreign country's minister/head of education. Official transcripts must be sent directly to UD from the university and must contain an official seal of the university's office of
academic affairs. Other requirements may be necessary (i.e. School of Business courses need to be taken at an AACSB accredited institution) given the specific course in question.

No credit will be granted when a student fails to receive prior written approval from the dean's office or fails to provide official transcripts sent to UD directly from the approved university.

## Internal Transfer Policy

Any undergraduate student having completed one academic semester in good standing at the University of Dayton may initiate a request for Internal Transfer. The student desiring to change his/her major can initiate this process by contacting their advisor and submitting a formal transfer application prior to registration.

To be considered for Internal Transfer the student must meet the following criteria:

- College of Arts \& Sciences

Cumulative GPA:
1.7 end of first term
1.7 end of second term
1.8 end of third term
1.9 end of fourth term
2.0 thereafter

* To be considered for internal transfer to the Predentistry or Premedicine major, the student must also complete the following courses and achieve a mean GPA of 3.0 or higher in them: CHM 123, CHM 123L, CHM 124, CHM 124L, BIO 151, BIO 151L, BIO 152, BIO 152L.
- School of Business Administration

Students must first attend an initial internal transfer meeting with an academic advisor in the School of Business Administration. Students may schedule this initial SBA internal transfer meeting in the Undergraduate Advising Office in Miriam Hall 108. Minimum requirements: cumulative GPA of 3.0 and successful completion of an appropriate UD Math course. A grade of C in a UD calculus class, a C+ or higher in MTH 116 or MTH 128, or a B- or higher in MTH 207 will qualify. Math courses taken at another college or university will NOT be considered.

- School of Education and Health Sciences

Cumulative GPA of 2.75 or better. For those seeking teacher licensure, proof must be submitted of satisfactory standardized testing scores.

- School of Engineering

The student must schedule an appointment with the department chair of the proposed major to discuss the change of program.
The associate dean will review the information and make the determination of the change. A student who intends to transfer to the School of Engineering must have met the minimum of the mathematics, physics and chemistry requirements, along with a minimum of 3.0 GPA to be considered for admission into the School of Engineering.

Units will review applications for transfer and make decisions in a timely fashion with communication to the student, the appropriate units and the Registrar. Please note: there are times when the student's desired transfer would not be recommended. This decision will be left to the judgment of the dean or his/her designated representative.

More complete information regarding Internal Transfer to the college or schools may be obtained in the respective dean's office.

## Admission-Undergraduate

We might not be able to make it easier for you to make your college decision, but at least we'll make it easier for you to apply. All it takes to apply is a simple click (https://www.udayton.edu/apply/undergraduate).

Applications for admission to the University of Dayton are reviewed for specific academic majors or, when applicable, for undeclared status in an academic division. The admission committee reviews grade record and pattern throughout high school, selection of courses in preparation for college, class standing or ranking (if provided by the high school) and ACT or SAT scores. The admission committee also considers the recommendation of a high school guidance counselor, along with other factors. The University of Dayton strives to admit students who possess the intellectual ability, the commitment to community and the motivation to thrive at the University of Dayton.

## Advanced Standing by Examination

## Advanced Placement (AP)

The University participates in the College Board's AP program, which allows students to receive college-level course credit for knowledge achieved through prior experience. AP examinations are given in May, upon completion of college-level material. Students who wish to receive credit and advanced placement through the AP program should have test scores sent to the University of Dayton. Advanced standing with credit in appropriate subject areas is awarded as follows:

- For a score of 5 - one or two terms of advanced standing with credit, depending on subject area.
- For a score of 4 - one term of advanced standing with credit.
- For a score of 3 - one term of advanced standing with credit is awarded in selected subject areas.

Scores below 3 do not entitle the applicant to either credit or advanced standing.

## College Level Examination Program (CLEP)

The University of Dayton also participates in the College Level Examination Program (CLEP), sponsored by the College Board. CLEP offers examinations in specific subjects. Since not all subject examinations are acceptable and some subject examinations require an essay, please contact Testing Services at the University of Dayton at (937) 229-3277 for information. Credit is not awarded for general examinations.

## General Certificate of Education A-Level Examinations

GCE A-Level examinations are based on a British secondary school program of college-level work and standardized examinations. To receive credit submit official test results to the Office of the Dean. A-Level examinations with a grade of " E " or better will be considered for credit.

## International Baccalaureate

The IB Program is a rigorous pre-university course of studies leading to examinations. Each examined subject is graded on a scale of one (minimum) to seven (maximum). Diploma candidates are required to select one subject from each of the six available groups. At least three and not more than four subjects are taken at higher level while others are taken at standard level.

IB is administered through the Office of the Dean in the College of Arts and Sciences. Based on results of IB higher level examinations, students may receive transfer credit. Credit is not awarded for standard level examinations.

## Application for Admission

Applications for first-year admission should be submitted to the Office of Admission and Financial Aid through the University of Dayton's online application or the Common Application. There is no fee to apply. Students are encouraged to submit applications early in their senior year of high school. The University of Dayton has an early action deadline of November 1 and a regular decision deadline of February 1.

Along with the application (including the essay), the applicant must submit an official transcript of courses and grades in secondary school and official results of the ACT or SAT. The counselor recommendation form is optional.

Any person whose native language is not English must submit an acceptable score on:

- The Test of English as a Foreign Language (TOEFL)
- The English Language Proficiency Test (ELPT)
- Pearson Test of English Academic (PTE)
- Advanced Placement International English Language (APIEL) Examination
- The International English Language Testing System (IELTS)
- Scholastic Aptitude Test (SAT) or
- American College Testing (ACT).

Exceptions to this policy may be made for students whose education has been in schools where English is the principal language of instruction.

Admission is based on the total information submitted by the applicant on his or her behalf. It is the applicant's responsibility to see that complete information has been provided to the Office of Admission and Financial Aid.

## Considerations for Admission

The applicant must have graduated from a high school accredited by a regional accrediting agency, a state department of education or the equivalent, and have a total record indicating a likelihood of success at the University of Dayton. The General Education Development (GED) certificate is also recognized for consideration by the admission committee.

The quality of the academic record is shown by the applicant's grades, selection of courses, and class standing or ranking. Although no set pattern of courses is required for admission, a well-prepared candidate will have had from 15 to 18 units in English, social sciences, mathematics, foreign language and laboratory science. Those who plan to major in one of the natural sciences, mathematics, computer science, business administration or engineering will find a strong mathematics background helpful.

Additional indicators of academic aptitude are scores received on the ACT, SAT and, when applicable, the Test of English as a Foreign Language (TOEFL). A recommendation from the high school guidance counselor is reviewed by the admission committee if submitted, although it is not a mandatory component of the application process.

Each applicant is strongly encouraged to visit campus and talk with an admission counselor. A visit also will provide an opportunity to see campus and ask questions of students and faculty.
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| Business 4 <br> (all <br> majors) | 2 | 1 | 1 | 1 | 1 |  |  |  | 1 | 6 |
| Engineerir 4 (all majors) | 2 | 1 | 1 | 1 | 1 |  | 1 | 1 |  | 4 |
| Engineerinf <br> Technology <br> (all <br> majors) | 2 | 1 | 1 | 1 |  |  | 1 |  |  | 6 |
| Teacher Education | 2 | 1 | 1 | 1 |  | 1 |  |  | 1 | 5 |
| Dietetics 4 | 2 | 1 | 1 | 1 | 1 | 1 | 1 |  |  | 4 |
| Exercise <br> Science <br> \& Fitness <br> Managem <br> Exercise <br> Science/ <br>  <br> Nutrition | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 |
| Pre- 4 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  | 3 |

Physical
Therapy,
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Physiology

| Sport | 4 | 2 | 1 | 1 | 1 | 1 | 6 |
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Graphic
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History,
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Therapy,
Philosophy,
Photography,
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| Applied 4 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 4 |
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| Economics, |  |  |  |  |  |  |  |  |
| Computer |  |  |  |  |  |  |  |  |
| Science, |  |  |  |  |  |  |  |  |
| Mathematics, |  |  |  |  |  |  |  |  |
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| Systems |  |  |  |  |  |  |  |  |
| Geology, 4 | 2 | 1 | 1 | 1 | 1 | 1 |  | 5 |
| Environmental |  |  |  |  |  |  |  |  |
| Geology |  |  |  |  |  |  |  |  |

## International Students

## Academic Programs

International students applying for an undergraduate program should submit the online Application for Undergraduate Admission and Scholarship or the Common Application and follow the general admission procedure outlined in the application instructions. The applicant whose native language is not English must submit proof of English proficiency by submitting one of the following:

- Test of English as a Foreign Language (TOEFL) - a minimum score of 70 on the Internet-based (IB) test or 523 on the paper-based (PB) test is required for full admission. Please use the University of Dayton's institution code 1834 when requesting your TOEFL score from Educational Testing Service (ETS).
- International English Language Testing System (IELTS) - a minimum Band 6.0 score is required for full admission.
- Pearson Test of English Academic (PTE) - a minimum score of 55 is required for full admission.
- English Language Proficiency Test (ELPT) - a minimum score of 956 is required for full admission.
- Advanced Placement International English Language (APIEL) Examination - a minimum score of three (3) is required for full admission.
- Scholastic Aptitude Test (SAT) - a minimum critical reasoning score of 550 .
- American College Testing (ACT) - a minimum English score of 24.

Undergraduate applicants unable to demonstrate the required English Proficiency options for their level of study at the time of application may be considered for conditional admission. Such a student will be expected to attend the University of Dayton's Intensive English Program and successfully complete the program or obtain the required TOEFL score for their level of study before full admission to an academic program will be granted.

For all students applying to an academic program, an official copy of the student's complete academic record of all previously attended secondary schools, colleges or universities must be received. This record must include dates of attendance, all subjects studied, grades earned and marks achieved on examinations. These documents must be accompanied by a certified English translation if the documents are not
in English. Documents must be sent directly from the institution to the University.

## Intensive English Program

Students wishing to study English as a second language may enroll in the University's Intensive English Program. Students may apply for admission to the Intensive English Program only or they may apply for conditional admission to an academic program at the University of Dayton. If a student seeking conditional admission completes an application to an academic program, a separate application for the Intensive English Program is not required.

The University of Dayton and the United States Bureau of Immigration and Customs Enforcement require that students who meet the academic requirements for admission for any of the above University programs, and plan to enter the U.S. on $\mathrm{F}-1$ (student) or $\mathrm{J}-1$ (scholar/exchange visitor) visas, provide proof of financial support before immigration documents (I-20 or DS-2019) can be issued. Proof of ability to cover the first year's educational costs, living and other miscellaneous expenses must be made available to the University. Financial documents should be submitted during the application process along with all other supporting documentation. We do not accept emailed, scanned or other photocopies of these documents.

Documents should include:

- An original bank statement issued within the past six months that shows the account number and balance.
- Statement of sponsorship, if not self-funded, indicating the extent and duration of support.

The following documents are helpful in processing the applicant's immigration record:

- A photocopy of the applicant's passport listing official name, birth date, etc.
- If the applicant is in the U.S., a photocopy of the visa and I-94 on which the applicant entered the country.


## Programs for Select At-Risk Students

The University has planned academic support programs, subject to availability, for a limited number of students who are judged to need special support to be successful at the University of Dayton.

The Fully Integrated Resource, Support and Transition (FIRST) Program is offered to a limited number of students whose academic profile and experience suggest they will benefit from a structured transition to college. In accepting admission to the University, FIRST students and their parents sign a contract indicating their understanding of the expectations for participants in the program. FIRST students are enrolled in a course during the fall semester which is designed to engage students in discussion and activities that will enhance their learning and study skills. In addition, FIRST students are expected to attend learning support sessions offered for several courses during the first semester.

The University Special Admits Program serves entering first-year students who are capable of academic success but, due to deficiencies in their academic background, need additional support to realize their full potential. Each year the Office of Admission and Financial Aid, in collaboration with each academic division (College of Arts and Sciences, Schools of Business Administration, Education and Health Sciences, and

Engineering), sets guidelines for accepting a limited number of first-year undergraduates as Special Admit students. Each academic division has developed support programs to help Special Admit students succeed in college. Depending on the academic division, the Special Admits Program may include careful course placement, special advising, supplemental instruction in designated courses, study tables, math workshops and cohort formation. Contact the Office of Admission and Financial Aid for specific information about the Special Admits Program in each academic division.

## Transfer Students

Students from accredited institutions may be considered for transfer to the University of Dayton provided they are in good standing socially and academically (minimum of a C average -2.0 cumulative grade point average). Possession of the minimum grade point average for consideration does not imply admissibility to the University. Most areas of study prefer a 2.5 or higher grade point average for admission.

Transfer students will be considered for admission after they have followed the regular admission procedure. Applicants for transfer admission may submit the University of Dayton's online application or the Common Application. ACT or SAT scores are required of transfer applicants under 21 years of age. All transfer candidates must submit official transcripts from all institutions previously attended. The dean's office of the appropriate college or school will evaluate the transcript(s) to determine the number of transferable credits. In general, all college credits earned with a " C " ( 2.0 on a 4.0 scale) or higher from any regionally accredited college or university will transfer and be included on the University of Dayton transcript. No credit will be given for a course in which the student earned below a "C". The evaluation to determine which courses will be accepted toward the degree will also be completed by the dean's office of the appropriate college or school.

A student with transfer credit from a two-year institution will be required to have at least 54 semester hours from a four-year institution for any baccalaureate degree. A transfer student is considered for a degree only if the last 30 semester hours have been taken from the University of Dayton and other requirements for graduation have been met.

## UD Sinclair Academy

The UD Sinclair Academy is a partnership between Sinclair Community College and the University of Dayton. Program details, including pathways from Sinclair to the University for courses leading to 23 majors, can be found in the articulation agreements.

As part of the UD Sinclair Academy, a student would have access to University of Dayton benefits while taking classes at Sinclair. Students receive support from UD advisors and are eligible for enhanced financial aid packages upon official transfer to UD. Access to UD student activities including clubs, fitness facilities and athletic events are also included for Academy students.

For more information visit the UD Sinclair Academy website (https:// www.udayton.edu/academy).

## Veteran Services Office

All departments at the University of Dayton have been approved by the State Approving Agency for Veterans' Training. Please contact the Flyer Student Services Office to inquire as to whether your major is listed among those approved by the State Approving Agency. The Flyer Student

Services Office is located in St. Mary's Hall and will assist in processing the necessary forms for educational benefits. A student who is receiving V.A. benefits is required to complete and sign all required forms, which can be obtained online. (http://www.udayton.edu/flyersfirst/veterans/\#2) Students using veteran benefits must inform the Flyer Student Services Office of any changes made to major, enrollment or registration. Failure to follow this procedure may result in cancellation of benefits by the Department of Veterans Affairs. If a student on probation fails to acquire the required cumulative grade point average at the end of the next fulltime term, the benefits from the V.A. may cease.

## Directories

In this section:

- Administrators (p. 22)
- Faculty (p. 23)
- Governing and Advisory Boards (p. 47)


## Administrators

| Title | Name |
| :---: | :---: |
| President | Eric F. Spina, Ph.D. |
| Provost | Paul H. Benson, Ph.D. |
| Associate Provost for Global and Intercultural Affairs | Amy E. Anderson, Ph.D. |
| Associate Provost for Academic Affairs and Learning Initiatives | Deborah J. Bickford, Ph.D. |
| Executive Director of Government and Regional Relations | S. Ted Bucaro |
| Vice President for Diversity and Inclusion | Lawrence A. Burnley, Ph.D. |
| Vice President for Student Development | William M. Fischer, J.D. |
| Vice President for Mission and Rector | Rev. James F. Fitz, S.M. |
| Vice President for Finance and Administrative Services | Andrew T. Horner |
| Vice President for University Advancement | Jennifer L. Howe |
| Dean, School of Education and Health Sciences | Kevin R. Kelly, Ph.D. |
| Vice President for Facilities and Campus Operations | Beth H. Keyes |
| Vice President for Research and Executive Director of UDRI | John E. Leland, Ph.D., P.E. |
| Dean, School of Business Administration | John D. Mittelstaedt, Ph.D. |
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Damasco, Ione (2006), University Libraries, Associate Professor - B.A., The Ohio State University, 1997; M.L.S., Kent State University, 2005.

Daniel-Cox, Minnita D. (2013), Music, Assistant Professor - B.A., Bowling Green State University, 2003; M.A., University of Michigan, 2005; D.M.A., 2008.

Daniels, Malcolm W. (1989), Electrical and Computer Engineering, Assistant Professor - B.S., University of Strathclyde, 1979; Ph.D., 1982.

Daprano, Corinne M. (2001), Health and Sport Science, Associate Professor - B.A., Cleveland State University, 1985; M.Ed., 1994; Ph.D., The Ohio State University, 2001.

Darrow, David (1996), History, Associate Professor - B.A., University of Northern Iowa, 1986; M.A., University of Iowa, 1988; Ph.D., 1996.

Dasgupta, Simanti (2009), Sociology, Anthropology, and Social Work, Associate Professor - B.A., University of Calcutta, 1993; M.A., Delhi School of Economics, 1995; M.Phil., 1997; Ph.D., New School, 2009.

Davies, Susan (2006), Counselor Education and Human Services, Associate Professor - B.A., University of North Carolina, 1995; M.S., Miami University, 1997; Sp.E., 1999.

Davis, Susan T. (2001), Psychology, Assistant Professor - B.A., Miami University, 1986; M.A., 1989; Ph.D., 1991.

Davis-Berman, Jennifer L. (1986), Sociology, Anthropology, and Social Work, Professor - B.S., Denison University, 1979; M.S.W., The Ohio State University, 1982; Ph.D., 1985.

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De Luca, Barbara M. (1975), Educational Administration, Associate Professor - B.S., University of Dayton, 1971; M.Ed., Miami University, 1975; Ph.D., The Ohio State University, 1984.

DeAloia, Leah (2005), English, Lecturer - B.A., Miami University, 1969; M.A., 1976; Ph.D., University of Michigan, 1981.

DeAnda, Neomi D. (2013), Religious Studies, Assistant Professor - B.A., St. Mary's University, 1997; M.A., 1999; M.A., Oblate School of Theology, 2005; Ph.D., Loyola University, 2011.

DeBeer, Madeleine A. P. (2013), Chemistry, Lecturer-B.A. and B.S., Gonzaga University, 1996; Ph.D., University of Wisconsin, 2003.

DeMarco, Jr. George M. (1997), Health and Sport Science, Associate Professor - B.S., Bridgewater State College, 1978; M.S., Ithaca College, 1992; Ed.D., University of Georgia, 1998.

Demmitt, Alan (1996), Counselor Education and Human Services, Associate Professor - B.Th., Atlanta Bible College, 1982; M.A., Northeast Louisiana University, 1991; Ph.D., Iowa State University, 1994.

DesAutels, Peggy J. (2001), Philosophy, Professor - B.A., Principia College, 1977; M.S., Washington University, 1988; M.A., 1993; Ph.D., 1995.

Devine, Christopher (2016), Political Science, Assistant Professor - B.A., Connecticut College, 2006; M.A., Ohio State University, 2008; Ph.D., 2011.

Dickey, Irene J. (1992), Management and Marketing, Lecturer - B.S., University of Dayton, 1982; M.B.A., Wright State University, 1987.

Diestelkamp, Wiebke S. (1998), Mathematics, Professor - M.S., University of Wisconsin-Milwaukee, 1992; Ph.D., 1998.

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Dillon, Mary E. (1995), Biology, Lecturer-B.S., Xavier University, 1982; M.S., Purdue University, 1984.

Dixon, Lee (2009), Psychology, Associate Professor - B.A., Western Kentucky University, 2000; M.A., 2002; Ph.D., University of Tennessee, 2009.

Dodd, Gloria F. (2011), University Libraries, Lecturer - B.A., Christendom College, 1987; M.Div., Dominican House of Studies, 1990; S.T.L., Dominican House of Studies, 1993; D.S.T., International Marian Research Institute, 2011.

Doench, Meredith (2010), English, Lecturer - B.S., Ball State University, 1998; M.A., University of Dayton, 2003; Ph.D., Texas Tech University, 2007.

Dolph, David (2005), Educational Administration, Assistant Professor - B.S., University of Dayton, 1970; M.S., Xavier University, 1973; Ph.D., University of Dayton, 1994.

Donahoe-Fillmore, Betsy K. (2006), Physical Therapy, Associate Professor - B.S., The Ohio State University, 1988; M.S., University of Indianapolis, 1992; Ph.D., Union Institute and University, 2002.

Donaldson, Steven L. (2006), Civil and Environmental Engineering and Engineering Mechanics, Associate Professor - B.S., Purdue University, 1981; M.S., University of Dayton, 1987; Ph.D., Stanford University, 1993.

Donnelly, Patrick G. (1979), Sociology, Anthropology, and Social Work, Professor - B.S., St. Joseph's College, 1974; M.A., University of Delaware, 1977; Ph.D., 1981.

Dorf, Samuel N. (2010), Music, Assistant Professor - B.A., Boston University, 2002; B.M., 2002; M.A., Tufts University, 2004; Ph.D., Northwestern University, 2009.

Doyle, Dennis M. (1984), Religious Studies, Professor - B.A., LaSalle College, 1974; M.A., Ohio University, 1978; M.A., Catholic University of America, 1980; Ph.D., 1984.

Driskell, Shannon, O.S. (2003), Mathematics, Professor - B.S., Edinboro University, 1992; M.A., East Carolina University, 1997; Ph.D., University of Virginia, 2003.

Dugan, Riley G. (2014), Management and Marketing, Assistant Professor - B.A., Emory University, 2001; M.B.A., University of Cincinnati, 2007; M.S., 2008; Ph.D., 2014.

Duggan Joseph E. (2017), Economics and Finance, Visiting Assistant Professor - B.A., Boston College, 2010; M.A., The Ohio State University, 2013; M.S., 2016; Ph.D., anticipated 2018.

Duncan, Bradley D. (1991), Electro-Optics and Photonics, Professor B.S.E.E., Virginia Polytechnic Institute and State University, 1986; M.S., 1988; Ph.D., 1991.

Dunham, Diane (2014), Philosophy, Lecturer - B.A., Wright State University, 1995; M.A., 1998; M.Hum., 1999.

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Elliott, Susan (2003), Law Library, Professor - J.D., University of Dayton, 1987; M.L.S., Kent State University, 2002.

Eloe, Paul W. (1980), Mathematics, Professor - B.A., Vanderbilt University, 1975; M.S., University of Missouri, 1977; Ph.D., 1980.

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Engle, Marianne S. (2012), Psychology, Lecturer - B.S., University of Wisconsin, 1990; Ph.D., Indiana University, 2001.

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Falkowski, Sean A. (2003), Engineering Management Systems and Technology, Associate Professor - B.S.M.E., GMI Engineering Management Institute, 1995; M.S.E.M., University of Dayton, 2002.

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Farris, Phillip (2000), Music, Artist in Residence - B.A. and B.M., University of Washington, 1980; M.M., University of Cincinnati, 1986.

Fehrman-Cory, Emily (2017), Mechanical and Aerospace Engineering, Faculty of Practice - B.S., Thomas More College, 2005; M.S., University of Dayton, 2007; Ph.D., 2014.

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Figueroa, Daniel (2005), Global Languages and Cultures, Lecturer - B.A., Universidad de Concepcion, 1989; M.Ed., Wright State University, 2004.

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Fisher, Mary I. (2008), Physical Therapy, Associate Professor-B.A., Wittenberg University, 1989; M.S., Boston University, 1991; Ph.D., University of Kentucky, 2010.

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Flanagan, Melissa T. (1989), Student Activities, Administrative - B.S., Western Illinois University, 1986; M.A., Bowling Green State University, 1988.

Fleischmann, Ellen L. (1998), History, Professor - B.A., Wesleyan University, 1977; Ph.D., Georgetown University, 1996.

Florek, Neil A. (2014), Philosophy, Lecturer - B.A., Purdue University Calumet, 1990; M.A., Purdue University, 1993.

Flynn, Roland R. (2001), Communication, Lecturer - B.A., University of Wisconsin-Eau Claire, 1982.

Freitag, Jennifer L. (2014), Communication, Lecturer - B.A., University of Northern Iowa, 2004; M.A., 2006; Ph.D., Southern Illinois University, 2013.

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Fuhs, Mary W. (2013), Psychology, Assistant Professor - B.A., Saint Mary-of-the-Woods College, 2006; M.A., University of Notre Dame, 2009; Ph.D., 2011.

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Gabbe, Myrna (2005), Philosophy, Associate Professor - B.A., University of Wisconsin, 1995; Ph.D., University of Pennsylvania, 2005.

Gallagher, Colleen E. (2014), Teacher Education, Assistant Professor B.A., Xavier University, 2000; M.S., Georgetown University, 2005; Ph.D., 2012.

Gallivan, Sean P. (2010), Physical Therapy, Clinical Faculty-B.S., University of Dayton, 1991; M.S., Duke University, 1994.

Gallo, Gerry (2007), Health and Sport Science, Lecturer - B.S., Lake Superior State University, 2002; B.Ed., Lakehead University, 2003; M.S., University of Dayton, 2006.

Gardstrom, Susan C. (1998), Music, Professor - B.M., Michigan State University, 1981; M.A., Western Michigan University, 1985; Ph.D., Michigan State University, 2004.

Gauder, Heidi (1998), University Libraries, Professor - B.A., University of Dayton, 1990; M.A., Purdue University, 1992; M.L.S., Indiana University, 1995.

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Getrost, Kara N. (2010), English, Lecturer - B.A., Kent State University, 1998; M.A., University of North Carolina, 2002; Ph.D., 2008.

Ghere, Richard K. (1984), Political Science, Professor - B.A., Concordia College, 1968; M.A., University of Toledo, 1970; Ph.D., Wayne State University, 1975.

Gibbs, Lance L. (2014), Sociology, Anthropology and Social Work, Lecturer - B.S., University of the West Indies, 2000; M.Sc., 2004; M.A., Bowling Green State University, 2010; Ph.D., 2015.

Globig, James E. (1998), Engineering Management Systems and Technology, Associate Professor - B.E.T., University of Dayton, 1979; M.B.A., Miami University, 1982; M.S., University of Dayton, 2003.

Glont, Anca (2016), History, Assistant Professor - B.A., American University in Bulgaria, 2005; M.A., Central European University, 2006; University of Illinois, 2015.

Gold, Lindsay (2016), Teacher Education, Assistant Professor - B.A., University of Dayton, 2001; M.S., 2004; Ph.D., 2017.

Goldberg, Erica (2017), Law, Assistant Professor - B.A., Tufts University, 2002; J.D., Stanford University Law School, 2005.

Goldman, Daniel (1997), Geology, Professor - B.A., State University of New York at Buffalo, 1985; M.A., 1987; Ph.D., 1993.

Gomez, Miguel (2014), History, Lecturer - B.A., University of North Carolina, 1998; M.A., Appalachian State University, 2004; Ph.D., University of Tennessee, 2011.

Goodnight, Jackson A. (2010), Psychology, Associate Professor - B.S., Xavier University, 2002; Ph.D., Indiana University, 2010.

Gorman, Michael F. (2002), Management Information Systems, Operations Management, and Decision Sciences, Professor - B.S., Xavier University, 1987; M.A., Indiana University, 1990; Ph.D., 1994.

Gowda, Raghava G. (1983), Computer Science, Associate Professor B.S.E.E., Banaras Hindu University, 1971; M.B.M., 1973; M.B.I.S., Georgia State University, 1981; Ph.D., 1988.

Gratto, Sharon Davis (2008), Music, Professor and Graul Chair in the Humanities - B.Mus, Oberlin College, 1966; M.A. American University, 1968; M.Mus., State University of New York, 1986; D.M.A., Catholic University of America, 1994.

Griffin, Jeffrey L. (1990), Communication, Associate Professor - A.B., University of North Carolina, 1979; M.A., University of Texas, 1983; Ph.D., University of North Carolina, 1990.

Grilliot, Mary (2015), Accounting, Visiting Assistant Professor- B.S., University of Dayton, 1975; M.B.A., 1979; Ph.D. , 2015.

Groppe, Elizabeth T. (2017), Religious Studies, Professor - B.A., Earlham College, 1985; M.A., Ph.D., University of Notre Dame, 1999.

Gunasekaran, Sidaard (2016), Mechanical and Aerospace Engineering, Assistant Professor - B.S., SRM University, 2011; M.S., University of Dayton, 2012; Ph.D., 2016.

Gunawan, Gunawan (2014), Chemistry, Lab Instructor - B.S., Universitas Sumatera Utara Indonesia, 2005; M.S., University of Arkansas Little Rock, 2008; Ph.D., 2013.

Haan, Jennifer E. (2010), English, Associate Professor - B.A., Calvin College, 1999; M.A., Purdue University, 2001; Ph.D., 2009.

Hageman, John B. (2010), Mechanical and Aerospace Engineering, Lecturer - B.S., University of Dayton, 1973.

Hall, Scott E. (1996), Counselor Education and Human Services, Professor - B.S.B.A., West Carolina University, 1986; M.Ed., Ohio University, 1991; Ph.D., The Ohio State University, 1994.

Hall, Stephen R. (2007), Management Information Systems, Operations Management, and Decision Sciences, Lecturer - B.S., The Ohio State University, 1971; M.S., University of Dayton, 1976.

Hallett, Miranda C. (2015), Sociology, Anthropology, and Social Work, Assistant Professor - B.A., Bard College, 1999; M.A., Cornell University, 2006; Ph.D., 2009.

Hallinan, Charles G. (1983), Law, Professor - B.A., University of Dayton, 1969; J.D., University of Toledo, 1977; LL.M., Yale University, 1983.

Hallinan, Kevin P. (1988), Mechanical and Aerospace Engineering, Professor - B.S., University of Akron, 1982; M.S., Purdue University, 1984; Ph.D., Johns Hopkins University, 1988.

Hammett, Lindsey (2014), Physician Assistant Education, Clinical Faculty - B.S., Kettering College of Medical Arts, 2007; M.P.A., 2008.

Han, Jee Hee. (2006), Communication, Associate Professor - B.A., Sogang University, 1997; M.A., 1999; M.A., University of Georgia, 2001; M.S., 2002; Ph.D., Purdue University, 2007.
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Hardie, Russell C. (1993), Electrical and Computer Engineering, Professor - B.E.S., Loyola College, 1988; M.E.E., University of Delaware, 1990; Ph.D., 1992.

Haritashya, Umesh (2013), Geology, Associate Professor - Ph.D., Indian Institute of Technology, 2005.

Harris, Kayla (2016), University Libraries, Assistant professor - B.A., Michigan State University, 2010; M.L.S., University of South Carolina, 2011.

Harrison, William B. (2010), Mathematics, Lecturer - B.A., Carleton College, 1974; M.S.T., University of Chicago, 1976.

Hart, Elizabeth S. (2011), School of Engineering, Lecturer - B.Ch.E., University of Dayton, 1991; M.Sc., 1992.

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Haus, Joseph W. (1999), Electro-Optics and Photonics, Professor - B.S., John Carroll University, 1971; M.S., 1972; Ph.D., Catholic University of America, 1974.

Hayford, Michelle (2014), Communication - Theatre, Dance and Performance Technology, Associate Professor - B.A., University of California at Santa Cruz, 2000; M.A., Northwestern University, 2001; Ph.D., 2005.

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Hellman, Lesley A. (2012), Teacher Education, Teacher in Residence B.A., Notre Dame College, 2004; M.Ed., Wright State University, 2009; Ph.D., University of Dayton, 2012.

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Henderson-Hurley, Martha L. (2017), Sociology, Anthropology, and Social Work, Professor - B.A., Furman University, 1992; M.A., University of Cincinnati, 1996; Ph.D., 2000.

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Henrick, Andrew K. (2013), Mechanical and Aerospace Engineering, Lecturer - B.S., University of Notre Dame, 2000; Ph.D., 2008.

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Heyne, Joshua S. (2014), Mechanical and Aerospace Engineering, Assistant Professor - B.S.E., University of Dayton, 2007; M.S.,
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Higgins, Aparna W. (1984), Mathematics, Professor - B.S., University of Bombay, 1978; M.S., University of Notre Dame, 1980; Ph.D., 1983.

Hiller, James M. (2001), Music, Assistant Professor - B.M., Capital University, 1982; M.M.T., Temple University, 1994; Ph.D., 2011.

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Huacuja, Judith L. (2000), Art and Design, Professor - B.A., University of Houston, 1993; B.F.A., 1993; M.A., Rice University, 1995; Ph.D., University of California, Santa Barbara, 2000.

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Jones, Jeffrey C. (2002), Art and Design, Associate Professor - B.F.A., University of Tennessee at Chattanooga, 1998; M.F.A., University of Cincinnati, 2000.

Jones, Julie R. (2015), Art and Design, Lecturer - B.F.A., University of Dayton, 2007; M.F.A., Columbia College Chicago, 2012.

Jones, Sarah (2016), Communication, Lecturer - B.A., Hastings College, 2007; M.A., Minnesota State University, 2009; Ph.D, University of Nebraska, 2014.

Joo, Young Ki (2016), Management and Marketing, Assistant Professor B.S., Cornell University, 2010; Ph.D., Indiana University, 2016.

Kallenberg, Brad J. (2001), Religious Studies, Professor - B.S. Ed., University of Minnesota, 1981; M.A., Fuller Theological Seminary, 1992; Ph.D., 1998.

Kanet, John J. (2002), Management Information Systems, Operations Management, and Decision Sciences, Professor and Niehaus Chair in Operations Management - B.S., Lehigh University, 1967; M.B.A., Loyola College, 1971; Ph.D., Pennsylvania State University, 1979.

Kango-Singh, Madhuri (2009), Biology, Associate Professor - B.S., Vikram University, 1989; M.S., Devci Ahilya University, 1991; Ph.D., 1997.

Kapusta, Daniel (2017), Economics and Finance, Lecturer - B.S., University of Wisconsin, Madison, 1985; M.B.A., Michigan State University, 1986.

Kargl, Kathleen W. (2013), Art and Design, Lecturer - B.S., University of Dayton, 1992.

Kariyawasam, Tharanga M. (2008), Physics, Lecturer - B.S., University of Colombo, 2000; M.S., University of Cincinnati, 2004; Ph.D., 2008.

Kashani, A. Reza (1994), Mechanical and Aerospace Engineering, Professor, - B.S.M.E., Sharif University, 1977; M.S.M.E., University of Wisconsin, 1979; M.S., 1988; Ph.D., University of Wisconsin, 1989.

Kavanaugh, Jeffrey L. (2003), Biology, Lecturer - B.S., University of Kansas, 1984; M.S., 1988; Ph.D., Virginia Polytechnic Institute and State University, 1998.

Keane-Sexton, Maureen (2005), English, Lecturer - B.A., University of Dayton, 1995; M.A., 2002.

Kebede, Messay (1998), Philosophy, Professor - B.A., University of Grenoble, France, 1971; M.A., 1973; Ph.D., 1976.

Kelley, Alan (2014), Communication, Lecturer-B.A., Angelo State University; M.B.A., University of Dayton, 1996.

Kelly, Katherine L. (2010), University Libraries, Associate Professor - B.S., Ohio University, 2008; M.S., Syracuse University, 2010.

Kelly, Kevin (2010), School of Education and Health Sciences, ProfessorB.A., Boston University, 1976; Ph.D., University of Iowa, 1985.

Kelly, Mary Kay (2005), Teacher Education, Associate Professor - B.A., College of St. Benedict, 1987; B.S., University of Minnesota, 1990; M.Ed., Miami University, 1996; Ph.D., 2001.

Kennedy, Gregory R. (2015), Communication, Media Specialist in Residence - B.A., University of Tennessee, 2007.

Keune, Marsha B.(2014), Accounting, Assistant Professor - B.S., Butler University, 1996; M.S., University of Central Florida, 2005; Ph.D., University of Wisconsin, 2010.

Keune, Timothy M. (2014), Accounting, Assistant Professor - B.S., Butler University, 1995; Ph.D., University of Wisconsin, 2010.

Kiewitz, Christian (2002), Management and Marketing, Professor - M.A., Johannes Gutenberg Universitat, Germany, 1995; M.A., Auburn University, 1998; Ph.D., University of Alabama, 2002.

Kim, Ryu-Kyung (2013), Music, Lecturer - B.A., Manhattan School of Music, 1994; M.M.A., 1996; D.M.A., State University of New York at Stonybrook, 2012.

Kinney, Allison L. (2014), Mechanical and Aerospace Engineering, Assistant Professor - B.S., Tulane University, 2005; M.S., University of Texas, 2007; Ph.D., 2010.

Kinnucan-Welsch, Kathryn (1997), Teacher Education, Professor - B.A., University of Illinois, 1971; M.A., Western Michigan University, 1988; Ed.D., 1995.

Kirschman, Keri (2005), Psychology, Associate Professor - B.A., Denison University, 1997; M.A., University of Kansas, 1999; Ph.D., 2003.

Kisel, Masha I. (2016), English, Lecturer - B.A., University of Wisconsin, 2001; M.A., Northwestern University, 2004; Ph.D., 2008.

Kissock, J. Kelly (1995), Mechanical and Aerospace
Engineering, Professor - B.S., University of Colorado, 1982; M.S.,
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Klosterman, Donald (2017), Chemical and Materials Engineering,
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Klosterman, Susan (2015), Geology, Lab Instructor - B.S., University of Dayton, 1989; B.S., 1999; M.S., Wright State University, 2005.

Knapke, Andrea (2015), Physician Assistant Education, Clinical Faculty - B.S., University of Toledo, 2002; B.S., Massachusetts College of Pharmacy and Health Sciences, 2005; M.S., 2007.

Knorr, Eric A. (2016), Music, Artist in Residence - B.M., College of Wooster, 1989; M.M., University of Akron, 1991; D.M.A., University of Cincinnati, 1994.

Kosmowski, Andrew J., S.M. (2014), University Libraries, Lecturer-B.A., Bradford College, 2000; M.A., University of Missouri, 2014

Kozar, Rev. Joseph F., S.M. (1985), Religious Studies, Assistant Professor - B.A., University of Dayton, 1969; M.A., 1973; M.Div., University of St Michael's College, Toronto, 1976; Ph.D., 1989.

Koziol, Andrea M. (1993), Geology, Associate Professor - B.A., Boston University, 1983; Ph.D., University of Chicago, 1988.

Krakowski, Rebecca J. (2000), Mathematics, Associate Professor - B.S., Allegheny College, 1986; M.S., North Carolina State University, 1995; Ph.D., 2000.

Krane, Carissa M. (2001), Biology, Professor and Scheullein Endowed Chair - B.S., Marquette University, 1990; Ph.D., Washington University, 1996

Krummel, Miriamne A. (2002), English, Associate Professor - B.A. University of Connecticut, 1988; M.A., Hunter College, 1992; Ph.D., Lehigh University, 2002.

Krystofik, Anthony (2006), Management and Marketing, Lecturer - B.S. University of Dayton, 1978; M.B.A., 1982

Kublik, Catherine M. (2013), Mathematics, Assistant Professor - B.S., Ecole Nationale Superieure de Techniques Avancees, 2003; M.Sc., University of British Columbia, 2005; Diplome d'Ingenieur, Ecole Nationale Superieure de Techniques Avancees, 2005; Ph.D., University of Michigan, 2010.

Kunz, Benjamin R. (2010) Psychology, Associate Professor - B.S., University of Utah, 2001; M.S., 2007; Ph.D., 2010.

Kurt, Layla (2014); Counselor Education and Human Services, Assistant Professor - B.S., Bowling Green State University, 1996; M.Ed., 2002; Ph.D., University of Toledo, 2012.

Kwon, Suki (2004), Art and Design, Associate Professor - B.A., Dae Gu University, 1999; M.A., University of Iowa; M.F.A., 2003.

Lacey, Denise (2007), Law, Associate Professor of Externships - B.A., University of Dayton, 1995; J.D., Cleveland State University, 1999.

Lafdi, Kahlid (2001), Chemical and Materials Engineering, Professor and WBI Endowed Chair in Nanomaterials - M.S., Nancy University, 1987; Ph.D., 1989; D.Sc., 1991.

Larrain-Hubach, Andres (2016), Mathematics, Assistant Professor - B.S., Universidad del Cauca, 2003; M.S., Universidad de los Andes, 2006; Ph.D., Boston University, 2012

Lau, Terence J. (2002), Management and Marketing, Professor - B.A., Wright State University, 1995; J.D., Syracuse University, 1998.

Lawless, Catherine (2013), Teacher Education, Visiting Professor - B.S., University of Dayton, 1990; M.S., 1997; Ed.D., University of Cincinnati, 2004.

Layman-Guadalupe, Melissa J. (2011), Psychology, Lecturer - B.S., Swarthmore College, 1990; M.S., Ohio University, 1993; Ph.D., 1996.

Leach, James (2017), Music, Lecturer - B.S., University of Arkansas, 1983; M.M., University of Central Arkansas, 1986; D.M.A., Boston University, 2008.

Lee, C. William (1982), Chemical and Materials Engineering, Professor B.S., National Taiwan University, 1976; M.S., University of Akron, 1979; Ph.D., The Ohio State University, 1982.

Lee, Yoon (2016), Chemisty, Lab Instructor - B.S., Seoul National University, 1986; MS., 1989; Ph.D., 1994.

Leming, Laura M., F.M.I. (1999), Sociology, Anthropology, and Social Work, Associate Professor - B.A., St. Mary's University of San Antonio, 1979; M.A., University of Dayton, 1987; Ph.D., Boston College, 1999.

Leslie, James M. (2006), Music, Artist in Residence - B.M.Ed., Central Michigan University, 1994.

Lewis, Vincent C. (2014), Management and Marketing, Lecturer-B.A., Western Kentucky University, 1986; M.A., Antioch University, 1995.

Li, Xiaoli (2012), English, Assistant Professor - B.A., Xi'an Foreign Language University, 1992; M.A., Bowling Green State University, 2002; Ph.D., Clemson University, 2011.

Liang, Robert (2016), Civil and Environmental Engineering and Engineering Mechanics, Professor - B.S., Tam Kang University, 1974; M.S., North Carolina State University, 1979; Ph.D., University of California, Berkeley, 1985.

Light, Lindsey (2014), English, Lecturer - B.A., Wright State University, 2008; M.A., University of Dayton, 2010.

Linderman, Jon K. (2000), Health and Sport Science, Associate Professor - B.A., California State University, 1984; M.A., 1987; Ph.D., University of California, 1991.

Litka, Stephanie J. (2011), Sociology, Anthropology and Social Work, Lecturer - B.A., University of Florida, 2001; M.A., 2004.

Liu, Ruihua (2004), Mathematics, Professor - B.E., Nankai University, 1985; M.E., 1988; Ph.D. (Engineering), 1994; M.S., University of Georgia, 2001; Ph.D. (Mathematics), 2002.

Lopper, Matthew (2007), Chemistry, Associate Professor - B.A., University of Dayton, 1998; Ph.D., University of Wisconsin, 2003.

Lovenjak, Nicole (2016), University Libraries, Lecturer-B.A., Western University, 2012. M.A., 2014.

Lowe, Robert (2016), Mechanical and Aerospace Engineering, Assistant Professor - B.S., Ohio Northern, 2003; M.S., The Ohio State University, 2005; Ph.D., 2015.

Lyon, Cody (2014), English, Lecturer - B.A., Seattle University, 2003; M.Ed., University of Missouri, 2010; Ph.D., Indiana University of Pennsylvania, 2016.

Lyons, Megan (2016), Teacher Education, Assistant Professor - B.S., Auburn University, 2002; M.Ed., 2004; Ed.S., Columbus State University, 2007; Ed.D., Valdosta State University, 2012.

Mackay, Elizabeth (2010), English, Assistant Professor - B.S., Appalachian State University, 1996; M.A., 2001; Ph.D., Miami University, 2007.

MacLachlan, Heather (2009), Music, Associate Professor - B.M.A., University of Manitoba, 1995; B.E., 1995; M.A., Cornell University, 2007; Ph.D., 2009.

Macleod, Alex (2009), English, Lecturer - B.A., University of Arizona, 1991; M.A., 1993; Ph.D., 2001.

Magnuson, Phillip C. (1981), Music, Professor - B.A., Duke University, 1971; M.M., University of Massachusetts, 1974; D.M.A., University of Wisconsin, 1977.

Majka, Theo J. (1983), Sociology, Anthropology, and Social Work, Professor - B.S., College of William and Mary, 1969; M.A., University of California, 1972; Ph.D., 1978.

Mammana, Angela (2011), Chemistry, Assistant Professor - Ph.D., Universita degli Studi di Catania, 2008.

Marshall, David (2017), Management and Marketing, Assistant Professor - B.S., Webber State University, 2007; M.B.A., Syracuse University, 2012; Ph.D., University of Mississippi, anticipated 2017.

Martin, Elizabeth S. (2004), English, Lecturer - B.A., Carnegie Mellon University, 1978; M.A., University of Dayton, 1982.

Marvin, William C. (2002), Philosophy, Lecturer - B.A., Kent State University, 1977; M.A., University of Dayton, 1991.

Mashburn, Joe D. (1981), Mathematics, Professor - B.S., Southern Missionary College, 1976; M.A., University of California, 1978; Ph.D., 1981.

Masthay, Mark (2006), Chemistry, Associate Professor - B.A., University of California, San Diego, 1978; M.S., University of California, Riverside, 1984; Ph.D., Carnegie Mellon University, 1988.

Mathes, Constance R. (1989), Teacher Education, Clinical Faculty - B.A., Wright State University, 1973; M.Ed., 1980.

Mathews, Jay (2013), Physics, Assistant Professor - B.S., Colorado State University, 2007; M.S., Arizona State University, 2010; Ph.D., 2011.

McCombe, John P. (2001), English, Professor - B.S., University of Pittsburgh, 1987; M.A., 1996; Ph.D., The Ohio State University, 2000.

McCutcheon, James R., III (1997), Music, Artist in Residence - B.S., University of Dayton, 1973; B.M., Wright State University, 1978; M.M., 1991.

McEwan, Ryan (2008), Biology, Associate Professor - B.S., University of Kentucky, 1999; M.S., 2002; Ph.D., Ohio University, 2006.

McGrew, Allen J. (1995), Geology, Associate Professor - B.A., Earlham College, 1983; M.S., Stanford University, 1987; Ph.D., University of Wyoming, 1992.

McIntosh, Novea (2015), Teacher Education, Clinical Faculty - B.A., University of the West Indies, 2002; M.Ed., Indiana Wesleyan University, 2008; Ph.D., Walden University, 2014.

Meek, William (2009), Management and Marketing, Associate Professor B.S., Bradley University, 2003; M.B.A., 2004; Ph.D., University of Louisville, 2010.

Meisami, Sayeh (2015), Philosophy, Assistant Professor-B.A., Shahid Beheshti University, 1994; M.A., Tehran University, 1997, 2001, Ph.D., 2005.

Merithew, Caroline A. (2002), History, Associate Professor - B.A., University of Missouri, 1990; M.A., University of Illinois, 1994; Ph.D., 2000.

Merithew, Robert (2015), Physics, Lecturer - B.S., Stanford University, 1991; M.S., University of Illinois, 1993, Ph.D., 2000.

Merriman, Harold L. (2006), Physical Therapy, Associate Professor - B.A., Atlantic Union College, 1982; Ph.D., Loma Linda University, 1990; M.P.T., Andrews University, 1997.

Middleton, Molly (2015), Physician Assistant Education, Clinical Faculty B.S., University of Dayton, 2003; M.D., University of Cincinnati, 2007.

Miller, Nancy A. (2002), Political Science, Associate Professor - B.A., Clemson University, 1995; M.A., Rice University, 2000; Ph.D., 2002.

Miller, Sheila (2004), Law, Professor of Lawyering Skills - B.A., Miami University, 1983; J.D., University of Cincinnati, 1987.

Miller, Tracy K. (2002), Management and Marketing, Lecturer B.S.B.A., The Ohio State University, 1985; M.L.H.R., 1986.

Miller, Vincent (2009), Religious Studies, Professor and Gudorf Chair in Catholic Theology- M.A., University of Notre Dame, 1990; Ph.D., 1997.

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Monk, Debra P. (1999), Residential Programs, Administrative - B.A., University of North Carolina at Charlotte, 1993; M.A., University of Dayton, 1995.

Montoya, R. Matthew (2008), Psychology, Associate Professor B.A., University of California, Berkeley, 1996; M.A., University of Massachusetts/Dartmouth, 1998; Ph.D., University of North Carolina, 2004.

Moore, Cecilia A. (1996), Religious Studies, Associate Professor - A.B., Sweet Briar College, 1988; M.A., University of Virginia, 1991; Ph.D., 1996.

Morgan, Thomas L. (2006), English, Associate Professor - B.A., University of Oregon, 1993; M.A., University of Buffalo, 1999; Ph.D., 2004.

Morris III, Willie L. (1993), Music, Associate Professor - B.M.E., East Carolina University, 1982; M.A., Stephen F. Austin State University, 1984; D.M.A., University of Missouri at Kansas City Conservatory of Music, 1996.

Mosser, R. Kurt (1992), Philosophy, Associate Professor - B.A., Southern Methodist University, 1979; M.A., University of Chicago, 1982; Ph.D., 1990.

Mueller-Hansen, Karolyn (2009), Biology, Associate Professor B.S., Pennsylvania State University, 1980; M.S., Drexel University, 1984; Ph.D., University of Delaware, 1990.

Mundew, Leslie M. (2002), Economics and Finance, Lecturer - B.S., The Ohio State University, 1979; M.B.A., Harvard University, 1984.

Muratore, Christopher (2017), Chemical and Materials Engineering Associate Professor - B.S., Colorado School of Mines, 1999; Ph.D., 2002.

Murray, Andrew P. (1996), Mechanical and Aerospace Engineering, Professor - B.S., Rose-Hulman Institute of Technology, 1989; M.S., University of California, Irvine, 1993; Ph.D., 1996.

Myers, Kevin (1987), Chemical and Materials Engineering, Professor -B.S., University of Dayton, 1981; D.Sc., Washington University, 1986.

Mykytka, Edward F. (1998), Engineering Management Systems and Technology, Professor - B.S., University of Dayton, 1976; M.S., University of Iowa, 1978; Ph.D., University of Arizona, 1983.

Myszka, David H. (1989), Mechanical and Aerospace Engineering, Associate Professor - B.S.M.E., State University of New York at Buffalo, 1985; M.S.M.E., 1989; M.B.A., University of Dayton, 1996; Ph.D., 2009.

Neeley, Grant (2005), Political Science, Associate Professor - B.A., Texas A\&M University, 1989; M.P.A., 1991; Ph.D., University of Tennessee, 1996.

Neiheisel, Steven R. (2013), Political Science, Lecturer - B.A., Xavier University, 1981; M.B.A., 1982; Ph.D., Washington University, 1990.

Nenonene, Rochonda (2007), Teacher Education, Clinical Faculty - B.S., Baldwin-Wallace College, 1992; M.A., University of Dayton, 1998; Ph.D., 2007.

Nguyen, Tam (2016), Computer Science, Assistant Professor - B.S., Vietnam University of Science, 2005; M.Eng., Chonnam National University, 2009; Ph.D., National University of Singapore, 2013.

Nielsen, Mark G. (2001), Biology, Professor - B.A., Oberlin College, 1988; Ph.D., Stanford University, 1994.

Nittala, Lakshminarayana (2017), Management Information Systems, Operations Management, and Decision Sciences, Assistant Professor B.Tech., Indian Institute of Technology, 1999; Ph.D, University of Illinois, 2006; Ph.D, University of California-San Diego, anticipated 2017.

Ober, Shirley J. (2000), Mathematics, Lecturer - B.S., Edinboro University, 1970; M.A., State University of New York at Buffalo, 1972.

Oberlander, Judith (1987), Institute for Technology-Enhanced Learning, Administrative - B.A., University of Dayton, 1969; M.S., 1987; Ph.D., 2002.

Obermeyer, James (2017), Mechanical and Aerospace Engineering, Lecturer - B.M.E., Kettering University, 1983; M.S., Rensselaer Polytechnic Institute, 1997.

O'Gorman, John M. (1999), University Libraries, Associate Professor B.A., Walsh University, 1981; M.L.S., St. John's University, 1983.

Oh, Kyoungrae (2006), Communication, Lecturer - B.A., Sogang University, 1995; M.A., 1998; M.S., University of Georgia, 2003; Ph.D., Purdue University, 2008.

O'Mara, Erin M. (2011), Psychology, Associate Professor - B.A., Quinnipac Universtiy, 2003; M.A., Northern Arizona University, 2005; Ph.D., University of Tennessee, 2011.

Ordóñez, Raúl, E. (2001), Electrical and Computer Engineering, Professor - B.S., Monterrey Institute of Technology, 1994; M.S., The Ohio State University, 1996; Ph.D., 1999.

Orji, Cyril (2005), Religious Studies, Associate Professor - B.A., University of Ibadan, 1990; M.Div., Dominican House of Studies, 1994; M.Ed., North Dakota State University, 2003; Ph.D., Marquette University, 2005.

Painter, Chad (2016), Communication, Assistant Professor - B.A., Capital University, 1999; M.A., University of Missouri, 2009; Ph.D., 2012.

Pair, Donald L. (1991), Geology, Professor - B.S., St. Lawrence University, 1983; M.Sc., University of Waterloo, 1986; Ph.D., Syracuse University, 1991.

Pan, Yue (2003), Management and Marketing, Professor - B.A., Tsinghua University, 1996; B.Eco., 1996; M.Eng., 1998; Ph.D., University of Georgia, 2003.

Parker, Michelle (2015), Management and Marketing, Lecturer - B.S., Wright State University, 1983; M.B.A., 1988.

Paslaru, Viorel (2007), Philosophy, Associate Professor - B.A., University of Bucharest, 1996; M.A., 1998; Ph.D., University of Cincinnati, 2007.

Patterson, Arnecia (2013), English, Lecturer - B.A., Wright State University; M.A., University of Dayton.

Pautz, Michelle (2008), Political Science, Associate Professor - B.A., Elon University, 2003; M.A., Virginia Polytechnic Institute and State University, 2005; Ph.D., 2008.

Payne, Michael A. (1977), Philosophy, Associate Professor - B.A., Xavier University, 1966; M.A., Boston College, 1970; Ph.D., University of Georgia, 1972.

Pedrotti, Leno M. (1987), Physics, Professor - B.A., Wright State University, 1981; Ph.D., University of New Mexico, 1986.

Peñas-Bermejo, Francisco J. (1991), Global Languages and Cultures, Professor - B.A., Universidad Complutense, 1984; M.A., University of Georgia, 1986; Ph.D., 1991.

Penno, Robert P. (1987), Electrical and Computer Engineering, Professor - B.S.M.E., Rose-Hulman Institute of Technology, 1971; M.S.E.E., 1984; Ph.D., University of Dayton, 1987.

Perkins, David A. (2013), Mechanical and Aerospace Engineering, Lecturer - B.S., University of Dayton, 2003; Ph.D., 2011.

Perugini, Saverio, Jr. (2004), Computer Science, Associate Professor B.S., Villanova University, 1998; M.S., Virginia Polytechnic Institute and State University, 2001; Ph.D., 2004.

Petrykowski, John C. (1985), Mechanical and Aerospace Engineering, Associate Professor - B.S., University of Wisconsin, 1975; M.S., University of Illinois, 1978; Ph.D., 1981.

Phelps, Kyle (2002), Art and Design, Professor - B.S., Ball State University, 1996; M.F.A., University of Kentucky, 2000.

Phung, Phu (2015), Computer Science, Assistant Professor - B.E., Ho Chi Minh City University of Technology, 2001; M.Sc., University of Ulsan South Korea, 2006; Ph.D., Chalmers University of Technology, 2011.

Picca, Leslie (2005), Sociology, Anthropology, and Social Work, Professor - B.A., Mary Washington College, 1997; M.A., University of Florida, 2000; Ph.D., 2004.

Pici, Joseph R. (1965), English, Professor - B.S., University of Dayton, 1962; M.A., 1964.

Piepgrass, Kent W. (2011), Chemistry, Lab Instructor-B.A., Linfield College, 1978; M.S., University of Arizona, 1982; Ph.D., Georgetown University, 1989.

Pierce, Jason L. (2002), Political Science, Professor - B.A., Southwestern University, 1994; Ph.D., University of Texas-Austin, 2002.

Pinnell, Margaret F. (2000), Mechanical and Aerospace Engineering, Associate Professor - B.M.E., University of Dayton, 1988; M.S., 1988; Ph.D., 1995.

Pitychoutis, Pothitos (2013) Biology, Assistant Professor - B.S., National \& Kapodistrian University of Athens, 2005; M.Sc., 2010; Ph.D., 2010.

Plick, William (2016), Physics, Assistant Professor - B.S., Connecticut College, 2004; Ph.D, Louisiana State University, 2010.

Plungis, Joan (2006), University Libraries, Associate Professor - B.A., The Ohio State University, 1974; M.A., Case Western Reserve University, 1977; M.L.S., Indiana University, 1988.

Poe, Danielle M. (2001), Philosophy, Professor - B.A., Seattle University, 1995; M.A., Catholic University, Belgium, 1997; Ph.D., Fordham University, 2001.

Poitras, Marc A. (1998), Economics and Finance, Associate Professor B.A., University of Massachusetts/Dartmouth, 1989; M.A., George Mason University, 1991; Ph.D., 1995.

Polanski, Patricia J. (1998), Counselor Education and Human Services, Associate Professor - B.A., University of Akron, 1979; M.Ed., Ohio University, 1987; Ph.D., University of North Carolina at Greensboro, 1998.

Portier, William L. (2003), Religious Studies, Professor and Spearin Chair in Catholic Theology - B.A., Loyola University, 1969; M.A., Washington Theological Coalition, 1972; Ph.D., University of St. Michael's College, 1980.

Potter, Rebecca C. (2002), English, Associate Professor - B.A., University of California, Davis, 1991; M.A., Brandeis University, 1998; Ph.D., 2001.

Powers, Deborah (2016) Physics, Lab Instructor - B.S., Rochester Institute of Technology, 1986; M.S., Cornell University, 1992.

Prasad, Jayesh (1990), Management Information Systems, Operations Management, and Decision Sciences, Professor - B.Tech., Indian Institute of Technology, Kharagpur, 1982; P.G.D.M., Indian Institute of Management, Calcutta, 1984; Ph.D., University of Pittsburgh, 1994.

Prather, Chelse (2016), Biology, Assistant Professor - B.S., University of Kentucky, 2003; Ph.D., University of Notre Dame, 2010.

Pruce, Joel (2014), Political Science, Assistant Professor - B.A., Rutgers University, 2002; M.A., University of Denver, 2006; Ph.D., 2011.

Pu, Haozhou (2017), Health and Sports Science, Assistant Professor B.S., Beijing Sport University, 2010; M.S., Florida State University, 2012; Ph.D., 2017.

Qumsiyeh, Maher (2008), Mathematics, Associate Professor - M.A., Indiana University, 1979; Ph.D., 1986.

Raffoul, Youssef N. (1999), Mathematics, Professor - B.S., University of Dayton, 1987; M.S., 1989; M.A., Indiana University, 1991; Ph.D., Southern Illinois University, 1996.

Ramamoorti, Sridhar (2017), Accounting, Associate Professor - B.Com., Bombay University, 1984; M.A., Ohio State University, 1992; Ph.D, 1995.

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Reeb, Roger N. (1993), Psychology, Professor and Roesch Chair in Sciences- B.A., Westminster College, 1984; M.S., Virginia Commonwealth University, 1987; Ph.D., 1993.

Reilly, Tracy L. (2006), Law, Professor - B.A., Northern Illinois University, 1990; J.D., Valparaiso University School of Law, 1995.

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Ren, Dan (2013), Mathematics, Assistant Professor - B.S., Beijing Normal University, 2004; M.A., 2006;M.S., New Mexico State University, 2008; Ph.D., Boston University, 2013.

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Rhoads, Elizabeth (2016), Biology, Lecturer - B.A., Miami University, 2000; M.S., University of Dayton, 2006; Ph.D., 2011.

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Ritterhoff, Kimberly A. (2011), Health and Sport Science, Lecturer - B.S., Ohio University, 2003; M.S., Wright State University, 2011.

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Robinson, Jayne B. (1994), Biology, Professor - B.S., Bowling Green State University, 1978; M.S., The Ohio State University, 1984; Ph.D., 1991.

Rodgers, Linda V. (1998), Counseling Center, Administrative - B.A., Mt. Mary College, 1989; M.S., University of Wisconsin-Milwaukee, 1991; Ph.D., 1998.

Rodriguez, Dario N. (2012), Psychology, Lecturer - B.A., University of Dayton, 2006; M.A., University of Dayton, 2008; Ph.D., John Jay College of Criminal Justice \& the Graduate Center, 2012.

Roecker Phelps, Carolyn E. (1995), Psychology, Associate Professor B.S., University of Illinois, 1984; M.S., Illinois State University, 1990; Ph.D., University of lowa, 1994.

Rojas, Eddy M. (2014), School of Engineering, Professor - M.S., University of Colorado, 1995; M.A., 1997; Ph.D., 1997

Rowe, Rachel M. (2015), English, Lecturer - B.A., University of Dayton, 2013; M.A., 2015.

Roy, Haimanti (2013), History, Associate Professor - B.A., Presidency College, 1996; M.A., Jawaharlal Nehru University, 1998; Ph.D., University of Cincinnati, 2006.

Ruggiero, John G. (1995), Economics and Finance, Professor and Edmund B. O'Leary Chair in Economics - B.A., State University of New York at Cortland, 1988; M.A., Syracuse University, 1992; Ph.D., 1995.

Rumpfkeil, Markus P. (2010), Mechanical and Aerospace Engineering, Associate Professor-B.S., Technical University of Berlin, 2000; M.S., Humboldt University, 2004; Ph.D., University of Toronto, 2008.

Rush, Tobias W. (2011), Music, Associate Professor - B.A., Adams State College, 1996; M.M., University of Northern Colorado, 1998; D.A., 2007.

Russo, Charles J. (1996), Educational Administration, Joseph Panzer Professor of Education - B.A., St. John's University, 1972; M.Div., Seminary of the Immaculate Conception, 1978; J.D., St. John's University, 1983; Ed.D., 1989.

Ryan, Mark (2014), Religious Studies, Assistant Professor - B.A., Swarthmore College, 1994; Ph.D., University of Virginia, 2006.

Sableski, Mary (2012), Teacher Education, Assistant Professor - B.S., University of Dayton, 1998; M.S., University of Dayton, 2001; Ph.D., The Ohio State University, 2007.

Sagardia, Sarah (2017), Communication, Lecturer - B.A., St. Mary's College, 2008; M.A., Ohio University, 2010; Ph.D., anticipated 2017.

Saintignon, Pauline L. (1983), Mathematics, Lecturer - B.S., Bowling Green State University, 1978; M.S., University of Dayton, 1982.

Saliba, Joseph E. (1980), Civil and Environmental Engineering and Engineering Mechanics, Professor - B.S., University of Dayton, 1979; M.S., 1980; Ph.D., 1983; Reg. Prof. Engr.

Saliba, Tony E. (1986), Chemical and Materials Engineering, Professor B.Cm.E., University of Dayton, 1981; M.S., 1982; Ph.D., 1986.

Salih, Jusuf (2012) , Religious Studies, Associate Professor - B.A. Marmara University, 1994; M.A., Marmara University, 1997; M.A., University of Virginia, 2006; Ph.D., University of Virginia, 2011

Salisbury, William D. (2002), Management Information Systems, Operations Management, and Decision Sciences, Professor - B.B.A., Ohio University, 1986; M.B.A., Miami University, 1988; Ph.D., University of Calgary, 1996

Sanderson, Mary (2014), History, Lecturer - B.A., Ohio University, 2002; M.A., Vanderbilt University, 2005; Ph.D., 2010.

Sandhu, Sarwan S. (1980), Chemical and Materials Engineering, Professor - B.S., Panjab University, 1961; B.S.Ch.E., 1966; M.S.E., University of New Brunswick, 1970; D.I.C., Imperial College, University of London, 1973; Ph.D., University of London, 1973.

Sandy, Michael R. (1987), Geology, Professor - B.S., Queen Mary College, University of London, 1980; Ph.D., 1984.

Sangalang, Angeline (2017), Communication, Assistant Professor - B.A. University of Illinois, 2011; M.A., University of Southern California, 2014 Ph.D., 2015.

Santamarina, Juan C. (1997), History, Associate Professor - B.A., University of Wisconsin, 1989; Ph.D., Rutgers University, 1995.

Sanyal, Tamisra (2009), Computer Science, Lecturer - B.S., University of Calcutta, 1973; M.S., India Institute of Technology Kanpur, 1976; M.Tech. 1976; M.S., University of Rochester, 1983.

Sarangan, Andrew M. (2000), Electro-Optics and Photonics, Professor B.A.Sc., University of Waterloo, 1991; M.A.Sc., 1993; Ph.D., 1996.

Sayre, Molly (2017), Sociology, Anthropology, and Social Work, Assistant Professor - B.A., College of Wooster, 2002; M.S.W., University of Cincinnati, 2008; Ph.D, University of Kentucky, 2016.

Scantlin, Ronda M. (2002), Communication, Associate Professor - B.A., Bethany College, 1992; M.A., University of Kansas, 1995; Ph.D., University of Texas, 1999.

Schaller, Molly A. (1989), Counselor Education and Human Services, Associate Professor - B.A., The Ohio State University, 1987; M.S., Miami University, 1989; Ph.D., Ohio University, 2000.

Schaurer, Randall L. (2012), Physics, Lab Instructor-B.S., Maryville College, 1975; M.Ed., Wright State University, 1984.

Schellhammer, Ulrike B. (2001), Global Languages and Cultures, Lecturer M.A., Rice University, 1989; Ph.D., 1993.

Schimelpfening, James (2016), Religious Studies, Lecturer - B.A., St. Mary's University, 1972; M.A., Creighton University, 1989; D.M., Catholic Theological Union, 2006.

Schmitt, Jeffrey (2016), Law, Assistant Professor - B.A., Miami University, 2004; J.D., University of Virginia, 2007.

Schneider, Kellie R. (2013) Engineering Management Systems and Technology, Assistant Professor - B.S., University of Arkansas, 2002; M.S., 2006; Ph.D., 2013.

Schneider, Scott J. (2004), Engineering Management Systems and Technology, Associate Professor - B.S.E.E., University of Dayton, 1996; M.S., The Ohio State University, 1998.

Schnell, Phillip O. (2017), Biology, Lecturer - B.S., University of Cincinnati, 1995; M.S., 1997.

Schoenenberger, Katherine R. (2001), Geology, Lecturer - B.A., Wellesley College, 1995; B.S., University of Dayton, 1999; M.S., University of Cincinnati, 2001.

Schramm, Christine H. (1993), Student Development, Administrative B.A., Michigan State University, 1987; M.A., 1989.

Schutte, Maria G. (2013), Economics and Finance, Assistant Professor B.S., Pontifical Catholic University of Ecuador, 1993; M.B.A., University of Notre Dame, 1995; Ph.D., University of Missouri, 2007.

Secrease-Dickson, Cassandra (2013), Communication, Lecturer - A.A., Bucks County Community College, 1994; B.A., West Chester University of Pennsylvania, 1997; M.A., Central Missouri State University, 2000; Ph.D., Indiana University, 2012.

Segalewitz, Scott I. (2000), Engineering Management Systems and Technology, Professor - B.S.E.E., Rutgers University, 1983; M.S., New Jersey Institute of Technology, 1986; Reg. Prof. Engr.

Seielstad, Andrea M. (1996), Law, Professor - A.B., Princeton University, 1988; J.D., University of Michigan, 1991.

Sexto, Laura Elizabeth (2012), History, Lecturer - B.A., University of California, Santa Cruz, 1997; M.A., New York University, 2002; Ph.D., University of California, Irvine, 2012.

Shabalala, Dalindyebo (2017), Law, Assistant Professor - B.A., Vassar College, 1998; J.D, University of Minnesota, 2004; Ph.D, Maastricht University, 2014.

Shaw, Lori E. (1988), Law, Professor of Lawyering Skills - B.S., University of Dayton, 1983; J.D., 1987.

Shen, Ju (2014), Computer Science, Assistant Professor - M.S., University of Birmingham, 2006; Ph.D., University of Kentucky, 2014.

Sherwan, Natalie (2017), History, Lecturer - B.A., University of Bucharest, 1994; M.A., 1998; Ph.D., University of California, Los Angeles, 2016.

Shimmin, Donald L. (2004), Economics and Finance, Lecturer-B.S., Miami University, 1983; M.B.A., Wright State University, 1990.

Shreffler, Stephanie (2014), University Libraries, Assistant Professor B.A., Hillsdale College, 2010; M.S., University of Michigan, 2012.

Sievers, David A. (2009), Music, Artist in Residence - B.M.A., Washington State University, 1994; M.M.A., Boise State University, 1996; D.M., Indiana University, 2009.

Simon, Julie (2010), Mathematics, Lecturer - B.A., Wellesley College, 1983; Ph.D., University of Illinois, 1989.

Singh, Amit (2007), Biology, Associate Professor - B.S., H.P. University, 1988; M.S., Devi Ahilya University, 1990; Ph.D., 1995.

Skill, Thomas D. (1984), Communication, Professor - B.A., State University of New York at Buffalo, 1978; M.A., 1980; Ph.D., 1984.

Slade, R. Andrew (2003), English, Associate Professor - B.A., Seattle University, 1995; B.A., Katholieke Universiteit Leuven, 1996; Ph.D., State University of New York at Stony Brook, 2004.

Small, Jamie L. (2015), Sociology, Anthropology, and Social Work, Assistant Professor - B.A., Adelaide University, 2002; M.A., Indiana University, 2006; Ph.D., San Francisco State University, 2015.

Smith, Anthony B. (1999), Religious Studies, Associate Professor - B.A., Boston College, 1985; M.A., University of Minnesota, 1989; Ph.D., 1995.

Smith, Elizabeth (2017), Physics, Lab Instructor - B.S., Purdue University, 1989; M.S., University of Michigan, 1992; Ph.D. 1998.

Smith, Todd B. (2001), Physics, Associate Professor - B.S., University of Notre Dame, 1989; M.A., Miami University, 1990; M.S., University of Michigan, 1995; Ph.D., 1998.

Sparks, John R. (1995), Management and Marketing, Professor - B.B.A., West Texas State University, 1988; Ph.D., Texas Tech University, 1995.

Spiker, Russell (2017), Sociology, Anthropology, and Social Work, Lecturer - B.A., University of North Carolina, 2009; M.A., University of Cincinnati, 2012.

Spina, Eric F. (2016), Office of the President, Professor - B.S., Carnegie Mellon University, 1983 ;M.A., Princeton, 1987; Ph.D, 1988.

Sritharan, R. (1999), Computer Science, Professor - B.Tech., Indian University of Technology, 1985; M.S., Vanderbilt University, 1988; Ph.D., 1995.

Stangel, Courtney (2015), Accounting, Lecturer - B.S., University of Dayton, 2003; M.S., 2003.

Stover, Richard C. (2014), Accounting, Lecturer-B.S., Wright State University, 1979.

Strain, Margaret M. (1995), English, Professor - B.A., Bellarmine College, 1977; M.A., University of Louisville, 1986; Ph.D., 1995.

Strauss, Andrew (2015), School of Law, Professor-B.A., Princeton University, 1981; J.D., New York University, 1985.

Street, Donna L. (2002), Accounting, Professor and AI \& Marcie Mahrt Chair in Accounting - B.B.A., East Tennessee State University, 1981; M.Acc., University of Tennessee, 1983; Ph.D., 1987

Street, P. Eric (1992), Music, Professor - B.M., Cornell College, 1975; M.M. Indiana University, 1977; D.M., 1985.

Subramanyam, Guru (1998), Electrical and Computer
Engineering, Professor - B.E., University of Madras; 1984; M.S., University of Cincinnati, 1988; Ph.D., 1993

Sudakov, Ivan (2015), Physics, Assistant Professor-B.S., Ural State University, 2006; B.E., 2008; M.S., 2008; Ph.D., St. Petersburg State University, 2011; Ph.D., Novgorad State University, 2012.

Sullivan, Diane M. (2006), Management and Marketing, Associate Professor - B.S.B.A., University of Central Florida, 1997; M.B.A.; Ph.D., 2006.

Sullivan Smith, Emily. (2014), Art and Design, Assistant Professor B.F.A., Kent State University, 2004; M.F.A., 2010.

Sun, Yvonne (2014), Biology, Assistant Professor - B.S., University of California at San Diego, 2002; Ph.D., University of California, Berkeley, 2008.

Sutherland, Bobbi Sue (2014), History, Assistant Professor - B.A., Calvin College, 2003; M.A., Yale University, 2005; M. Phil, 2007; Ph.D., 2009.

Swavey, Rochael J. (2010), Chemistry, Lab Instructor-B.S., Cleveland State University, 1991; M.S., Case Western Reserve University, 1993; Ph.D., 1997.

Swavey, Shawn M. (2002), Chemistry, Professor - B.S., Edinboro University, 1991; M.S., Case Western Reserve University, 1995; Ph.D., 1998.

Sweeney, Paul D. (2001), Management and Marketing, Professor - B.A., California State University, 1978; M.S., University of Pittsburgh, 1980; Ph.D., 1983.

Sweet, Stephanie K. (2015), Communication, Lecturer - B.A., University of Dayton, 2012, M.A., 2014.

Szeghi Dempster, Tereza (2009), English, Associate Professor - B.A., University of Cincinnati, 2000; M.A., University of Arizona, 2004; Ph.D., 2007.

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Tabo, Tamara (2017), Law, Visiting Assistant Professor - B.A., University of Houston, 2001; J.D., Texas Southern University, 2011

Taha, Tarek (2009), Electrical and Computer Engineering, Assistant Professor - B.A., DePauw University, 1996; B.S.E.E., Georgia Institute of Technology, 1996; M.S.E.E., 1998; Ph.D., 2002.

Talbott, Anthony N. (2008), Political Science, Lecturer - B.A., Columbia College, 1995; M.A., Ohio University, 1997.

Tanova, Nadya (2009), Global Languages and Cultures, Lecturer - M.A. University of Sofia, 1990; M.A., Purdue University, 2003.

Taylor, Annette M. (1988), Communication, Assistant Professor - B.A., Michigan State University, 1974; M.A., 1988; Ph.D., Bowling Green State University, 1996.

Taylor, Denise G. (2006), Civil and Environmental Engineering and Engineering Mechanics, Associate Professor - B.S., Virginia Polytechnic Institute and State University, 1981; B.C.E., University of Dayton, 1992; M.S., University of Cincinnati, 1995; Ph.D., Johns Hopkins University, 2003.

Tello Sánchez, Maria Teresa (2007), Global Languages and Cultures, Lecturer-- B.A., University of Salamanca, 2003; M.A., 2007.

Thomas, Patrick W. (2011), English, Associate Professor- B.A. Mercyhurst College, 2002; M.A., Kent State University, 2006; Ph.D., 2011.

Thomas-Trout, Misty (2016), Art and Design, Assistant Professor - B.F.A., University of Dayton, 2011 ; M.F.A., Ohio University, 2016.

Thompson, Daniel Patrick Speed (2012), Religious Studies, Associate Professor - B.A., University of Notre Dame, 1986; A.M., University of Chicago, 1987; Ph.D., 1998.

Thompson, Teresa L. (1985), Communication, Professor - B.A., University of Wisconsin, 1975; M.A., Purdue University, 1976; Ph.D., Temple University, 1980.

Thompson-Miller, Ruth K. (2011), Sociology, Anthropology and Social Work, Assistant Professor - B.S., University of Florida, 2002; M.S., Texas A\&M University, 2004; Ph.D., 2011.

Tibbetts, Paul E., Jr. (1969), Philosophy, Professor - B.A., Clark University, 1964; M.A., Boston University, 1965; Ph.D., Purdue University, 1973; Ph.D., University of Illinois, 1985

Titlebaum, Peter J. (1996), Health and Sport Science, Professor - B.S., State University of New York at Brockport, 1982; M.S., The Ohio State University, 1985; Ph.D., Temple University, 1993.

Todd, Adam G. (2010), Law, Professor of Lawyering Skills - B.A., Brown University, 1983; J.D., Rutgers School of Law, 1990.

Toll, Shannon (2016), English, Assistant Professor - B.A., Kansas State University, 2006; M.A., San Diego State University, 2008; Ph.D., University of Oklahoma, 2016

Toomb, Laura G. (2015), Communication, Lecturer - B.A. University of Dayton, 1988; M.A., Northwestern University, 1992.

Toubia, Elias A. (2011), Civil and Environmental Engineering and Engineering Mechanics, Associate Professor - B.S., Lebanese University, 2000; M.S., University of Dayton, 2003; Ph.D., 2008.

Trick, Kimberly A. (1994), Chemistry, Lecturer - B.Ch.E., University of Dayton, 1984; M.S., 1988; Ph.D., 1994.

Trollinger, Susan (2007), English, Professor - B.A., University of Wisconsin, 1986; M.A., University of Pittsburgh, 1988; Ph.D., 1995.

Trollinger, William (1998), History, Professor - B.S., Bethel College, 1977; M.S., University of Wisconsin, 1980; Ph.D., 1984.

Tsen, Hsuan (2012), Art and Design, Lecturer - B.A., Hampshire College, 1998; Ph.D., Stanford University, 2011.

Uhlman, Todd (2009), History, Assistant Professor - B.A., Indiana University, 1998; Ph.D., Rutgers University, 2008.

Untener, Joseph A. (1987), Engineering Management Systems and Technology, Professor - B.M.E., General Motors Institute, 1984; M.S., Purdue University, 1985.

Usman, Mohammad (2007), Mathematics, Associate Professor - M.S. and M.A., Ohio University, 2001; Ph.D., University of Cincinnati, 2007.

Valenzano, Joseph M. III (2011), Communication, Associate Professor - B.A., Providence College, 2000; M.A., University of Maine, 2002; Ph.D., Georgia State University, 2006.

Van Zandt, Victoria (2005), Law, Associate Professor of Lawyering Skills B.A., The Ohio State University, 1991; J.D., University of Dayton, 1996.

Vanderburgh, Paul (2004), Health and Sport Science, Professor - B.S., United States Military Academy, 1982; M.A., University of Georgia, 1988; Ed.M., Columbia University, 1991; Ed.D., 1992.

Vasquez, Erick (2015) Chemical and Materials Engineering, Assistant Professor - B.S., Universidad Centroamericana Jose Simeon Canas, 2007; M.S., Clemson University, 2009; Ph.D., Mississippi State University, 2013.

Velasquez, Ernesto (2009), Philosophy, Associate Professor - B.A., University of Illinois at Chicago, 1998; M.A., University of Hawaii, 2000; Ph.D., State University of New York at Buffalo, 2009.

Veliz-Cuba, Alan (2015), Mathematics - B.S., Universidad Nacional Mayor de San Marcos, 2003; Ph.D., Virginia Polytechnic Institute and State University, 2010.

Venard, Paul (2007), Law Library, Professor - B.S., John Carroll University, 1997; J.D., Kent State University, 2001; M.L.S., 2005.

Ventura, Renato (2010), Global Languages and Cultures, Associate Professor - B.A., Trinity College, 2003; M.A., University of Connecticut, 2006; Ph.D., University of Connecticut, 2011.

Vibber, Kelly S.(2014), Communication, Assistant Professor - B.A., Western Michigan University, 2003; M.A., Purdue University, 2005; Ph.D., 2014.

Voracheck, Laura (2007), English, Associate Professor - B.A., Trinity University, 1991; M.A., University of Texas-Houston, 1995; Ph.D., University of Wisconsin, 2004.

Vorontsov, Mikhail (2009), Electro-Optics and Photonics, Professor and WBI Endowed Chair in Ladar and Free Space Optical Communications - M.S., Moscow State University, 1974; Ph.D., 1977; D.Sc., Lomonosov Moscow State University, 1989.

Wagner, Peter G. (1999), Management Information Systems, Operations Management, and Decision Sciences, Lecturer - B.S., Louisiana Tech University, 1970; M.S., University of Southern California, 1980.

Wallace, Samuel P. (1982), Communication, Professor-B.A., The Ohio State University, 1975; M.A., 1979; Ph.D., 1985.

Walsh-Messinger, Julie (2015), Psychology, Assistant Professor - B.A., Boston College, 2004; M.A., 2006; M.A., Long Island State University, 2009; Ph.D., 2013.

Walter, Beth A. (2013), Communication, Lecturer - B.A., Carlow University, 1996; M.A., Duquesne University, 2004; Ph.D., 2014.

Wang, Fukuo Albert (2005), Economics and Finance, Professor - B.A., National Taiwan University, 1982; M.B.A., University of North Carolina, 1989; Ph.D., 1994.

Wang, Jia (2017), Economics and Finance, Assistant Professor - B.S., Shandong University, 2010; Ph.D., University of Oklahoma, 2015.

Wantland, Ryan (2016), Communication -Theatre, Dance, and Performance Technology, Lecturer - B.A., Indiana University, 2011; M.A., Ohio University, 2016.

Washington, Versalle (2010), History, Lecturer - B.S., United States Military Academy, 1985; M.A., The Ohio State University, 1994; Ph.D., 1995.

Watkins, David (2010), Political Science, Associate Professor - B.A., Western Washington University, 1997; M.A., University of Washington, 2000; Ph.D., 2008.

Watson, Blake A. (1992), Law, Professor - B.A., Vanderbilt University, 1978; J.D., Duke University, 1981.

Wawrose, Susan C. (1998), Law, Professor of Lawyering Skills B.A., Wellesley College, 1980; M.A., Columbia University, 1984; J.D., Northeastern University, 1990.

Webb, Kathleen M. (1993), University Libraries, Professor - B.S., Pennsylvania State University, 1982; M.L.S., University of California, Los Angeles, 1991.

Webber, Sarah J. (2010), Accounting, Associate Professor - B.S., University of Dayton, 2003; M.B.A., 2003; J.D., The Ohio State University, 2007; L.L.M., Capital University, 2010.

Welland, Kehler (2017), Communication - Theatre, Dance, and Performance Technology, Lecturer - B.A., Denison University, 2008; M.A., University of Nevada, 2011.

Welkener, Michele (2008), Counselor Education and Human Services, Associate Professor - B.F.A., Miami University, 1990; M.A., 1992; Ph.D., 2000.

Wells, Andrea Chenoweth (2012), Music, Artist in Residence - B.A., University of Dayton, 2000; M.Mus. Cleveland Institute of Music, 2004.

Wells, Charles E. (1984), Management Information Systems, Operations Management, and Decision Sciences, Professor - A.B., Harvard University, 1976; M.B.A., Miami University, 1977; Ph.D., University of Cincinnati, 1982.

Wells, Rebecca M. J. Yates (1980), Management and Marketing, Associate Professor - B.B.A., University of Cincinnati, 1973; M.B.A., 1975; Ph.D., 1980.

Wendorf, Thomas A., S.M. (1999), English, Associate Professor - B.A., University of Dayton, 1986; M.A., Washington University, 1995; Ph.D., 1999.

Whisnant, Rebecca S. (2003), Philosophy, Professor - B.A., Oberlin College, 1989; M.A., University of North Carolina, 1993; Ph.D., 2002.

Whitaker, Jayne K. Matlack (1993), Art and Design, Associate Professor B.S., University of Delaware, 1983; M.F.A., Temple University, 1993.

Whitaker, Joel A. (1993), Art and Design, Professor - B.F.A., University of Montevallo, 1985; M.F.A., Florida State University, 1988.

White, John J. (2007), Teacher Education, Associate Professor - B.A., University of Massachusetts at Boston, 1984; M.A., Boston College, 1995: Ph.D., 2000.

Whitney, Thomas J. (1988), Civil and Environmental Engineering and Engineering Mechanics, Associate Professor - B.M.E., University of Dayton, 1986; M.M.E., University of Delaware, 1988; Ph.D., University of Dayton, 2003.

Wilbers, Timothy A. (1983), Art and Design, Associate Professor B.A.Ed., The Ohio State University, 1972; M.A., 1974; M.F.A., Southern Illinois University, 1981.

Wilhoit, Stephen W. (1988), English, Associate Professor - B.A., University of Kentucky, 1980; M.A., University of Louisville, 1983; Ph.D., Indiana University, 1988.

Wilkens, Robert J. (1999), Chemical and Materials Engineering, Professor - B.C.M.E., University of Dayton, 1992; M.S. 1993; Ph.D., Ohio University, 1997.

Will, Kenneth (2016), Music, Lecturer - B.A., Ohio University, 2008; M.A., 2013.

Williams, Marlon L. (2014), Economics and Finance, Assistant Professor - B.S., University of the West Indies, 2001; M.S., 2006; Ph.D., Pennsylvania State University, 2013.

Williams, P. Kelly (1973), Biology, Professor - B.A., University of Texas, 1966; M.S., University of Minnesota, 1969; Ph.D., Indiana University, 1973.

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Wolfe, Randall N. (2016), Music, Artist in Residence - B.M., University of Cincinnati, 1982; M.M., 1983; D.M.A., 1991:

Wolters, Julie (2017), Biology, Lecturer - B.S., University of Dayton, 1997; M.S., 1999.

Work, Nicola (2009), Global Languages and Cultures, Associate Professor - B.A., Wayne State University, 1998; M.A., 2000.

Wright, David J. (1996), Biology, Associate Professor - B.S., University of Sheffield, England; Ph.D., University of lowa, 1989.

Wright, Shirley J. (1993), Biology, Professor - B.S., Loyola University, Chicago, 1981; M.S., 1983; Ph.D., University of Iowa, 1981.

Wu, Shuang-Ye (2004), Geology, Associate Professor - B.A., Nanjing University, 1991; M.A., Beijing Foreign Study University, 1994; M.Phil., Cambridge University, 1996; Ph.D., 2000.

Wulff, Susan M. (2012), Physician Assistant Education, Clinical Faculty -B.S., Kettering College of Medical Arts, 1999; M.S., Arizona School of Heath Sciences, 2002.

Wynn, Donald (2007), Management Information Systems, Operations Management, and Decision Sciences, Associate Professor - B.A. University of Tennessee, 1988; M.B.A., Middle Tennessee State University, 1998.

Yan, Xinyan (2016), Economics and Finance, Assistant Professor - B.S., Birmingham-Southern College, 2010; Ph.D., University of Alabama, 2016.

Yang, Jia J. (2014), Global Languages and Cultures, Assistant Professor - B.A., Peking University, 2002; M.A., Tsinghua University, 2005; M.A., The Ohio State University, 2007; Ph.D., 2014.

Yao, Zhongmei (2009), Computer Science, Associate Professor - B.E., Donghua Unviersity, 1997; M.S., Louisiana Tech University, 2004; Ph.D., Texas A\&M University, 2009.

Ye, Feng (2016), Electrical and Computer Engineering, Assistant Professor - B.S., Shanghai Jiao Tong University, 2011; Ph.D., University of Nebraska, 2015.

Yengulalp, Lynne (2009), Mathematics, Associate Professor - B.S., Miami University, 2001; M.S., 2003; Ph.D., University of Kansas, 2009.

Yocum, Sandra (1992), Religious Studies, Associate Professor - B.A., University of Oklahoma, 1976; Ph.D., Marquette University, 1987.

Yorke, Jerome (2015), Communication -Theatre, Dance and Performance Technology, Lecturer - B.F.A., Central Connecticut State University, 2002; M.F.A., Dell'Arte International School of Physical Theatre, 2014.

Young, Pamela R. (2011), Educational Administration, Assistant Professor - B.S., Bowling Green State University, 1974; M.S., Mansfield State College, 1977; Ph.D., University of Dayton, 2002.

Zalewski, Daniel J. (2013), Engineering Management Systems and Technology, Assistant Professor - B.S., United States Air Force Academy, 1983; M.S., George Mason University, 1988; Ph.D., Air Force Institute of Technology, 1995.

Zargham, Mehdi (2013), Computer Science, Professor - B.S., Computer College/School of Planning and Computer Application, 1977; M.Sc., Michigan State University, 1980; Ph.D., 1983.

Zavakos, Andrea (2015), Management and Marketing, Lecturer - B.A., Chaminade University, 1990; M.B.A., Dowling College, 1992; Ph.D., Antioch University, 2006.

Zelazny, Lucian (2013), Accounting, Assistant Professor - B.S., Virginia Polytechnic Institute and State University, 1991; M.S., 1998; Ph.D., 2011.

Zhan, Qiwen (2002), Electro-Optics and Photonics, Professor - B.S., University of Science and Technology of China, 1996; M.S.E.E., University of Minnesota, 2000; Ph.D., 2002.

Zhang, Chun (2017), Management and Marketing, Assistant Professor B.A., Jiangxi Normal University, 2009; M.S., University College (Dublin), 2011; M.Phil.,Lingnan University, 2013; Ph.D., Concordia University, anticipated 2017.

Zhang, Ting (2009), Economics and Finance, Associate Professor - B.A., Shanghai International Studies University, 1994; M.B.A., University of Northern lowa, 2002; M.Acc., 2003; M.S.F., Clark University, 2005.

Zhao, Chenglong (2015), Physics, Assistant Professor - B.S., Jilin University, 2006; Ph.D., Peking University, 2011.

Zink, Julie (2006), Law, Professor of Lawyering Skills - B.A., Wright State University, 1996; J.D., University of Dayton, 1999.

Ziskin, Mary (2014), Educational Administration, Assistant Professor B.A., Oberlin College, 1990; M.A., University of Minnesota, 1993; Ph.D., University of Michigan, 2004.

Zois, Catherine J. (1998), Psychology, Professor - B.S., University of Illinois, 1992; M.A., Wayne State University, 1995; Ph.D., 1997.

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## Financial Information-Undergraduate

A University of Dayton education is a lifetime investment, appreciating over the course of time. It's also an excellent value, and more than 90 percent of undergraduates receive financial assistance. Find out how more than 7,300 undergraduate students are making their UD dream a reality.

## Academic Scholarships for First-Year Students

Merit based scholarships have been established to recognize academic achievement for our incoming first-year students. Applicants receive consideration for these scholarships based on the following:

- high school academic performance
- SAT or ACT scores
- demonstrated service to school, community and church
- proven leadership ability
- citizenship

Awards begin at $\$ 1,000$, and each scholarship is available for eight undergraduate terms. To remain eligible for these scholarships, recipients must maintain the required minimum cumulative grade point average, be enrolled full time (minimum of 12 credit hours), participate in Universitysponsored extracurricular activities and serve as a responsible member of the university community.

## Application Procedure:

1. Apply for admission to the University of Dayton (online at the University homepage) by November 1st of your senior year in high school.
2. Take the Scholastic Aptitude Test (SAT) and/or the American College Test (ACT) no later than October. Indicate that your scores are to be sent to the University of Dayton.

Please refer to our website (https://www.udayton.edu/apply/ undergraduate/affordability.php) for additional information.

## Academic Scholarships for Returning Students

Students in full-time attendance who have completed at least 12 semester hours on campus at the University of Dayton will be considered for additional scholarships. Recipients are selected on the basis of academic accomplishments, leadership, financial need and demonstrated service to the University. These scholarships are gifts to the University of Dayton, from alumni, families, corporations and foundations. The scholarships are awarded for a period of one academic year and generally range from $\$ 500$ to $\$ 3,000$.

Please access additional information about scholarships on our website (catalog.udayton.edu/undergraduate/generalinformation/ financialinformation/academicscholarshipsforreturningstudents/ \%20https://www.udayton.edu/flyersfirst/financialaid/undergrad/ types_of_aid/scholarships.php).

## Additional Opportunities

## Vocational Rehabilitation

State vocational rehabilitation agencies arrange the training of disabled persons for gainful employment. Requests for information on rehabilitation services should be directed to the State Director, Vocational Rehabilitation Agency.

## Veteran Benefits

Students who enlisted in the military as Active Duty or as Selected Reserve Status may qualify for the Montgomery G.I. Bill benefits. Students of a parent who is/was a military veteran may qualify for Educational Assistance Benefits.

## U.S. Army Reserve Officers Training Corps (ROTC)

Army ROTC has a number of scholarships available, affording students the opportunity to defray a majority of the costs of attending a prestigious school such as the University of Dayton. High school students compete for three- and four-year scholarships. These scholarships currently are valued at full-tuition, plus University incentive grants. Two- and three-year scholarships may be available once a student is enrolled at the University. Currently, these scholarships will pay tuition. In addition, students receive an allowance of $\$ 3,000$ to $\$ 5,000$ each school year the scholarship is in effect.

## U.S. Air Force Reserve Officers Training Corps (AFROTC)

The Air Force Reserve Officers Training Corps (AFROTC) program is offered in cooperation with Wright State University by the Department of Aerospace Studies. All students who complete the General Military Course (first and sophomore years) may have the opportunity to enroll in the advanced Professional Military Course (junior and senior years), leading to a commission in the United States Air Force upon graduation. There are opportunities throughout the program to compete for scholarships and stipend money. Refer to the Air Force Reserve Officers Training Corps (AFROTC).

## Ohio Safety Officers Memorial Fund

- NOT based on financial need
- Available to children of Ohio Peace Officers or Ohio Firefighters killed in the line of duty
- Apply by contacting the Ohio Board of Regents

Please refer to our website (https://www.udayton.edu/flyersfirst/ veterans/begin_here.php) for additional information.

## Cancellation and Refunds

If registration is cancelled before the first day of classes, full tuition refunds will be made with the exception of the admission deposit.

Cancellations will be allowed only after the completion of proper drop/ add procedures. Students who do not attend classes and do not officially complete withdrawal procedures during the cancellation period will be responsible for the full amount of the applicable tuition and charges.

During the four-week cancellation period for the first and second terms, tuition credits will be given according to the following schedule:

- During first week of classes $80 \%$
- During second week of classes $60 \%$
- During third week of classes $40 \%$
- During fourth week of classes $25 \%$
- During or after fifth week of classes $0 \%$
(The 1st week starts on the first day of a term; the 2nd week begins 7 days later, etc.)

During the two-week cancellation period for each six-week session of the split third term, tuition credits will be given according to the following schedule:

- During second week of classes $30 \%$
- During or after third week of classes $0 \%$

Cancellations for a full third term course have a four-week cancellation period and will be on the same schedule as cancellations for the first and second terms.

Financial adjustments for tuition are based on the date the drop (withdrawal) form is finalized in registration.

Financial adjustments for housing (please refer to your housing contract) are based on the date of checkout from housing, if applicable. Detailed housing cancellation information can be found at the Housing and Residence Life website (https://www.udayton.edu/studev/housing).

Special rules may apply for students who withdraw and who received Title IV funds. Please contact the Office of Financial Aid if additional information is needed.

All tuition refund requests and appeals must be in writing and directed to Beth Gloekler, Director of Student Accounts.

Students suspended/dismissed from the University or from University residence facilities as a result of disciplinary action are not eligible for any refund of tuition, room or board charges under the University's Cancellation and Refund policy. Exceptions to this position will be made to comply with refund requirements of federal financial aid programs.

## Dining Services

The University of Dayton Dining Services operates a variety of fine eateries! Included are two full-service a la carte student dining facilities, located in Kennedy Union and Marycrest Complex as well as two restaurants, Passports and The Grainary, located in the Virginia Kettering Residence Hall. Au Bon Pain, located on the first floor of Kennedy Union, serves gourmet soups, salads, sandwiches and desserts, along with fresh bakery items. The Brown St. Bistro, located in Fitz Hall, offers made to order sandwiches and salads, The Emporium, a mini grocery store with a full service deli, is located in the Marianist Residence Hall and Stuart's Landing, a convenience store, is located in Stuart Hall Complex. Dining Services also operates The Galley, a pretzel/ice cream/gourmet coffee shop located in Kennedy Union, and The Chill, a juice bar with healthy snack options located in the RecPlex. Rudy on the Run, Dining Services' food truck, serves a variety of specialty items and is located in Humanities Plaza, near Kennedy Union. All meal plans are accepted at each location.

Any student living in a residence hall (Marycrest, Stuart, Founders, Marianist, Virginia Kettering) is required to purchase a traditional meal plan as there is no access to a kitchen.

## Traditional Meal Plans:

- Standard Plan - The Standard Plan provides breakfast, lunch and dinner, seven days a week, with set meal plan hours and spending allowances. The plan resets every day and any unused meals are lost. This plan also includes $\$ 100$ bonus dollars that can be used to cover meals exceeding the allowance or to purchase an item when you do not want to use the entire meal. Bonus dollars expire at the end of each semester and do not roll over to the next semester.

Breakfast - 7am to 10:55am (\$5.50 allowance)
Lunch - 11 am to 4:55pm (\$8.00 allowance)

Dinner - 5pm to Closing (\$8.25 allowance)

- Flexible Plan - The Flex Plan operates on a declining balance. There are no meal times or allowances tied to this plan and allows the student to eat whenever they want, as many times a day they want and all of the purchases are deducted from the flexible debit account. Any remaining funds at the end of the Fall term roll over to the Spring term to be used in addition to the Spring term meal plan. At the end of the Spring term, only half of the remaining funds, up to a maximum of $\$ 300.00$ will roll over to the next school year.


## Meal Plan Cost and Participation Charge:

The total cost per semester for the Flexible and Standard Meal Plans is $\$ 2640.00$ for the 2017-2018 academic year. Please be aware that for each meal plan, there is an $\$ 800$ plan participation charge. This money is applied to Dining services' operational costs to help cover utilities, labor and equipment/ repair purchases to support operating multiple dining venues in convenient locations as well as any maintenance and remodeling of those venues.

The Flex Plan provides $\$ 1840.00$ for the student to spend for the semester after deduction of the plan participation fee. This is the same amount earned ( $\$ 800$ ) per semester on the Standard Plan as students do not use meals or do not spend the full allowance. The only difference is that the participation fee is paid upfront with the Flex Plan.

## Neighborhood Meal Plan:

Students living in the UD housing or apartment system are not required to purchase a traditional meal plan at a fixed cost, but may choose to purchase a Neighborhood Plan which operates much like the Flex Plan, on a declining balance. The Neighborhood Plan allows the student to control the amount of money put on the account. Money can be added by calling Dining Services, or visiting the website.

Please visit our website (http://dining.udayton.edu) for more information!

## Employment

All University of Dayton students can apply for employment opportunities on campus as long as enrollment requirements are met. Positions are available in many departments and the hourly rate is based on experience and job description.

Federal Work Study (FWS) is awarded to undergraduates who demonstrate financial need based on FAFSA results. Any on-campus position (except those at the Research Institute) is eligible to be set up as FWS. FWS Community Partner positions are also available off-campus. This unique opportunity allows FWS eligible students to work off-campus with local organizations to improve the quality of life for members of the Dayton community.

Federal Work-Study and University-Funded student employees may work up to 20 hours per week during the school term and will receive payroll checks semi-monthly through direct deposit for their services. Students interested in pursuing opportunities in either of these programs should apply online at Handshake (https://www.udayton.edu/careerservices/ handshake).

## Expenses

Tuition for full-time students during the 2017-18 academic year (fall and spring terms) will total about $\$ 41,750$. Room and board on campus
for this period would be approximately $\$ 13,680$ based on double room occupancy, Flexible Meal Plan and a Flyer Express account for weekends. Books and supplies will cost approximately $\$ 500.00$ each term. In addition, the student will need funds to satisfy personal expenses and extra meals on the weekends.

Expenses for commuting students will include tuition and miscellaneous living costs. Transportation to and from the University as well as meals should be considered in the budget.

## Financial Aid Policy

The University of Dayton realizes that many students need assistance financing their college education. Financial aid is available in the form of nonrepayable grants, scholarships, student loans and part-time employment. Parent loans and monthly payment plans are also available. Priority is given to our full-time, degree-seeking students.

Students seeking financial assistance must complete the Free Application for Federal Student Aid (FAFSA) annually. Developed by the U.S. Department of Education, the FAFSA is used to determine the family's financial need after careful review of income, assets and other household information. Eligibility for need-based federal, state and university-sponsored aid is determined by comparing the total cost of attending UD with a family's available resources, as determined by the FAFSA.

The FAFSA should be submitted electronically each year (fafsa.ed.gov) in mid-January to meet our priority deadline of February 1st for incoming first year or transfer undergraduate students. Currently enrolled undergraduate and graduate students should file the FAFSA by midMarch each year to ensure that the University of Dayton receives the results by the priority deadline date of April 1st. UD's federal code is 003127.

In order to submit the FAFSA electronically, the applicant (student) and at least one parent (if deemed a dependent student by FAFSA definition) must possess a federal student id. To apply for an FSA ID, the appropriate parties should visit fsaid.ed.gov. Students are encouraged to call the Admission/Financial Aid Office as an incoming student. Currently enrolled undergraduate students and graduate students may reach out to the Office of Financial Aid in the Student Services Center.

In addition, the Higher Education Act (HEA) of 1965, as amended, requires institutions that receive and disburse Federal Title IV aid, to develop and enforce, annually, their standards of satisfactory academic progress (SAP). These requirements encourage students to successfully complete courses for which financial aid is received and to progress satisfactorily toward degree completion.

The University of Dayton also uses these same standards for the renewal of other University and state funds. The Office of Financial Aid will review your progress in May of each year to verify your eligibility for aid for the next academic year. We recommend you review the 'Satisfactory Academic Progress' guidelines for undergraduate students - https:// www.udayton.edu/flyersfirst/_resources/files/financial_aid/sap.pdf.

Please visit our website (https://www.udayton.edu/flyersfirst/ financialaid) for additional information.

## General Policy

The tuition and charges of the University are set at the minimum permissible for financially responsible operation, and, in general, these
charges are less than the actual costs incurred. Gifts and grants received through the generosity of industry, friends and alumni help to bridge the difference between income and costs. The trustees of the University reserve the right to change the regulations concerning the adjustment of tuition and charges at any time the need arises and to make whatever changes in the curricula they may deem advisable.

Tuition, charges, room and board are to be paid in full before the term begins or in accordance with payment terms for the fall and spring semesters. Late registration charges are assessed when scheduling and registration are completed after the start of the term.

All checks should be made payable to the UNIVERSITY OF DAYTON. The student's name and student identification number should be shown on the face of each check to insure proper credit.

An assessment of $\$ 35.00$ or $1 \%$ of the check amount (whichever is greater) will be made for payment by a returned check from any area at the University. This assessment is made each time a check is dishonored.

Only students who have a clear University financial record may complete registration for a new term or receive a transcript of credits.

## Grants

## Federal Pell Grant

The Pell Grant Program makes funds available to eligible undergraduate students who demonstrate high financial need as determined by the U.S. Department of Education. Apply by completing the Free Application for Federal Student Aid (FAFSA) annually.

## Federal Supplemental Educational Opportunity Grants

These federally supported, university-administered grants are provided to undergraduate students who have high financial need as determined by our office with the FAFSA on an annual basis. Students must meet the University's FAFSA priority filing date each year.

## Federal TEACH Grant

The Teacher Education Assistance for College and Higher Education (TEACH) Grant Program provides up to \$4,000 per year in grants for graduate and undergraduate students in specified majors who intend to teach full-time in high-need subject areas for at least four years at schools classified as serving low-income students. For more information, please visit our website (https://www.udayton.edu/ flyersfirst/financialaid).

## State Grants

Depending on the availability of state funding, you may be eligible to receive grants from your state of residency. Currently we honor grants awarded to undergraduate students from Delaware, Ohio, Pennsylvania and Vermont.

We recommend you contact your state's higher education agency to determine what grants your state may offer its residents and how to apply.

## University Need Based Grants

The University of Dayton offers nonrepayable grants to undergraduate students with demonstrated financial need. The University assumes that the student will also accept self-help aid in the form of loans and schoolyear employment. The Free Application for Federal Student Aid (FAFSA) is required annually for consideration and must be received by our priority
deadline, February 1 st for incoming first year and transfer students, and April 1 st for returning students.

## Loans

Students who seek financial aid should be willing to accept educational loans to meet a portion of their educational costs. Student loans are a valuable resource available to assist you in meeting the cost of education and allow you to defray tuition costs over a longer period of time typically 10 years.

The first step in determining your eligibility for a federal student loan is to file the Free Application for Federal Student Aid (FAFSA). The programs outlined in this section have proven to be excellent resources for our families. Loans, however, are optional and may be declined.

The University of Dayton adheres to the U.S. Department of Education's Student Loan Code of Conduct available to review under the Forms and Resources section of our website (https://www.udayton.edu/flyersfirst/ financialaid/resources).

## Federal Direct Loans

Federal Direct Loans are made available to all students who file the FAFSA. The maximum loan is $\$ 5,500$ per year for the first year, $\$ 6,500$ for the second year and \$7,500 per year for the junior and senior years. Repayment begins six (6) months after the student graduates, leaves school or drops below half-time enrollment status. Repayment can be spread over a ten-year period. Based on the FAFSA, the student will qualify for an Unsubsidized Direct loan, Subsidized Direct loan or a combination of both.

## Federal Perkins Loans

The Federal Perkins Loan is a federally-funded student loan, but individual schools determine eligibility requirements. Priority is given to dependent undergraduate students who demonstrate high financial need (as determined by the FAFSA). Repayment begins nine (9) months after the student graduates, leaves school or drops below half-time enrollment status.

## Federal Parent Loan for Undergraduate Students

The Federal Parent Loan for Undergraduate Students (PLUS) provides a source of financing to all families regardless of the family income. All credit-worthy parents of dependent undergraduate students may borrow up to the cost of education minus financial aid per academic year for each student attending an accredited college. Standard repayment begins within sixty days after the loan is fully disbursed, however, parents have the option to defer payments until their dependent student graduates. Repayment can be spread over a ten-year period. For more information please visit our website (https://www.udayton.edu/ flyersfirst/financialaid).

## Private Alternative Educational Loans

Private Alternative Educational Loans are also available to help meet college expenses. The University of Dayton works closely with several lenders and their private loan programs, however, students or parents are able to borrow from the lender of their choice. These private loan programs offer competitive interest rates, flexible repayment schedules and various co-signer requirements. If you are interested in a private alternative educational loan, please contact the Office of Financial Aid or visit our website (https://www.udayton.edu/flyersfirst/financialaid).

## Other Scholarship Opportunities

## Federal scholarships

ROTC and Military Family Scholarships, as well as scholarships for active duty military, veterans and their families are also available.

AmeriCorps, administered by the Corporation for National and Community Service, allows people of all ages and backgrounds to earn educational awards in exchange for a year of community service.

## Ohio National Guard Scholarship

- NOT based on financial need
- Available to Ohio residents enlisted in the Ohio National Guard
- Apply by contacting your local National Guard recruiter or call 1-888-400-6484 or online: http://www.ong.ohio.gov/ scholarship_index.html


## Ohio War Orphans Scholarship

- Available to children of deceased/disabled Ohio war veterans
- Apply by contacting the Ohio Board or Regents
- Deadline May 15, for more information call (888)833-1133 or go online: https://www.ohiohighered.org/ohio-war-orphans


## Athletic Scholarships

Intercollegiate athletic scholarships are awarded each year to entering students. Contact the Department of Intercollegiate Athletics at (937) 229-2100 for additional information.

## Music Scholarships

Music scholarships are awarded on a competitive basis following auditions with the music faculty. Contact the Department of Music at (937) 229-3936 for additional information.

## Visual Arts Scholarships

Visual Arts Scholarships are awarded on a competitive basis. Entering students must submit a portfolio for consideration. A number of fouryear scholarships are awarded to students who demonstrate outstanding promise in the visual arts and who plan to pursue a degree in this field. Contact the Department of Visual Arts at (937) 229-3237 for additional information.

## Additional Scholarships Administered by the University of Dayton

Through generous donations to the University from our alumni and friends, we are proud to assist our students with achieving their goals by awarding a variety of scholarships. The University will select students as nominees for scholarships offered by certain corporations, foundations, service organizations, alumni, families and other benefactors.

Please visit our website (https://www.udayton.edu/flyersfirst/ financialaid) for additional information.

## Payment Options

For those who prefer to budget annual school costs out of monthly income, the following options are available:

Credit Cards - Credit card payments for student account charges may be made online only. MasterCard, Visa, American Express and Discover are accepted. A convenience charge will apply.

UD Payment Plan - The University of Dayton understands that sometimes you need some help managing your statement of account. That's why we offer The University of Dayton Payment Plan. The plan is a convenient, manageable payment solution that gives you the option
to pay interest-free monthly installments. The plan is available for undergraduate, graduate and doctoral students who are in good financial standing with the University. Students or their authorized user may enroll in the plan online. Features of the plan include:

- Four payments per semester (fall and spring)
- Enrollment charge of just $\$ 50$ per semester with no interest charges
- Payments begin July 22 for fall term and December 22 for spring term
- You can enroll in the plan, manage your account and make payments online 24 hours a day
- Paperless billing

For more information or to enroll, please visit our website (https:// www.udayton.edu/studentaccounts). Our customer service representatives are available to assist you with questions at 1-800-259-7117.

Sponsored Students - It is the responsibility of the student to provide their letter of financial guarantee to the Office of Student Accounts prior to the start of the term and make payment for any amount not covered by the sponsor.

Student accounts that are not paid in full prior to the start of the semester or enrolled in the UD Payment Plan are subject to a $1 \%$ interest charge on the unpaid balance each month.

The University of Dayton reserves the right to make changes to payment options at any time.

## Residence Life Policy University Housing Requirement

The University of Dayton has a requirement that each first- and secondyear undergraduate domestic, international, conditionally admitted international student and international student enrolled in the Intensive English Program (classified by a student's start term at the University or high school graduation year, not by the number of credit hours) under 21 years of age, unmarried and not living at a parent's or legal guardian's permanent residence within 40 miles of the University is required to live in University housing. Any first- or second-year student requesting to commute must complete and notarize the form (https://udayton.edu/ studev/_resources/files/housing/CommuterNotarizedForm.pdf).

Each student applying for a University residence facility must complete an online residential living contract with Housing and Residence Life. The contract covers both the fall and spring terms of the academic year. Once a contract is signed, it may not be canceled without incurring substantial cost as long as the student is enrolled at the University.

Those students dropping all courses and checking out of housing during the first four weeks of school will be authorized refunds as stated under "Cancellations and Cancellation Charge".

All students living in housing facilities are required to observe all University regulations and specific regulations of each facility. Residents will be held responsible for any damages to the residential structure that are due to their own negligence and will be billed for those damages at the time of discovery. Students will share responsibility with other residents of the structure for unidentified common area damages. Damage charges will be billed monthly when applicable. The same
conditions shall also hold for any loss or damage to the University grounds, fixtures, furnishings or other property provided by the University for use by the students.

Students may reside in their rooms, suites, apartments or houses without additional charge during Thanksgiving and Easter recesses. All University residences are closed during semester breaks except Plumwood and University Place Apartments.

## Room and Board, per term, Terms I and II August 2017 through May 2018

Choices for First-Year Students (per semester)

| Description | Amount |
| :--- | :--- |
| Founders Hall | $\$ 3950.00$ |
| Marianist Complex | $\$ 3950.00$ |
| Marycrest Complex | $\$ 3950.00$ |
| Stuart Complex | $\$ 3950.00$ |
| Triple Rooms in Marycrest | $\$ 3150.00$ |

Choices for Sophomore Students (per semester)

| Description | Amount |
| :--- | :--- |
| Virginia W. Kettering Suite Complex | $\$ 3950.00$ |
| Campus South Apartments | $\$ 3950.00$ |
| East Stewart Garden Apartments | $\$ 3950.00$ |
| Marianist Complex | $\$ 3950.00$ |

Choices for Junior/Senior Students (per semester)

| Description | Amount |
| :--- | :--- |
| Lawnview Apartments | $\$ 4630.00$ |
| ArtStreet Apartments | $\$ 4630.00$ |
| Caldwell Apartments | $\$ 4630.00$ |
| Traditional Houses/Apt in the | $\$ 4630.00$ |
| Student Neighborhoods |  |
| New/Renovated/Sorority Houses in | $\$ 4820.00$ |
| the Student Neighborhoods |  |
| Garden Apartments | $\$ 3950.00$ |
| Irving Commons Townhouses | $\$ 3950.00$ |

Choices for Graduate/Law School Students (per semester)

| Description | Amount |
| :--- | :--- |
| Plumwood Studio/Double | $\$ 4630.00$ |
| Apartments |  |
| Plumwood Single Apartments | $\$ 4820.00$ |
| University Place Studio/Double | $\$ 4940.00$ |
| Apartments |  |
| University Place Single Apartments | $\$ 5300.00$ |

## Tuition Reductions

Tuition Remission/ Assistance for University of Dayton Full-time Employees<br>Full-time benefit-eligible employees, spouses and children, when admitted in accordance with University of Dayton admission standards, are eligible for tuition remission/assistance benefits. Eligible employees

receive $100 \%$ remission for both graduate and undergraduate classes for themselves up to 18 credit hours per academic year.

Spouses and children are eligible for undergraduate tuition assistance only based on years of benefit-eligible service. Please refer to the appropriate University of Dayton Benefit Handbook for the schedule of dependent tuition assistance.

## Senior Fellows

Students 60 years of age and over are eligible to apply through the College of Arts and Sciences at the University of Dayton for remission of tuition.

## Undergraduate Tuition and Charges

Tuition Charges in Terms I and II<br>Full-time undergraduate student (12-18 semester hours) per term \$20,875<br>Part-time undergraduate student (1-11 semester hours) per semester hour - \$1,525<br>Audit course per undergraduate semester hour - \$763<br>\section*{Tuition Charges in Term III}<br>Tuition per semester hour - \$1,525<br>\section*{Other Charges}<br>Late registration service charge - \$25.00 per week to a maximum of \$75.00<br>Credit by examination per semester hour - \$35.00<br>CLEP per credit hour - \$35.00<br>Books and supplies - variable

## Student Status

## Full-Time Students

A student with an academic schedule of at least 12 semester hours is considered a full-time student. With this status and upon payment of tuition, the student is entitled to the benefits of the various activities and student services as available.

## Part-time Students

A student with an academic schedule of 1-11 semester hours is considered a part-time student.

## Special Students

Special students and non-matriculated students (continuing education) are subject to the various expenses outlined above for full-time or parttime students.

## Veterans Services Office

All departments at the University of Dayton have been approved by the State Approving Agency for Veterans' Training. Please contact the Flyer Student Services Office to inquire as to whether your major is listed among those approved by the State Approving Agency. The Flyer Student Services Office is located in St. Mary's Hall and will assist in processing the necessary forms for educational benefits. A student who is receiving V.A. benefits is required to complete and sign all required forms, which can be obtained online. (http://www.udayton.edu/flyersfirst/veterans/\#2) Students using veteran benefits must inform the Flyer Student Services Office of any changes made to major, enrollment or registration. Failure to follow this procedure may result in cancellation of benefits by the Department of Veterans Affairs. If a student on probation fails to acquire
the required cumulative grade point average at the end of the next fulltime term, the benefits from the V.A. may cease.

## Interdisciplinary and Special AreasUndergraduate

In this section:

- Adult Degree Advancement Program (p. 53)
- Air Force Reserve Officers Training Corps (p. 53)
- Applied Creativity for Transformation
- Cooperative Education (p. 54)
- Core Program (p. 54)
- Education Abroad (p. 54)
- Experiential Education Programs (p. 56)
- Fitz Center for Leadership in Community (p. 56)
- Information Technology Facilities and Services (p. 57)
- Institute for Pastoral Initiatives (p. 57)
- Interdisciplinary Studies (p. 60)
- Mini Courses (p. 69)
- Prelaw (p. 70)
- Reserve Officers Training Corps (p. 70)
- Special Programs and Continuing Education (p. 70)
- University Honors Program (p. 70)


## Adult Degree Advancement Program (ADAP)

Specifically designed for students 24 years of age and older who wish to attend college part-time, the University of Dayton Adult Degree Advancement Program (ADAP) allows for completion of the bachelor's degree at a pace that fits nicely with that lifestyle. Day and evening classes are available. Tuition for the ADAP students is very affordable, with cost per credit hour comparable to other adult degree programs.

ADAP students can select from one of six bachelor degree programs:

- Communication Management
- Psychology
- General Studies
- Engineering Technology
- ADA Didactic Program in Dietetics
- Early Childhood Education

Information regarding Communication Management, Psychology and General Studies can be obtained from the College of Arts and Sciences, 937-229-2604. Information regarding Engineering Technology can be obtained from the Department of Engineering Management, 937-229-4216. Information regarding Dietetics and Early Childhood Education can be obtained from the Department of Teacher Education, 937-229-3372 or the Department of Health and Sport Science, 937-229-4203.

## Air Force Reserve Officers Training Corps (AFROTC)

As a University of Dayton (UD) student you have the opportunity to become an Air Force officer through a cooperative agreement with Wright State University's (WSU) Department of Aerospace Studies. WSU is the home of Detachment 643 and the host site for local colleges and universities to provide the AFROTC program. Although you'll register for ROTC through UD, all courses are taught at WSU. UD provides transportation.

The AFROTC program is designed to produce Air Force officers who will be successful leaders. All officers are placed in positions of responsibility, facing challenging and rewarding career opportunities while using the most advanced technology in the world.

The AFROTC program is organized in two portions: the General Military Course (GMC), typically taken during first- and sophomore years, and the Professional Officer Course (POC), usually taken during junior and senior years or during the last two years prior to graduation. A corresponding Leadership Laboratory for each year, where students apply leadership skills, demonstrate command and effective communication, develop physical fitness, and practice military customs and courtesies, is also required. For more information on ROTC course descriptions, please visit https://www.wright.edu/air-force-rotc/cadet-life/rotc-classes.

- The GMC is a no-obligation introduction to the Air Force. The course covers the Foundations of the United States Air Force (USAF) and the Evolution of USAF and Space Power.
- The POC curriculum covers communicative skills, Air Force Leadership Studies, National Security Affairs and Preparation for Active Duty.

All AFROTC students have the opportunity to apply for scholarships that pay partial or full tuition, books and charges, plus a monthly stipend. These scholarships are available on a competitive basis to students who demonstrate academic and leadership potential. High school students should apply for a scholarship at https://www.afrotc.com/. In-college students will apply for scholarships through their AFROTC instructor. If you are a first-year or sophomore seeking a challenge and want to serve your country, sign up for the Aerospace Studies 121 course.

For further information about AFROTC at UD, students should contact:
The Department of Aerospace Studies
Wright State University
Dayton, Ohio 45435
Phone: 937-775-2730
Email: afrotc@wright.edu
Website: http://www.wright.edu/air-force-rotc
or
The University of Dayton Admission Office
Phone: 937-229-1000
E-mail: info@udayton.edu

## Applied Creativity for Transformation

The undergraduate certificate in Applied Creativity for Transformation introduces students to the creative competencies that today's job market demands, while applying those same skills to the students' diverse
disciplines of study with special focus on developing a personal mission, or purpose-based learning design, that is additive to their academic pursuits. Through the introduction of creative theory, critical perspective and innovative immersions within collaborative problem-solving, the student's perception of what is and what can be in their field of study and the world they live in will broaden in creative, critical and innovative ways.

| Certificate in Applied Creativity for Transformation |  |  |
| :--- | :--- | ---: |
| SSC 200 | Social Science Integrated | 3 |
| EGR 103 | Engineering Innovation | 2 |
| UDI 371 | ACT I: Creative Confidence Through Critical <br> Perspective | 1 |
| UDI 372 | ACT II: Innovative Practice Through Creative <br> Confidence | 1 |
| UDI 471 | Act III: Creative Design (Research and Design) | 1 |
| UDI 472 | Act IV: Creative Application (Innovate and <br> Implement) | 1 |
| Mission-Based CAP elective | 3 |  |

## Total Hours

## Cooperative Education (COP)

Cooperative education is an optional plan of full-time, on-campus study alternating with terms of full-time, off-campus paid work experience in industry, business or government. Among the expected benefits to the student are on-the-job experience, career identification, financial assistance and professional development. The work terms average seventeen weeks. Three full work terms are considered minimum for the program. Students are encouraged to begin their first co-op work experience after their third or fourth semester of academic study.
Placement in a job is not guaranteed since it depends on the student's qualifications and on the availability of jobs.

## College of Arts and Sciences \& School of Business Administration

Cooperative Education is open to all students in the College of Arts and Sciences and the School of Business Administration. These students may start the application process by making an appointment with a career services professional. Further information on the cooperative education program for arts, science and business students may be obtained by contacting Career Services, University of Dayton, Dayton, OH 45469-2711; phone (937) 229-2045; website (http://careers.udayton.edu).

## School of Engineering

Qualifications for entering and remaining in cooperative education are (1) to be admitted to the University as a full-time undergraduate student with a minimum cumulative grade point average of 2.3 ; (2) to have a declared major in one of the academic departments in Engineering or Engineering Technology; (3) to maintain good academic standing as specified by the particular academic department; (4) to engage in full-time study and make progress toward the degree during each study term following each full-time work training term.

Incoming sophomore level, junior level or transfer students interested in cooperative education should enroll in the Introduction to Engineering Cooperative Education course which provides complete information regarding co-op registration and work term requirements. Those who start as first-year students at the University are eligible for placement after completing three terms of full-time study on campus. Transfer students, whether from two-year or four-year institutions, must spend one full-time study term on campus after transferring before becoming eligible for the first work term.

Further information on the engineering cooperative education program may be obtained by contacting Cooperative Education, School of Engineering, University of Dayton, Dayton, OH 45469-0223; phone (937) 229-2335; website (https://www.udayton.edu/engineering/cooperativeeducation).

## Core Program

The University of Dayton's Core Program offers an innovative, interdisciplinary two and one-half year curriculum that stresses the connections between disciplines while at the same time fulfilling many of the University's Common Academic Program requirements. These interdisciplinary courses, in the humanities, arts and social sciences, address a common theme, "Human Values in a Pluralistic Culture," and are carefully coordinated so that students experience the integrated character of the liberal arts. Extracurricular speakers, arts events and other activities related to course content are an important part of the program.

The Core Program accepts 120 students each year from across all of the University's four undergraduate schools - the College of Arts and Sciences, the School of Business Administration, the School of Education and Health Sciences and the School of Engineering. All entering first-year students are invited to apply. Students in some majors in the College of Arts and Sciences are enrolled automatically. Core is designed to deepen the learning experience of any interested University of Dayton student.

While Core is not an accelerated or honors program, students can receive 15 semester hours of honors credit for completing the Core Program. Core is a strong academic program and students in the program receive support in the form of highly committed faculty, Core Residence Assistants and Core Fellows.

## Core Program

William Trollinger, Director
Faculty who teach in the Core Program are located in several departments including: Art and Design; English; History; Music; Philosophy; Psychology; Religious Studies; and Sociology, Anthropology, and Social Work. Faculty who teach in the program include: Atlas (Religious Studies); Cadegan (History); Cardilino (Religious Studies); Carillo (English); Cox (Philosophy); Crum (Art and Design); Dixon (Psychology); Donnelly (Sociology, Anthropology, and Social Work); Dorf (Music); Gabbe (Philosophy); Henning (Religious Studies); Holcomb (Sociology, Anthropology, and Social Work); Inglis (Philosophy); James (Philosophy); Kebede (Philosophy); Leming (Sociology, Anthropology, and Social Work); Mackay (English); Maclachlan (Music); Majka (Sociology, Anthropology, and Social Work); Marvin (Philosophy); Meisami (Philosophy); Miller (Religious Studies); Reeb (Psychology); Smith (Religious Studies); Thompson (Religious Studies); S. Trollinger (English); W. Trollinger (History); Velasquez (Philosophy); Wilhoit (English).

## Education Abroad

The Office of Education Abroad, located in the Center for International Programs (CIP), guides students pursuing an educational experience outside the United States. Whether the student wishes to attend a program through the University of Dayton or through another institution, our education abroad staff assist with the application process and prepares students through a pre-departure orientation. The education
abroad staff also offer a re-entry program to students returning to the U.S.

A variety of international education programs are available through the University of Dayton, including: summer, semester and full-year study abroad programs; the Semester Abroad and Intercultural Leadership (SAIL) program's international service opportunities and work experiences; and intercultural programming.

## Summer Faculty-Led Study Abroad Programs - Interdisciplinary

Summer Faculty-Led Study Abroad Programs, offered through the CIP, are a unique study and travel experience. Students choose from a variety of sites during the months of May, June and July, and spend approximately three to five weeks at each program site. While abroad, students select courses from a variety of disciplines and use on-site resources to guide and enhance their learning experience. Typically, courses are taught by University of Dayton professors. By choosing to study at two different sites for a total of 6-10 weeks, students can earn up to a full semester of credits. Past sites have included Argentina, Ireland, Italy, Spain and the United Kingdom.

## Summer Faculty-Led Study Abroad Programs - Disciplinary

Students may also participate in a Summer Faculty-Led Study Abroad Program to focus on a particular area of study. These programs are offered on a regular basis. Past summer options included programs in business, teacher education, engineering, communication and psychology. Past sites have included Chile, France, Germany and Peru.

Language majors or minors can develop their spoken and written foreign language skills through summer language immersion programs. Students can improve their foreign language skills while integrating personal experiences and discoveries with material discussed in class lectures. University of Dayton professors design the courses to incorporate contemporary use of the language and explore the culture, government and history of the city and nation in which they are teaching.

## Semester/Academic-Year Education Abroad

The University of Dayton has developed partnerships and participates in exchange agreements with several overseas institutions. In addition to University of Dayton tuition, students are responsible for their room and board in the host country, international travel and personal expenses. There are some programs where board may be included. Most financial aid (including institutional scholarships and grants) applies to exchange programs.

Students may also participate in an innovative program called SAIL (https://www.udayton.edu/international/ed_abroad_partners_exchanges/ sail.php) (Semester Abroad and Intercultural Leadership). SAIL is a yearlong education abroad and leadership development program that entails a fall semester abroad at one of three study abroad sites in China, Ireland, or Spain, followed by participation in a semester intercultural leadership program that includes special housing during the subsequent spring semester. The SAIL program is designed to allow students to study abroad for the same cost as a semester on campus. Students pay the same amount for their fall semester abroad as they would a semester at UD (tuition, room and board). Most financial aid packages still apply. In addition, students accepted into the SAIL program are eligible for a $\$ 3,000$ scholarship to help fund their experience.

## Other Opportunities

University of Dayton students can study abroad in many countries through other U.S. colleges and universities, study abroad organizations or overseas universities. Program costs for these programs generally include tuition, room and board in the host country, international travel and personal expenses. Aid for non-University of Dayton sponsored programs is limited. Through these programs, University of Dayton students can study in places such as Argentina, Australia, Austria, China, Costa Rica, the Czech Republic, France, Hungary, Ireland, Italy, Mexico, Poland, Russia, South Africa, Spain, the United Kingdom and many other countries.

## Cultural Immersions \& Service-Learning Abroad

The Center for Social Concern offers opportunities for students to combine service-learning with their education abroad experience. The International Summer Immersion programs introduce students to the country's way of life through job placements, interaction with host families and travel through the country. Past destinations have included India, Cameroon, Guatemala and Zambia. The Center for Social Concern also coordinates week-long international service programs during the University's winter break.

The ETHOS Center offers various service opportunities in cities within Latin America, Africa, India, China and Bangladesh, as well as domestic placements. Through the ETHOS Center's International Service Learning Placements, students participate in an 8 - to 16 -week service-learning internship. These internships involve working with NGOs or cottage industries doing engineering- and/or business-related work. The program is operated by the School of Engineering's ETHOS Center and is open to both engineering and business majors. Students from other majors may participate by permission.

Other service learning opportunities are available on an annual basis and students are encouraged to visit the Center for International Programs for more information.

## Release Agreement and Travel Registration

All students participating in a university-sponsored international program must complete the Release and Agreement Form which releases the University from liability for claims including, but not limited to, injury, delay and damage while abroad. As part of this agreement, the student agrees to abide by the University's standards of behavior while in the host country or countries. Students are also required to complete the Student Health Information and Emergency Treatment Authorization Form which requests medical information and the Behavioral Contract which outlines the institution's expectations for behavior while abroad. Depending on the program, students may need to complete the Authorization Form in order to transfer academic credit earned as part of a study abroad program to the University of Dayton.

Additionally, all University of Dayton faculty and staff traveling abroad for research or other business-related trips are required to complete the online International Travel Registry (https://studioabroad.udayton.edu/index.cfm? FuseAction=Abroad.ViewLink\&Parent_ID=0\&Link_ID=0D9A3C68-26B9-58D3F55850D4C047AFAA) prior to their departure. The University-wide travel registry allows the University to remain in close contact with faculty and staff should they need assistance while abroad and also monitor frequency and type of travel by university employees for business purposes. Students participating on a university-sponsored international program are automatically registered with the University when they have completed an online application with the Office of Education Abroad. Additionally, all students participating in an individual exchange or non-

University-sponsored program are required to register with the U.S. State Department. Traveling faculty and staff are also encouraged to register with the U.S. State Department prior to business-related travel.

## International SOS

The University of Dayton has contracted with International SOS (SOS) to provide worldwide medical, travel and security assistance and evacuation services for all faculty, staff and students participating in universityrelated international travel. Services include up-to-date reports on safety and security, health issues, medical referrals and vaccination requirements for individual countries. SOS offers UD travelers and their dependents travel, medical and security advice and services and protects against a variety of difficulties that could arise while abroad; however, the SOS is not a health insurance provider. The University of Dayton continues to require all students studying abroad, or faculty and staff traveling abroad on business, to maintain adequate health insurance coverage while overseas and expects students, faculty and staff to ensure that their policies cover them, and any specific personal issues, while abroad.

For additional information about the UD International Travel Policy, please click here (https://www.udayton.edu/international/ ed_abroad_partners_exchanges/travel_policy.php).

## Experiential Education Programs (EXP)

Experiential Learning is an optional part-time or full-time internship work experience, either paid or unpaid, in industry, business or government directly related to a student's major or career path. Among the expected benefits to the student are on-the-job experience, career exploration or identification, financial assistance and professional development. The work terms can be part-time during semesters while attending classes and/or full-time during semesters not taking classes. Students may begin an Experiential Learning internship work experience as early as the summer after their first year of study. Jobs may be found with the assistance of Career Services through Hire a Flyer, an academic department or a student may find a position on their own. Experiential Learning is open to all students. Students may start the application process by making an appointment with a career services professional prior to beginning work. Further information may be obtained by contacting Career Services, University of Dayton, Dayton, OH 45469-2711; phone (937) 229-2045; website (http://www.udayton.edu/careerservices).

## Fitz Center for Leadership in Community

The mission of the Fitz Center for Leadership in Community is to cultivate servant leaders and just communities through reciprocal partnerships; engaged learning and scholarship; and community building. The Fitz Center lives its mission to address the diverse, comprehensive, and interconnected challenges of urban neighborhoods and larger communities; create, share, and apply knowledge for the common good; and educate and prepare students for lives of impactful civic action. The Fitz Center's vision is for the University of Dayton to advance the common good of communities through diverse, community-based partnerships, engaged learning and scholarship, and servant leadership. Grounded in Catholic social teaching and Marianist ideals, the Fitz Center
stimulates, coordinates and facilitates learning and scholarship on leadership that builds and sustains community.

The Fitz Center builds on the University's and the Marianists' long experience of linking University resources to those of the Dayton community to solve regional problems, develop community leaders and build neighborhoods and nonprofits. Through the Fitz Center, the University has built collaborative relationships with dozens of neighborhood, community, nonprofit and local government organizations and associations in efforts that have enriched the quality of life for thousands of citizens within Dayton and surrounding communities. These projects also have afforded meaningful learning opportunities to hundreds of students and dozens of faculty members annually.

The Fitz Center represents a different way of learning, one that is based in practical reasoning and democratic civic engagement; a different way of seeing and understanding the urban community as a social ecology of children, families, neighborhoods and systems; a different way of designing and implementing change using a model of comprehensive community building based on assets, not needs; and a different way of leading focused on adaptive leadership through constructive conversation that balances inquiry and advocacy. The Center also emphasizes the importance of relationships and the necessity of widely shared vision to move communities forward. These basic convictions guide planning and program development. They also build on the extensive community experiences of the Fitz Center staff.

The Fitz Center for Leadership in Community has four primary functions. These functions are carried out by teams of students, faculty and Fitz Center staff working in partnership with neighborhood and community leaders. They are:

- Build university and community capacity for constructive deliberation and change.
- Develop communities of reciprocal learning, scholarship and practice.
- Develop curricular and co-curricular innovations around leadership in community.
- Initiate and sustain partnerships.

The Fitz Center educates leaders who build and sustain communities. The Center offers the following opportunities for learning about and experiencing leadership in community focused on community and neighborhood partnership, community engaged learning, and student servant leadership:

- Annual CityLinks Neighborhood Conference
- Annual River Summit
- Community Assets Bus Tours
- Community Engaged Learning
- Dayton Civic Scholars
- Dayton's Neighborhood School Centers
- Fr. Ferree Professor of Social Justice
- Leadership in Building Communities seminar
- Research and evaluation
- Rivers Institute and River Stewards
- River Leadership Curriculum
- Semester of Service

The Fitz Center provides an interdisciplinary minor in family development within the College of Arts and Sciences. It also conducts research
on a broad range of contemporary family and community issues and offers opportunities for the development of social science research skills through tutorials and participation in its ongoing research projects. The Center serves as a resource to local governmental, health, religious, educational and social service agencies by evaluating programs and developing solutions to the problems of families and the communities in which they live. The Fitz Center is committed to an integrated perspective on families and communities that draws on multiple disciplines. For more information on this minor, visit FDV in Academic Information. The Fitz Center also houses the research division of the Montgomery County Office of Family and Children First. This office is available to assist students and faculty interested in local human services issues.

The Society of Mary supports the Ferree Professor of Social Justice in the Fitz Center. Marianist Provincial Father William Ferree was recognized as a key spokesperson on the Catholic theory of social justice. The Ferree Professor connects Catholic social teaching to the social sciences and other disciplines through the community-building mission of the Center.

The nature of the leadership challenges in the Dayton community requires adaptive learning and leadership across professional and community sectors. The University of Dayton has established a reputation as an effective community partner, especially with urban Dayton on difficult community challenges. The University of Dayton adds value to the community through the Fitz Center as it brokers and leads ongoing community building partnerships.

## Information Technology Facilities and Services

As one of the nation's premier institutions for technology-enhanced learning, the University of Dayton views information technology as central to both the living and learning experiences of students. UD hosts a robust wired and wireless network for use by the campus community. Residence halls, as well as the 25 city blocks of UD owned houses comprising the Student Neighborhood, are equipped with high-speed data connections for each student. The University also supports more than 2400 wireless access points to provide wireless coverage in most areas on campus, including academic buildings. In addition, students have access to an array of on-campus computer labs and computer-equipped classrooms.

To leverage this high-performance digital community, UD requires all incoming students to have a notebook computer that meets minimum hardware and software requirements set forth by each academic area. UD provides software such as Microsoft Office, SPSS, and SAS and to support learning, communication and collaboration within and beyond the classroom.

The technology infrastructure at UD includes a 40 gigabit network backbone with over 330 servers. In addition to maintaining this robust infrastructure, UD also supports learning and collaboration through such operations as the IT Service Center, IT Training and e-Learning. Students at the University of Dayton are encouraged to become highly proficient in using the tools of the information age as they prepare for their chosen careers.

## Institute for Pastoral Initiatives

The Institute for Pastoral Initiatives mobilizes the resources of the University of Dayton for partnerships with the church that create and
implement innovative pastoral initiatives designed to meet the needs of the church and to articulate faith within the context of contemporary culture.

The Institute co-directs the unique Forum for Young Catechetical Leaders for students. The Forum prepares students to be certified to become catechists in the Catholic Church. Students are introduced to outstanding catechetical leaders from around the country. Each semester students gather one Saturday a month for a full day of catechetical formation. This is the only such program in the U.S. in a Catholic University.

The Virtual Learning for Faith Formation (online courses) is coordinated by the Institute. Courses are offered for CEUs to support Catechist, Youth Ministry and Lay Ecclesial Leadership Formation.

The Institute's overall mission is to reflect the Catholic Marianist identity of the University through education, consultative services, networking, applied pastoral research and multimedia catechetical productions and publications.

The Institute is currently focusing on research and teaching in the following areas:

- Advocacy for Persons with Disabilities within the Church
- Forum for Young Catechetical Leaders
- Lay Ecclesial Leadership Formation
- New Paradigms for Adult Faith Formation
- Pastoral Communications and Ministry
- Religion, Spirituality and Film
- Virtual Learning Community for Faith Formation (Internet)


## Inst for Pastorl Int-Marianist Courses

IPM 220. Marianist Studies: Founders of the Marianist Family. 1 Hour Historical context and life of Father William Joseph Chaminade and other Marianist founders, especially Adele de Batz de Trenquelleon and Marie Therese de Lamourous.
IPM 221. Community. 1 Hour
Exploration of the key theological principles for understanding the meaning and formation of community within the Marianist spirit.

## IPM 222. Marianist Studies: Spirituality. 1 Hour

Examination of the cultivation of a life of prayer informed by Marianist spiritual traditions, particularly the role of Mary and the commitment to permanent Marianist mission.

## IPM 223. Marianist Studies: Prayer. 1 Hour

MARIANIST STUDIES: PRAYER An exploration of Father William Joseph Chaminade's methods and practices of prayer with insights for individual and group prayer.

## IPM 224. Marianist Studies: Social Justice. 1 Hour

An exploration for integrating the insights of Father William Joseph Chaminade with the realities of modern life in envisioning a Marianist approach to social change for the twenty-first century.

## IPM 225. Marianist Studies: Leadership. 1 Hour

Exploration of how to integrate excellent leadership skills with goals and principles of the Marianist mission. Designed for those invited to hold leadership roles in the Marianist family.

## IPM 226. Marianist Studies: Charism. 1 Hour

Exploration of the concept of charism focusing on the Marianist charism. Emphasis on the principles and practices of Marianist spirituality, the Marianist apostolate and its importance in forming Marianist life, and the real and potential impact of the Marianist mission on the wider Church and global community.

## IPM 227. Marianist Studies: Education. 1 Hour

Advanced course in Marianist education based on a basic understanding of the Characteristics of Marianist Education (CMEs). Emphasis on the manner in which Marianist education interweaves instruction with development of persons committed to Fr. Chaminade's mission to educate in the faith and to multiply Christians.

## IPM 228. Marianist Studies: Mary. 1 Hour

Survey of the roles Mary has which make her a model for believers to follow: believer, prophet, God-bearer/mother, disciple, and companion. Special attention is given to the events of her life and the life of her son Jesus. Prerequitie(s): (IPM 220, IPM 221) or permission of instructor.

## Inst for Pastorl Int Courses

## IPI 100. Survey of Catholic Doctrine. 1 Hour

Comprehensive survey of Catholic doctrine which systematically follows the structure of the Nicene-Constantinopolitan Creed. Prerequisite(s): Permission.

## IPI 121. Conscience. 1 Hour

The steps, stages of development, and concepts concerning moral decision making as practiced within the context of the Roman Catholic faith. Prerequisite(s): IPI 100 or permission of instructor.

## IPI 130. Introduction to Scripture. 1 Hour

An introductory overview of Christian scripture that is foundational for Old and New Testament online courses.

## IPI 131. Introduction to Old Testament. 1 Hour

Study of contemporary Old Testament studies to learn how to read a biblical text in terms of its literary qualities and cultural influences on interpretations. Prerequisite(s): REL 210.

IPI 132. Introduction to New Testament. 1 Hour
Introduction to the New Testament with a focus on the text's cultural contexts, literary composition, theological themes, and pastoral applications. Prerequisite(s): REL 211.

## IPI 180. Faith \& Human Development. 1 Hour

Study of the development of Christian spirituality as part of human moral and psychological development. Prerequisite(s): Permission.

IPI 210. Introduction to Prayer. 1 Hour
Introduction to the nature and types of prayer understood and practiced in Scripture and the theological and liturgical tradition of the Roman Catholic Church. Prerequisite(s): IPI 100 or permission of instructor.

## IPI 211. Prayer with Children. 1 Hour

Survey of how children develop spiritually and the best practices for teaching children techniques in prayer and developing their spiritual life. Prerequisite(s): IPI 100 or permission of instructor.

## IPI 212. Introduction to Liturgy. 1 Hour

Introduction to the public and communal worship of the Church, its purpose and features, with special attention paid to the Mass and the Liturgy of the Hours. Prerequisite(s): IPI 100 or permission of instructor.

## IPI 220. Catholc Social Teaching. 1 Hour

Survey of the foundations and key themes of the social teaching of the Roman Catholic Church. Prerequisite(s): IPI 100 or permission of instructor.

IPI 225. Ecclesiology: The Beginnings of the Church. 1 Hour Introduction to the theological study of the Church, including basic terms and concepts essential for understanding the Church's nature, mission, and historical evolution. Prerequisite(s): REL 212.
IPI 226. Ecclesiology: The Pilgrim Church. 1 Hour
Exploration of how the Church maintains its continuity with Jesus and reshapes its own self-understanding, focusing on how the Church continually reconstitutes itself through its decisions in meeting the challenges of each age. Prerequisite(s): REL 240.

IPI 227. Ecclesiology: Reframing Church. 1 Hour
Focus on the Second Vatican Council as a whole with specific consideration of the Council's teachings regarding liturgy, Scripture, hierarchy, laity, and the Church's relationship with the world. Prerequisite(s): REL 241.

IPI 228. Mary Holy Possiblty. 1 Hour

## PI 229. Introduction to Islam. 1 Hour

The origin, development and spread of Islam is surveyed, followed by the study of the basics of this religion, including major practices and beliefs, the role of the Quran, perspectives on gender roles and how Islam views people of other faiths.Consideration will also be given to factors that give rise to either fundamentalist or democratic movements in the Muslim world. Prerequisite(s): IPI 100 or permission of instructor.

## IPI 250. Church History I. 1 Hour

Survey of the origin and development of the Roman Catholic Church from the apostolic era through the Protestant and Catholic Reformation, with a focus on key events and personalities. Prerequisite(s): IPI 100 or permission of instructor.

## IPI 251. Church History II. 1 Hour

Survey of the origin and development of the Roman Catholic Church from the Reformation era to the post-Vatican II era with a focus on key events and personalities. Prerequisite(s): (IPI 100,250) or permission of instructor.

## IPI 253. History of Catholic Social Action. 1 Hour

An introduction to official Catholic Church documents on social teaching and how Catholic activism around the world has influenced these teachings. Prerequisite(s): REL 262.

## IPI 254. United States \& World Poverty. 1 Hour

Analysis of conditions, causes, and trends of poverty in the U.S. and abroad and responses through the theological lens of Catholic social teaching. Prerequisite(s): REL 260B, 263.

IPI 260. Introduction to Catechesis. 1 Hour
Exploration and analysis of the purpose, methods, goals, tasks and essential content of catechesis.

## IPI 300. Christology. 1 Hour

Survey of the origins and development of the foundational doctrines and theology concerning the identity, work, and mission of Jesus Christ. Prerequisite(s): IPI 100 or permission of instructor.

## IPI 301. Mary. 1 Hour

Survey of the place the Virgin Mary occupies in the history of salvation and in the Church's life. Prerequisite(s): IPI 100 or permission of instructor.

IPI 302. Sacraments. 1 Hour
Survey of the history, theology, pastoral and liturgical practice of the sacraments of the Roman Catholic Church. Prerequisite(s): IPI 100 or permission of instructor.

IPI 303. Sacraments of Initiation. 1 Hour
The history, theology, pastoral and liturgical practice of the sacraments of Baptism, Confirmation, and Eucharist.
IPI 304. Sacrament of Marriage. 1 Hour
The history, theology, official teaching, pastoral and liturgical practice of the Sacrament of Matrimony according to the Roman Catholic Church. Prerequisite(s): IPI 100 or permission.

## IPI 400. Advanced Catholic Social Teaching. 1 Hour

Detailed discussion of the principles and recurring themes of Catholic Social Teaching according to papal social encyclicals and other documents. Prerequisite(s): (IPI 100,220) or permission of instructor.

## IPI 435. Scripture \& Justice. 1 Hour

Exploration of Old and New Testament foundations for Catholic social teaching and social action.

## IPI 450. Vocation Ministry. 1 Hour

Basic principles of ministry in the Church are introduced, according to guidelines outlined in the United States Conference of Catholic Bishops' National Certification Standards for Lay Ecclesial Ministers. Prerequisite(s): IPI 477 or permission of instructor.

## IPI 451. Communication \& Community. 1 Hour

Explores principles and techniques for effective communication in varied kinds of parish and diocesan ministry. Prerequisite(s): (IPI 450, 477) or permission of instructor.

## IPI 452. Collaboration in Community. 1 Hour

Study of techniques of effective collaboration with others in ministry and the identification and overcoming of obstacles to collaboration. Prerequisite(s): (IPI 450, IPI 451, IPI 477) or permission of instructor.

## IPI 453. Pastoral Culture. 1 Hour

Survey of the theories and concepts related to culture, the ethnic groups that make up the Catholic Church in the United States of America, and the skills needed to begin to work effectively in a multicultural parish community or other Catholic ministry setting. Prerequisite(s): (IPI 450, IPI 451, IPI 452, IPI 477) or permission of instructor.

## IPI 454. Leadership Ministry. 1 Hour

Survey of the principles, strategies, and best practices of the exercise of leadership and management within the context of Church ministry. Prerequisite(s): (IPI 450, IPI 451, IPI 452, IPI 453, IPI 477) or permission of instructor.

## IPI 455. Administrative Ministry. 1 Hour

Survey of the essential skills of management and supervision in Church ministry, including the spiritual dimension necessary for the effective exercise of those skills. Prerequisite(s): (IPI 450, IPI 451, IPI 452, IPI 453, IPI 454, IPI 477) or permission of instructor.

## IPI 456. Church Living System. 1 Hour

Integration of the principles, best practices, and skills needed for effective lay ministry leadership in the Church. Prerequisite(s): (IPI 450, IPI 451, IPI 452, IPI 453, IPI 454, IPI 455, IPI 477) or permission of instructor.
IPI 460. Foundations \& Vision for Adult Learning \& Faith Formation. 1 Hour
Exploration and analysis of the principles, tasks, and goals of adult faith formation within the larger context of lifelong catechesis. Prerequisite(s): IPI 477 or permission of instructor.

IPI 461. Parish as a Learning Community. 1 Hour
Examination of the parish as a learning community in order to facilitate adult faith formation. Content includes the study of the dynamics and stages of community and group development, the characteristics of a learning community, and the development of strategies for the formation of the parish as a learning community. Prerequisite(s): IPI 460 or permission of instructor.

## IPI 462. Many Faces of Adult Learners. 1 Hour

Examination of the intellectual and spiritual capacities and experiences which constitute adult learning and faith formation. Prerequisite(s): IPI 461 or permission of instructor.
IPI 463. Facilitating Adult Learning \& Faith Formation. 1 Hour Examination of the foundations, principles, and strategies for effective adult learning and facilitation of adult learning and faith formation for all stages of adulthood. Prerequisite(s): IPI 462 or permission of instructor.

IPI 464. Leadership Roles \& Skills for Adult Learning \& Faith Formation. 1 Hour
Study and development of leadership and team development skills for adult learning and faith formation, including skills in collaboration, forming and empowering others for roles in adult learning and faith formation, learning how to facilitate effective meetings, learning effective methods of communication in groups, dealing with conflict, and developing ways for leaders to create a balanced approach to Christian life. Prerequisite(s): IPI 463 or permission of instructor.
IPI 465. Spirituality in Adult Learning \& Faith Formation. 1 Hour Exploration of the defining spirituality, and the principles, techniques, and goals required for an authentic spiritual life in the specific context of adult faith formation. Content also includes a survey of the different schools of spirituality within Catholic tradition. P rerequisite(s): IPI 464 or permission of instructor.

## IPI 466. Designing \& Implementing Adult Learning \& Faith Formation. 1

 HourPresentation and analysis of the principles, tasks, and goals of adult faith formation within the larger context of lifelong catechesis. Prerequisite(s): IPI 465 or permission of instructor.

IPI 477. Vocation, Spirituality \& Discipleship of Catechists. 1 Hour Exploration and analysis of the vocation, spirituality, and discipleship of catechesis. Prerequisite(s): IPI 260 or equivalent.
IPI 480. A Vision for Catholic Youth Ministry. 1 Hour
Introduction to the themes, principles, components, and goals to construct successful Catholic youth ministry programs according to guidelines outlined in the US Conference of Catholic Bishops pastoral plan, Renewing the Vision. Prerequisite(s): IPI 477 or permission of instructor.

## IPI 481. Relational Ministry with Youth. 1 Hour

Exploration and analysis of the relationships youth have with their parents, youth ministers, and the parish community as a whole. Prerequisite(s): IPI 480 or permission of instructor.

IPI 482. Prayer \& Worship with Adolescents. 1 Hour
Study of pedagogical practices to help young people make prayer a central and regular habit of their lives. Prerequisite(s): IPI 481 or permission of instructor.

## IPI 483. Principles for Addressing Diversity Issues in Youth Ministry. 1

 HourSurvey of best practices for developing effective youth ministry programs for young people from plural backgrounds and environments. Prerequisite(s): IPI 482 or permission of instructor.

## IPI 484. Planning Youth Ministry. 1 Hour

Survey of the common factors and best practices that contribute to effective planning for youth ministry. Prerequisite(s): IPI 483 or permission of instructor.

## IPI 496. Parish \& Social Action. 1 Hour

Exploration of the roots of the parish's social mission in Scripture and Catholic social teachings. Prerequisite(s): REL 260B, 263.

## Interdisciplinary Studies

All interdisciplinary and experimental studies at the University of Dayton must involve University students and faculty, must be commensurate with University resources or resources accessible to the University, and must further the recognized goals and purposes of the University. When these studies involve disciplines within the College of Arts and Sciences or one of the Schools, they are administered by or through the offices of the respective deans. When they are University-wide, i.e., inter-school, they are usually administered by the Office of the Provost.

## Interdisciplinary-A\&S Courses

ASI 100. Academic Reading \& Dialogue. 3 Hours
Academic Reading and Dialogue.

## ASI 110. The Roots and Development of Western Culture in a Global Context. 7 Hours

An introductory two-course sequence integrating the study of English, history, philosophy and religious studies. The first course, ASI 110 ( 7 sem. hrs), offered in the fall semester, covers ancient civilizations through early modern civilization. (Completion of ASI 110 counts as completion of HST 103 and REL 103).

## ASI 120. The Development of Western Culture in a Global Context. 8 Hours

An introductory two-course sequence integrating the study of English, history, philosophy and religious studies. The second, course, ASI 120, (8 sem. hrs), offered in the spring semester, continues from the Enlightenment to the contemporary period. Restricted to first-year students in the Core Program. (Completion of ASI 120 counts as completion of second historical study course, PHL 103, and ENG 200H.) Prerequisite(s): ASI 110.

## ASI 150. Introduction to the University Experience. 1 Hour

Examination of the values that inform academic progress in the College; discussion of strategies for taking full advantage of academic opportunities and integrating formal and experiential learning.

ASI 160. First Year Seminar for Discovering Students. 1 Hour Examination of academic policies and procedures in the College; discussion of strategies for sustaining student success, selecting a major and incorporating experiential learning into the academic experience for Discovering (undecided major) students.

## ASI 170. Applied Learning Strategies. 1 Hour

Students will explore personal strategies for academic success with a faculty or staff mentor.

## ASI 201. Personal Value Development. 2 Hours

Exploration of the conceptual framework of value development. Application of concepts in such personal decision making as educational and career planning, developing satisfying personal relationships, and using time productively.

## ASI 203. The Dayton Community. 3 Hours

An interdisciplinary social science course describing and analyzing the nature of community issues and problems of the Dayton area; various approaches to addressing local concerns including public, private and citizens initiatives are explored.

## ASI 214. Dramatic Kinesics in a Foreign Language. 1 Hour

Corrective work in foreign language sound and gesticulatory patterns accomplished by enacting scenes from a play in the language. May be repeated in one language in successive stages of difficulty up to three semester hours. Registration may be retroactive. Prerequisite(s): Basic instruction in language; permission of instructor.

## ASI 228. Focus on Women. 1 Hour

Interdisciplinary seminar on the changing roles and status of women. Requirement for women's studies minors. May be repeated since topics change yearly.

## ASI 301. Democracy \& Deliberation. 3 Hours

Democracy \& Deliberation explores competing theoretical approaches to and empirical assessments of democratic governance. Particular attention is paid to the role of deliberation and civic engagement in democracies. Students will help organize and execute a deliberative forum as part of the course.

## ASI 305. Appalachian Studies. 3 Hours

Appalachian history and its influence on the present; problems of recent events; influence of local government and federal programs on the people; economic problems of underprivileged people and the future of industrial development; ecology of the region; literature, art, and music; psychology of social change and community development in the underdeveloped regions; health and mental health; problems of the Appalachian migrant.

## ASI 320. Cities \& Energy. 3 Hours

Interdisciplinary examination of the influence of energy on the urban environment since the Industrial Revolution, and how this relationship has affected every aspect of city life from infrastructure to culture (literature and film, in particular). Emphasis on the relationship between the development and design of cities and their impact on various forms of difference (e.g., race, class, and gender, among others), as well as the prospects for the future of cities and energy systems. Prerequisite(s): ENG 100, HST 103, or ASI 110.

## ASI 322. Cities \& Suburbs: The Influence of Place (Social Science). 3

 HoursThis interdisciplinary course examines the changing social, political, economic, cultural, ethical, and religious factors that shape life in cities and suburbs. It examines the factors that influence where people choose to live and the conditions that both unite and divide people across urban/ suburban regions. Particular consideration is given to issues of social injustice, privilege and oppression, and moral responsibility. The social science domain is emphasized. This course is cross-listed with ASI 323 and ASI 324. Students taking ASI 322 may not receive credit for ASI 323 or ASI 324.

ASI 323. Cities \& Suburbs: The Influence of Place (Philosophy). 3 Hours This interdisciplinary course examines the changing social, political, economic, cultural, ethical, and religious factors that shape life in cities and suburbs. It examines the factors that influence where people choose to live and the conditions that both unite and divide people across urban/suburban regions. Particular consideration is given to issues of social injustice, privilege and oppression, and moral responsibility. The philosophy domain is emphasized. This course is cross-listed with ASI 322 and ASI 324. Students taking ASI 323 may not receive credit for ASI 322 or ASI 324.

## ASI 324. Cities \& Suburbs: The Influence of Place (Religious Studies). 3 Hours

This interdisciplinary course examines the changing social, political, economic, cultural, ethical, and religious factors that shape life in cities and suburbs. It examines the factors that influence where people choose to live and the conditions that both unite and divide people across urban/ suburban regions. Particular consideration is given to issues of social injustice, privilege and oppression, and moral responsibility. The religious studies domain is emphasized. This course is cross-listed with ASI 322 and ASI 323. Students taking ASI 324 may not receive credit for ASI 322 or ASI 323.

## ASI 325. Cities \& Institutions. 3 Hours

Examination of important urban institutions, including, but not limited to, city planning, economic development, public safety, and education.

## ASI 341. Special Topics in Arts Study. 1-3 Hours

Examination of an interdisciplinary topic in arts study. Topics developed by faculty holding appointment in the Humanities Fellows Program or in an endowed chair. May be repeated as topics change.

## ASI 342. Special Topics in Historical Study. 1-3 Hours

Examination of an interdisciplinary topic in historical study. Topics developed by faculty holding appointment in the Humanities Fellows Program or in an endowed chair. May be repeated as topics change.

## ASI 343. Special Topics in Philosophy Study. 1-3 Hours

Examination of an interdisciplinary topic in philosophy. Topics developed by faculty holding appointment in the Humanities Fellows Program or in an endowed chair. May be repeated as topics change.

## ASI 344. Topics in Religious Studies. 1-3 Hours

Examination of an interdisciplinary topic in religious studies. Topics developed by faculty holding appointment in the Humanities Fellows Program or in an endowed chair. May be repeated as topics change.

## ASI 345. Special Topics in Social Science. 1-3 Hours

Examination of an interdisciplinary topic in social science. Topics developed by faculty holding appointment in the Humanities Fellows Program or in an endowed chair. May be repeated as topics change.

ASI 346. Special Topics in Physical \& Life Science. 1-3 Hours
Examination of an interdisciplinary topic in physical and life sciences. Topics developed by faculty holding appointment in the Humanities Fellows Program or in an endowed chair. May be repeated as topics change.

## ASI 347. Physics \& Literature. 3 Hours

Examination of works of literature that are based on principles of physics. Basic physics experiments will be performed to reinforce theoretical principles. Prerequisite(s): ENG 102 or equivalent; SCI 190 or other PHY course.

## ASI 350. Interdisciplinary Film Study. 1 Hour

A capstone course in the film studies minor. Interdisciplinary study of film from religious, philosophical, literary, creative, technological and institutional perspectives. Requirement for film studies minors. Prerequisite(s): Any combination of four courses (twelve semester hours): REL 372, PHL 324, ENG 331, ENG 332, CMM 345, other approved substitutes.

## ASI 357. Vocation \& the Arts. 3 Hours

Interdisciplinary arts study course that explores the impact of an artist's sense of vocation on art; use of autobiography for self-knowledge. Open to Chaminade Scholars. Prerequisite(s): REL 356 or permission of department chairperson.

## ASI 358. Christianity, Citizenship \& Society. 3 Hours

Interdisciplinary social science course, capstone for Chaminade Scholars. Presentation of historical-theological context of the church and its impact on society. Designed to help students think through their place and role in the society in which they live, work, and worship. Prerequisite(s): (ASI 357; REL 356) or permission of department chairperson.

## ASI 371. Professional Ethics in a Global Community - Business

 Administration. 3 HoursVirtues and responsibilities of professionals to self, clients, community, and world. Philosophical and religious approaches to ethical theory and decision-making. In-depth study of one of the following: business ethics (371), ethics and education (372), engineering ethics (373), philosophical (374) or religious (375) consideration of membership in a global community.
ASI 372. Professional Ethics in a Global Community - Education. 3 Hours Virtues and responsibilities of professionals to self, clients, community, and world. Philosophical and religious approaches to ethical theory and decision-making. In-depth study of one of the following: business ethics (371), ethics and education (372), engineering ethics (373), philosophical (374) or religious (375) consideration of membership in a global community.

## ASI 373. Professional Ethics in a Global Community - Engineering. 3

 HoursVirtues and responsibilities of professionals to self, clients, community, and world. Philosophical and religious approaches to ethical theory and decision-making. In-depth study of one of the following: business ethics (371), ethics and education (372), engineering ethics (373), philosophical (374) or religious (375) consideration of membership in a global community.
ASI 374. Professional Ethics in a Global Community - Philosophical. 3 Hours
Virtues and responsibilities of professionals to self, clients, community, and world. Philosophical and religious approaches to ethical theory and decision-making. In-depth study of one of the following: business ethics (371), ethics and education (372), engineering ethics (373), philosophical (374) or religious (375) consideration of membership in a global community.
ASI 375. Professional Ethics in a Global Community - Religious. 3 Hours Virtues and responsibilities of professionals to self, clients, community, and world. Philosophical and religious approaches to ethical theory and decision-making. In-depth study of one of the following: business ethics (371), ethics and education (372), engineering ethics (373), philosophical (374) or religious (375) consideration of membership in a global community.

## ASI 390. Social Justice in Latin America. 3 Hours

This course adopts an inter-disciplinary, highly experiential approach to the topic of social justice in Latin America by focusing on the social, theological, and ethical dimensions of justice. Taught on-site in Latin America. Prerequisite(s): SPN 201 or equivalent or permission of instructor.

## ASI 395. Integrative Capstone Project, India. 3 Hours

Development and presentation of a major project which demonstrates integration of philosophical analysis and synthesis with at least two other disciplinary perspectives and which makes application of these disciplinary perspectives to an aspect of a life of ministry.

ASI 397. Capstone Seminar in Human Rights Studies. 3 Hours
Examination and reflection of scholarship and experiential learning activity related to interdisciplinary major. Project and public presentation on a contemporary human rights challenge demonstrating practical wisdom and critical evaluation of our times. Exploration of leadership, advocacy and service opportunities in human rights and humanitarian assistance as vocation.
ASI 398. Special Topics in International Development. 3 Hours
Study of political, philosophical, historical, and economic questions associated with developing countries. Topics determined by an interdisciplinary team.

## ASI 399. Interdisciplinary Topics. 3 Hours

Study of special topics or themes of an interdisciplinary nature. Specific subtitles announced in composite. May be repeated as topics change.

## ASI 404. Applied Study in Community Issues. 3 Hours

An advanced seminar that generates applied social science research related to contemporary social problems and public policy-making in the Dayton area. Students participate in research teams to assist government agencies in defining and analyzing critical social conditions (under spervision of faculty from various disciplines). Prerequisite(s): Permission of instructor.

## ASI 448. Seminar in Family Development. 1 Hour

Interdisciplinary examination of issues relating to family relationships, changes in family life, and the social context of family life. Required of family development minors. Prerequisite(s): Twelve semester hours completed in the minor.

## ASI 495. Integrative Capstone Project, India Program. 3 Hours

Development and presentation of a major project which demonstrates integration of philosophical analysis and synthesis with at least two other disciplinary perspectives and which makes application of these disciplinary perspectives to an aspect of a life of ministry.

## Mini Courses Courses

UDI 055. Becoming a Mindful Learner. 1 Hour
Becoming a Mindful Learner is a seven-week learning course accompanied by one-on-one academic coaching sessions until the end of the semester. Students in the course will be provided with positive and supportive experiences in which they can develop a series of strategies to enhance their academic success. Must be current UD students in degreeseeking programs.

## UDI 102. Plan for Financial Success. 1 Hour

No description available.

## UDI 103. Financial Strategies For the Real World. 0.5 Hours

Credit cards, car loans, 401 Ks , retirement benefits, mortgages...As students, you may have never had to deal with any of these financial services. However, as soon-to-be college graduates, they are all just around the corner. This course is designed to teach students how to take care of their own finances by giving answers to all their financial questions. We will spend a great deal of time talking about healthy vs. unhealthy financial decisions and the rewards and consequences that come from these decisions.
UDI 110. Maximizing Your International Experience - Explore. 1 Hour No description available.

UDI 120. PAGES: Prison Action Group for Education Service. 1 Hour This mini-course is a service learning course at the Montgomery County Jail. Participants must go through a background check and tour and training at the jail; then, once authorized to enter the jail, students serve as tutors to nonviolent inmates preparing to earn the GED (Graduate Equivalency Diploma); each student is expected to tutor for two hours a week for at least 8 sessions : 16 hours.
UDI 136. Does Anyone Date Anymore?. 1 Hour
Dating, relationships and hooking up - it's complicated in college. This course draws from various readings - both medieval literature and contemporary research - to facilitate classroom dialogue on the romance culture at UD. Students will be challenged to go on a date and reflect on their personal experience.

## UDI 139. Alcohol\&Christian. 1 Hour

When is it acceptable to feast? When is it better to fast? How much is too much? This course outlines the two poles of abstinence and over consumption in respect to alcohol consumption. Students will be encouraged to engage intellectually and personally with questions of communal temperance and celebration in the context of Catholic Sacramental and moral theology.

## UDI 141. New Evangelization. 1 Hour

This course is a response to and implementation of Pope Francis' new direction for the Church as outlined in Evangelii Gaudium. Students will be encouraged to have a renewed spiritual encounter with Jesus Christ through a study of the communities of the early Church, modern examples of evangelization, as well as a look at Pope Francis' papacy and vision for the Church.

## UDI 144. Prayer Through Music. 1 Hour

How often do we consider the ways in which we utilize music within our lives? Praying Through Music seeks to explore this question specifically in the ways that our making and taking of music informs our spirituality. The course will feature the experience of various methods of music prayer as well as the training of students to lead music prayer sessions.
UDI 145. Life Skills for First-Year Student Athletes. 1 Hour
Focus will be on the unique transitions that student-athletes face upon entering college. Student-athletes will explore several aspects of college life such as an introduction to the university, leadership and identity. Class limit: 20.

## UDI 146. Trans College Athlete Grad. 1 Hour

No description available.
UDI 147. Building Academic Skills for Student-Athletes. 2 Hours
This course is designed to enhance student-athletes' experience at the University of Dayton by building academic skills focusing on a growth mindset and leadership potential.

## UDI 148. Everyday Conversations in China. 1 Hour

Everyday Conversations in China is exclusively for the China Institute. Taught by Soochow University, a partner of the University of Dayton, this course will provide students an introduction to China through a cultural and linguistic lens. Students will interact with their Chinese counterparts as well as faculty from Chinese universities to begin understanding more about China through language.

## UDI 149. Learning Connections. 2 Hours

In this two-credit-hour course, we will explore the relationship between the research on learning, neuroscience, and your own experience of and needs in - learning. The course will require you to make connections between the content of this course and your past and present learning experiences. The goal of the course is to further develop your approaches to studying and enhance your learning experiences in American college classes. (Note: this course is for International students, section M1 is reserved for International students enrolled in the School of Engineering) Class limit: 12 per section.

## UDI 152. Student Challenges. 0.5 Hours

No description available.

## UDI 154. DC Flyers Program Launch. 1 Hour

This mini-course is designed to both assist students in securing a summer internship in Washington, DC as well as assist them in preparing for their 10 week DC summer internship. Topics to be covered over the mini-course include 1) professional development topics such as resume/cover letter development, networking basics, and proper office etiquette, 2) a basic introduction to government and politics in DC, and 3) discussion of skills and tips for living and working in DC. Prerequisite(s): Must be selected for the DC Flyer Summer 2016 Internship.

## UDI 164. Faith, Vocation \& Leadership. 1 Hour

Students explore topics such as Christian identity, discipleship, and leadership (second semester: evangelization, service, and prayer) in an effort to understand Christian vocation and leadership.

## UDI 165. Chaminade Scholars. 0.5 Hours

Students explore the topics of community, service and prayer in an effort to more fully understand Christian vocation.

## UDI 166. Choosing Your Career. 1 Hour

This course is designed for first-year and sophomore students who have yet to decide on an academic major or career path. We will investigate personality type, interests, values and skills, and help students develop a more specific focus on their future career choices. Class limit: 24.
UDI 169. Getting Down to "Business": Major and Career Exploration. 1 Hour
This class assists students in examining the components of academic major and career choice. The focus is on career awareness, personal awareness and educational awareness as students relate to the process of selecting a business major and career. Planning skills and selfassessment instruments will help identify majors and tentative career options. Decision making strategies, resume writing, interviewing skills and job search techniques will be reviewed. Prerequisite(s): First-year student or sophomore; School of Business Administration major.

## UDI 174. Health, Balance and Talents. 1 Hour

The college environment can make it feel impossible to manage your personal well being. Students in this course will redefine wellness through presentations by guest speakers, hands-on activities, and critical inquiry to enhance and enjoy life.

## UDI 175. The Art \& Science of Learning. 2 Hours

Students in this course will explore the intersection of research in neuroscience, psychology and educational psychology with their own experience of and needs in learning. The course will ask students to synthesize what they're learning about themselves. Topics will include self-efficacy, motivation, Marianist community, responsibility and a variety of learning and study skills. First-year students. Class limit: 15.

## UDI 184. Flyer Consulting Class. 1 Hour

This is an introductory business class designed to expose students to Flyer Consulting, the nonprofit sector, and to the consulting industry. It also provides an orientation to project management, teamwork, and professional skills through training sessions and activities.

## UDI 185. Junior Achievement Economic Education Project. 1 Hour

 This minicourse provides a unique opportunity to undertake service learning in area elementary schools. UD students present six short modules covering basic economics topics using materials provided by the Junior Achievement organization (designed to complement the Ohio state curriculum requirements). UD students from any school or major are welcome. Participants, working in teams of three to four UD students, gain valuable experience in making presentations and, more importantly, the satisfaction of motivating young students to stay in school and envision a better future.UDI 188. Technology Certification. 1 Hour
No description available.

## UDI 190. ESTEEM - Engaging Students to Enliven the Catholic Mission. 1

 HourESTEEM (Engaging Students to Enliven the Ecclesial Mission) is a national ministry initiative designed to train, encourage, and support young adult Catholics to engage in their Catholic faith life more deeply and witness to their faith while in college and upon graduation.
UDI 201. Catholic Spirituality and Prayer: It's All About Practice. 1 Hour What is prayer and how do I do it? Can prayers like the rosary really help me to grow spiritually? This course will explore different Catholic prayers by learning about a specific prayer style and practicing it as a class. Each session will be a formational, faith-sharing experience. Students will also have the opportunity to attend a half day retreat. This retreat is designed to help them to relax while taking intentional time to reflect upon and grow in their spiritually while exploring what it means to feel connected to the greater Catholic Church.

## UDI 202. Finanical Strategies for the Real World. 1 Hour

Credit cards, car loans, 401 (k) plans, retirement benefits, mortgages: As students, you may have never had to deal with any of these financial services. However, as soon-to-be college graduates, they are all just around the corner. This course is designed to teach students how to take care of their own finances by giving answers to all their financial questions. We will spend a great deal of time talking about healthy vs. unhealthy financial decisions and the rewards and consequences that come from these decisions. Class limit: 25.

## UDI 203. Faith and Fitness. 1 Hour

Christian theology holds true that humans are made in the image and likeness of God (imago Dei). This course will explore the relationship between healthy body image and Christian spirituality. Students afterwards will be confident to create reflections for our on campus faithFIT organization. Prerequisite(s): REL 103.

UDI 204. This is UD: Archival and Primary Source Research. 1 Hour Learn about the campus, community, Catholic, and Marianist past with this hands-on research course. Students will connect to the past by analyzing the University Libraries collections and research individual artifacts.

## UDI 205. Using Technology to Transform Learning. 1 Hour

In this course, we will learn how to evaluate and use technologies for learning, with a special focus on mobile applications (e.g. Apps for iOS, Android, etc). This course includes class discussions and inquirebased activities and assignments to critically review various moblile applications for education and learning. Although not required, students are encouraged to provide their own mobile device.

## UDI 210. SAIL: Semester, Abroad, Intercultural Leadership and Re-Entry.

 1 HourSAIL: Semester Abroad, Intercultural Leadership and Re-Entry is offered only to study abroad almuni that studied at the UD China Institute, Maynooth University (Ireland) or Universidad Pontificia Comillas (Spain) in the fall 2016 semester. This course allows student alumni of these programs to pivot towards becoming a global citizen within the UD community and post-graduation by learning about key notions of leadership and intercultural compentency. Students registered for this course will have the opportunity to "un-pack" their experience abroad within these contexts alongside other SAIL alumni and applying it within their residential community at UD.

## UDI 211. SAS Programming. 1 Hour

The purpose of this course is to teach students SAS - a powerful software package used for data management, statistical analysis and optimization. Knowledge of this software is beneficial for students interested in either working in industry or continuing on to graduate school. Sophomore students will find this course useful. Class limit: 20.

## UDI 212. Video Sports Production. 1 Hour

This course will provide an in-depth look at video production as it relates to sports. In this course, students will learn what makes executing projects of sports different than other broadcasts and how the many pieces of a live sports production are executed and come together.

## UDI 214. Peace Leadership. 1 Hour

No description available.

## UDI 217. Writing in APA Style. 1 Hour

In this course students will learn to write APA style research papers, including APA style citations and references. Assignments will include reading and writing research papers, critiquing the work of classmates, and revising their own work. Prerequistie(s):PSY217 or graduate student status.

## UDI 220. Maxie Prepare. 1 Hour

The focus will be on preparing for a study abroad experience and developing cultural learning in any context. The course will cover culture general concepts and culture specific strategies for learning and understanding that begin to connect the student to his/her host destination.

## UDI 222. The Marianist Guide to Almost Everything. 1 Hour

This course will be centered around the reading and discussion of The Jesuit Guide to Nearly Everything by the popular spiritual writer, Fr. James Martin. This book breaks down steps of spirituality at a level basic enough for a beginner in faith to understand but profound enough for the more experienced to still learn from. Furthermore, other traditions, especially those of the Society of Mary, will be used to supplement Fr. Martin's work.

## UDI 223. Small Faith Community Leadership. 0.5 Hours

This course provides spiritual and leadership development intended for the student leaders of small faith communities on campus, particularly those leading PORCH or Madeleine Groups through Campus Ministry. It will involve elements of prayer, reflection, and sharing on each leader's engagement in small faith communities. This course will engage Sophomores through Seniors, some of whom will repeat the course as they lead small faith communities for consecutive years.

## UDI 226. Creative Prayer and Spiritual Growth. 1 Hour

This course will explore faith development through advanced contemplative prayer techniques including lectio divina, psalm prayer, visio divina, the Ignatius' examen, soul collage, etc. These spiritual practices will be experientially taught throughout the campus, including the newly renovated Immaculate Conception Chapel.

## UDI 227. Lean Six Sigma. 1 Hour

Introduction to the principles and techniques used to optimize industrial and business processes. The course will include the Six Sigma approach known as DMAIC and Lean Enterprise principles such as Just-in-Time, Pull Systems and Set-up Reduction.

## UDI 228. Creative Analytics II: Robotics. 1 Hour

Practical concepts of robotics as applied in automation systems. Business issues, technical aspects and the benefits of using robotics process automation will be explored. Discrete robotic as well as system applications will be used.

## UDI 229. Creative Analytics III: Data Analytics. 1 Hour

This course will introduce students to commonly used Business Analytics (BA) methods through a series of hands-on assignments. Examples of analysis methods covered are spreadsheet optimization, data mining, data visualization, and text data mining. During the course, students will familiarize themselves with these methods by completing hands-on assignments. To complete the assignments, students will be using popular BA tools such as Microsoft Excel's Solver, IBM's SPSS, Microsoft's PowerBI, and Tableau. At the end of the course, students should have an understanding of what makes each method unique, what types of analysis are appropriate for each method, and how to perform simple analyses using software tools.

## UDI 230. Creative Analytics IV: Artificial Intelligence. 1 Hour

Artificial Intelligence (AI) spans a wide variety of topics including search, planning, reasoning, and learning, with the ultimate goal to make computer behave intelligently to tackle complex real-world problems. This course serves as a broad introduction to many Al topics, but taught at the undergraduate level, where students will learn to solve various AI problems with rigorous mathematical software tools. Given the limited time, we will try to avoid unnecessary difficulties of theoretic proofs and notations as far as possible to enable students to get a grasp on the big picture about AI. Students in this program will master an in-depth curriculum that covers both foundational principles and the cuttingedge advancements in Al , e.g. Deep Learning, which is one of the most transformational technologies. Through hands-on projects and exposure to modern Al tools, students will gain essential coding experience and develop their practical skills bridging the gap between colleges and industries.

UDI 233. Sophomore Year Experience. 1 Hour No description available.
UDI 238. Liturgical Music Practicum. 1 Hour
No description available.

## UDI 239. Liturgical Music Practicum. 1 Hour

Students will advance their studies of Catholic liturgical music through both classroom learning and practical experiences providing music in a mentored environment for a variety of campus liturgies.
UDI 241. Religious Studies: Explorations and Discoveries. 1 Hour The course allows Religious Studies majors and minors as well as those interested in learning more about the major to explore different facets of religious and theological studies as it relates to current events and issues, to form a community of learners, and explore vocation in relationship to their studies.

## UDI 244. Comparative Legal History. 1 Hour

The course seeks to provide a comparative perspective of the evolution of western legal systems from medieval times to XXIth Century both in private and Constitutional Law. Special emphasis will be provided to European Continental Tradition and Common Law system.
UDI 247. Introduction to Principles of Liturgy for Christian Musicians. 1 Hour
This course provides liturgical background and knowledge for the new undergraduate music ministers who will be chosen by auditioning in spring 2015 and will be leading/ directing music at liturgies on campus. Enrollment is limited to those students who have completed the application process, auditioned and been accepted as undergraduate music ministers (called UGMMs for short). Selection will be in spring 2015.

## UDI 250. Exploring Everyday Techonology. 1 Hour

No description available.
UDI 251. U LD-Pear Academic Leadership. 1 Hour
No description available.
UDI 257. Experiences in Operations \& Supply Management. 1 Hour Designed to immerse students into the contemporary issues of operations management. The course is comprised entirely of site visits and guest lectures from operations management leaders. The class is limited to 5 students. The goal of the class is to introduce students to the field of operations management by providing the opportunity to see for themselves what real operations managers do. The course is open to all UD students, but priority is given to undergraduate business majors who are yet undecided as to their choice of major.

## UDI 258. Exploring Careers in Information Systems. 1 Hour

This course is intended for students exploring their interest in being a major, minor, or double major in management information systems (MIS) in the business school. The course is designed to allow students to develop an understanding of career possibilities in MIS. The class focuses on introducing students to careers in information systems by providing opportunities to see, discuss, and experience what real information systems professionals and managers do. The course is comprised primarily of visits with MIS professionals, discussions, and experiences guided by leaders and professionals in the information systems field. This class is limited to 5 students.
UDI 262. Exploring Sustainability, Energy and Environment. 1 Hour This minicourse provides an exploration of sustainability, energy and environment (SEE) themes, people and organizations (both on and offcampus). Students choose from a menu of field trips, service projects, speakers and dialogue events. Several discussion sessions with classmates and a reflection paper aid in integrating the experiences. The course is designed for students in the SEE integrated learning-living community. It is also open to other students in their first year at UD, of all majors, who are interested in SEE issues.

UDI 265. Christian Leadership Development. 1 Hour
Required course for students selected to be Student Leaders for the Christian Leadership and Vocation Callings workshop. The course will prepare students to be effective leaders and to assist incoming first-year students in articulating the role of vocation in their life. The course will include a retreat experience, a service learning experience, and classes.

## UDI 267. Journey towards Global Citizenship. 1 Hour

This course is offered only to GLLC residents in the fall semester. This course allows residents to engage in deeper intercultural experiences, learning more about themselves, each other, and how they can contribute more fully to the Global Learning Living Community experience and beyond. Students registered for this course will have the opportunity to explore culture in an experiential format and with other GLLC peers. Permission required.

## UDI 270. Premedical Community Health Experience. 1 Hour

This one-credit pass/fail minicourse is intended to orient and train students to provide services as volunteers at Reach Out of Montgomery County. In addition to learning skills required to perform volunteer functions during the open clinic, students will learn about the complexities of providing health care to underserved populations and develop interpersonal skills to be empathic and informed advocates for patients. Class limit: 12.

## UDI 271. Vowed Women in Religion. 1 Hour

This course will exlpore vowed religious life of women's communities in the Roman Catholic Church. It will include a brief historical overview and will then focus on the charisms of sereral women's religious communities today, paying particular intention to those that are active in the United States and especially on campus. The course will include a required livein experience with a community of the student's choice.

## UDI 273. Introduction to Urban Poverty. 3 Hours

No description available.

## UDI 276. Predental Community Health Experience. 1 Hour

Students preparing for admission to dental school benefit from the opportunity to observe and assist in a dental environment. UD students are drawn to opportunities to provide service in the Dayton community as part of their undergraduate experience. The purpose of this mini-course is to provide an opportunity for pre-dentistry students to observe dentists practicing in a nonprofit environment and assist in providing dental services to patients. Prerequisite(s): 45 credits of completed coursework.

## UDI 277. Medical Documentation in the EMR Age and the Medical Scribe.

 1 HourThis course is a one credit pass/fail mini course intended to provide the student with a glimpse into the complexities of documentation in an electronic medical record. In addition to learning the basics of documentation, the student will be provided an opportunity to practice scribing into a medical record. Additional training will be available to those interested in pursuing a position as a medical scribe with ABC Scribes.

## UDI 278. Health Careers Seminar. 1 Hour

Career planning course will explore a variety of health careers and help students gain insight into which careers are good fits based on selfassessment activities. Course will include clinical observation and opportunities for service learning.

## UDI 281. Business Ethics Case Competition. 1 Hour

By coaching a team to enter into a business ethics case competition, this course sharpens our student understanding of the principles of ethics and of the complexity of situations encountered reqularly by executives and other professionals.

## UDI 282. BEES in the Field: Business Ethics \& Environmental

 Sustainability (BEES) Field Trips. 1 HourThis course is designed to complement coursework in environmental sustainability and business ethics. While innovated to meet the particular needs of students in the Integrated Living Community- BEES, it is also a great complement to coursework in ECO 435: Environmental Economics as well as other sustainability and SEE classes. Trips to sewage treatment plants, landfills, and vulnerable environmental sites (e.g. wetlands) will be offered; there will also be guest speakers and films on campus and/ or visits to other private and public sector entities in the Dayton vicinity that impact the environment. Students will be able to choose from a number of options that may include a kayak/canoe trip and a biking outing. Students can choose between several events; they just have to attend 13 hours of programming over the course of the semester.

## UDI 283. MOS Certification - EXCEL. 1 Hour

No description available.

## UDI 284. MOS Certification - WORD. 1 Hour

No description available.

## UDI 290. Introduction to Engineering Design and Appropriate Technology. 0.5 Hours

An experiential course in appropriate technology and engineering design which spans the Spring or Fall semester in preparation for a tenday service-learning experience focused on technical or engineering related work in a developing country. The course also includes language preparation, travel orientation, and intercultural awareness discussions. Prerequisite(s): EGR 103.

UDI 302. International Basketball European Tour. 2 Hours
In conjunction with the basketball foreign tour, students will learn basic information about the history, culture and food in the Spanish cities of Madrid and Barcelona. Through athletics, service learning and cultural immersion students will document how history and culture over the long duration of time plays a role in societal formation.

## UDI 303. GRE/GMAT Preparation. 1 Hour

The purpose of this course is to prepare students for taking graduate entrance exams and to help improve their scores. The GMAT and GRE exams test a student's knowledge on multiple areas. The focus of the class will be on solving past exam questions.

## UDI 309. Medical Terminology for Premeds. 1 Hour

This course will instruct students on the basics of the language of medicine as taught by a practicing family physician. Real-world scenarios and case studies presented from actual clinical practice will enhance the motivated student's ability to learn medical terminology. Skills mastered in this class will remain with the future physician or healthcare worker for the remainder of his/her career.
UDI 310. Maxie: On-Site. 0-1 Hours
No description available.

## UDI 314. The Facing Project. 1 Hour

The Facing Project mini course is designed for students who are participating in the Facing Project hosted by the Fitz Center for Leadership in Community.

## UDI 315. The River Steward Experience I. 1 Hour

This course is for the River Stewards ONLY, the student group of the Rivers Institute at the University of Dayton. River Steward Experience Year I will highlight aspects of leadership development and civic engagement through education, experience and action in an interdisciplinary setting. Students will begin to lead discussions and interact with community partners. The Great Miami River will serve as the focus for community engagement and meaningful learning. Class limit: 20.

## UDI 316. River Steward Experience. 1 Hour

This course will be a seminar for the River Stewards, the student group of the Rivers Institute at the University of Dayton. The course will be available for only River Stewards. This course will highlight components of education, action and experience. Participants in the Year 1 minicourse will, under the supervision of the instructor, organize and teach many of the topics covered in the Year 1 course. The Great Miami River will serve as the focus for community engagement and meaningful learning.

## UDI 317. Gvng Prf Prsntn-PSY. 1 Hour

This class is about how to organize and present psychological research at professional conferences. Students taking this class should already possess the basic skills required to develop the research questions, design the studies, collect the data, conduct the statistical analyses and interpret the findings that would comprise the content for these presentations. these skills are taught in the 100 and 200 level classes listed as pre-requisites.

## UDI 324. Live Simply Sustainability. 1 Hour

No description available.
UDI 325. Women in Community: The Benedictine Experience. 2 Hours This course will prepare students for a week long monastic experience at a women's Benedictine Community in Erie, PA. At Mount Saint Benedict students will experience the monastic rhythm of prayer and work; encounter the inextricable link between faith and justice; and discover sacred beauty in the ordinary aspects of life made holy. There is a breakout fee of $\$ 250.00$ for the required May breakout to the monastery.
UDI 335. Being Together: A Workshop in Sexual Ethics. 0.5 Hours In this course, you will reflect on your past and current experiences, including on this campus, using this reflection as a base for developing your own sense of what you value and hope for in your romantic and sexual relationships. At the end of the five sessions, you will have thought and written about many aspects of your relationship life, shared some of your thoughts with the group participants, and reflected further on your own. This is an ethics course-one that we hope will stay with you in a special way as you grow, and live, and love.

## UDI 339. Global Brigades: Preparing for Nicaragua. 1 Hour

Roughly $50 \%$ of the Nicaragua population lives in poverty. Currently, more than $43 \%$ of the population lives in isolated, rural areas of the country. Of this population, $85 \%$ struggle to live on more than $\$ 1$ daily. Communities are limited in their access to basic health services because of poor read infrastructure, also making transportation and trade extremely difficult. Historically, each step forward that Nicaragua has taken in the realm of development has been counteracted with a step back in the form of a revolution, natural disasters, repealing of funding for governmental projects or foreign aid. Prerequisite(s): Acceptance to the Global Brigade service trip.

## UDI 341. Sexual Diversity. 1 Hour

This course explores the lives and development of lesbian, gay, and bisexual people in contemporary American society with particular attention to individual, relationship, and community issues and their intersections. Students will be encouraged to examine their fears and prejudices as a way of discovering that sexual minority individuals are both unlike and just like everyone else. In this way all students- - straight or gay - can learn to be more sensitive to differences in sexuality that exist in the world around them.

## UDI 350. Wines of the World. 1 Hour

This is a course for those who are convinced they will appreciate wines more if they learn more about wine and its history. This course will be a journey where we will share what we discover as we travel together over the wine roads of many nations. In addition to our reading and discussions we will share three experiences along the way. The first will be a component tasting where we will examine the individual tastes, aromas and sensations that come with both good and bad wines. Next we will have a formal wine tasting to explore the properties of red and white wines from several different countries. Finally we will share a dinner where the several courses have been matched to one or more wines.

## UDI 353. Project Letterpress. 0.5 Hours

Students receive intensive instruction on setting letterpress type and work on the design, printing, and cuating of a large edition of letterpress prints. Prerequitie(s): VAF253.

## UDI 357. Chaminade Scholars Practical Discernment and Servant Leadership. 1 Hour

This course explores and utilizes topics related to discernment and servant leadership as a way to design a capstone project for the Chaminade Scholars Class of 2016 Cohort. This is a closed course for Chaminade Scholars. Prerequisite(s): REL 356.

## UDI 358. Christian Leadership. 1 Hour

## UDI 359. Employment Readiness. 1 Hour

Conducting your job search can be a daunting task, but breaking it down into manageable steps will help you be successful. You will acquire professionalism with ease and become more self assured in business interactions. You will also learn how to become a highly desirable employee by understanding career leadership skills most desired by employers, such as professionalism, problem solving, respecting workplace boundaries and diversity.

## UDI 361. Cross Cultural Immersion Preparation. 1 Hour

The Cross-Cultural Immersion Preparation course offers students one credit hour as they prepare for their summer immersion through the Center for Social Concern. The course will introduce students to the intricacies of foreign travel and immersion and will discuss global issues. This is a requirement for all students participating in a summer immersion through the CSC and is only open to those students.

UDI 363. ULEAD: Leadership Program Emerging Leaders. 2 Hours The UleaD course is carefully structured to explore concepts of leadership. Facilitated as an emerging leaders programs, UleaD focuses on providing opportunities for students to develop a better understanding of self and others, strengthen leadership skills, and network.

## UDI 365. Faith, Vocation and Leadership. 1.5 Hour

Students explore topics such as community, prayer and Christian servant-leadership in an effort to understand and engage in communal faith development and vocation discernment.

## UDI 366. Challenging Faith. 1 Hour

This course explores ways of balancing social life and faith on UD's campus. Students will reflect on life experiences and discuss alcohol, sexuality, and over commitment as challenges to their faith journeys.

## UDI 368. Marianist Studies in Community. 1.5 Hour

Living in intentional community will guide the students participating in the Marianist Student Community program. Student will engage in formation and dialogue concerning the Catholic and Marianist mission and identity of UD through formation in-service, prayer, and community building.
UDI 371. ACT I: Creative Confidence Through Critical Perspective. 1 Hour Students are introduced to applied creative theory and critical thinking through the Institute of Applied Creativity for Transformation's (IACT) transdisciplinary, experimental sessions focused on developing inquiry, reflection and confidence through critical and creative experimentation (with special focus given to the White Box Incubator Design). 1 credit hour mini-course; offered during Fall semester only.
UDI 372. ACT II: Innovative Practice Through Creative Confidence. 1 Hour Students are grouped based on their collective purposes to experiment with creative theory as innovative practice within their disciplines. Students will design a collaborative session exploring applied creativity as a tool and mindset for innovative change in solving social, commercial, professional and academic challenges. Prerequisite(s): UDI 371.

## UDI 373. Design Your Life. 1 Hour

Through purpose-based learning and a humanity-centered approach, students will build the creative confidence to tackle the dilemmas that life presents with intention, in order to imagine and evoke innovative social change within society - though their disciplines of study.

## UDI 376. Global Brigades: Preparing for Nicaragua. 1 Hour

Using a combination of lectures, group activities, and guest speakers, we will illustrate the intimate linkages that exist between the aforementioned factors and discuss their roles in shaping health outcomes in Nicaragua. By the end of this course, students will be able to critically analyze healthrelated problems and suggest sustainable solutions that can potentially be implemented in marginalized, rural communities in Nicaragua. Furthermore, upon completion of the course, students will possess the knowledge and skill set necessary to participate in a medical service project with an international service organization focused on providing acute and preventative medical care to under served populations in rural Nicaragua. The trip will occur January 3-11, 2016. Students will complete an online application through the university of Dayton Center for International Programs to participate in this trip. Acceptance to the Global Brigade service trip required.

## UDI 377. Understanding, Respecting and Connecting II: Taking Action. 1

 HourThis course is intended as a follow-up to UDI 380 Understanding, Respecting, and Connecting: Examining Privilege and Taking Action from last spring. This course will use applied academic concepts, reflective practices, and dialogue skills as students work on implementing a large scale project on campus; this course will focus on supporting students during their efforts to engage with the values and philosophy they observed at the White Privilege Conference. The goal of the course is to facilitate student initiatives in collaboration with faculty and staff on campus. Students are expected to apply their understanding of the role of diversity and privilege in creating injustices and boundaries on campus and in the community. Enrollment is limited to students who participated in UDI 380 last spring; they will be organized into self-selected groups that will pursue completing sustainable action for dismantle injustice in the UD community and beyond.

## UDI 378. DaytonCorps: Education, Opportunity, and Neighborhood AmeriCorps. 1 Hour

The DaytonCorp AmeriCorps Experience mini course is designed to provide support for students engaged in the DaytonCorp AmeriCorps program. Mini course students will be simultaneously participating in an experiential, community engaged learning experience while providing selfsufficiency support to young adults experiencing homelessness; families focused on increasing literacy; and neighborhood associations dedicated to building leadership capacity.

## UDI 379. Prep for Rare Book Exhibit. 1 Hour

This mini-course will support the preparations for the Stuart Rose rare book exhibit at the University of Dayton in the fall of 2014. Students will engage the texts selected for the exhibit and aid in the development of materials for the promotion of the exhibit as well as the exhibit itself. Students will learn about the selection texts in terms of their content, histories and as particular artifacts representing different forms of written materials. This course will also potentially bridge into the support of development of digital media for use in educational apps and a website being developed for the exhibit.
UDI 380. Understanding Respecting and Connecting: Examining privilege and taking action. 2 Hours
During the course students will examine their own privilege and dialogue with others about diversity and social justice as a means to explore the historical and social implications of diversity and privilege, and will design sustainable actions to dismantle injustice in the UD community and beyond. Students in this course will travel with a group of UD faculty and staff to attend a conference on social justice and privilege during spring term.

## UDI 382. International Films. 1 Hour

An advanced look at the multitude of significant films that are made around the world. Each film screened will be examined from historical, religious, philosophical, cultural, literary and artistic standpoints with the assistance of panel discussions led by faculty members from the Humanities.

## UDI 383. Servant Leadership: Hunger and Homelessness Awareness Week Leaders. 1 Hour

This class will look at Hunger and Homelessness from a global, national, and local lens, while also engaging in advocacy and activism with peers. Students in this course will serve as the Leadership Team for Hunger and Homelessness Awareness Month, helping to plan fundraising events, reflection and service opportunities, and engaging the University of Dayton in dialogue around issues of Hunger and Homelessness. In the spirit of Servant Leadership, this class requires students to work outside of class to plan and attend all events for Hunger and Homelessness Awareness Month in November.

UDI 384. Social Justice Advocacy and Allies for Change. 1.5 Hour The Social Justice Advocates and Allies for Change course is a 1.5 credit course carefully structured to explore concepts of social justice, diversity, privilege and power. The course aims to help students develop the skills and knowledge needed to be an advocate and ally for social justice.
UDI 385. Intergroup Dialogue: Religion. 1 Hour
The Intergroup Dialogues course is carefully structured to explore social group identity, conflict, community and social justice. It involves an identity group defined by race and ethnicity. Each identity group is represented in the dialogue with two facilitators--one from each represented identity group--who encourage dialogue rather than debate. Facilitators and participants explore similarities and differences among and across groups and strive toward building a multicultural and democratic community.

## UDI 386. Inventing Identity. 1 Hour

Making use of the 20th Annual Humanities Symposium, Inventing Identity, this interdisciplinary course addresses questions about women's identity formation in the midst of race, gender, abilities, class, and power differences.

UDI 387. President's Diversity. 1 Hour
No description available.

## UDI 389. Intergroup Dialogue: Ethnicity. 1.5 Hour

The Intergroup Dialogues course is carefully structured to explore social group identity, conflict, community and social justice. It involves an identity group defined by race and ethnicity. Each identity group is represented in the dialogue with two facilitators - one from each represented identity group - who encourage dialogue rather than debate. Facilitators and participants explores similarities and difference among and across groups and strive toward building a multicultural and democratic community.
UDI 390. Servant Leadership Seminar for REAL Dayton Leaders. 1 Hour In this minicourse for REAL Dayton leaders, students will explore the themes of servant leadership, community building, Catholic Social Teaching, the Marianist charism and mission, civic engagement and the assets and challenges of Dayton. REAL Dayton leaders will cultivate and apply servant leadership skills, working as a team to plan, implement and reflect on the REAL Dayton program.

## UDI 391. Civic Scholar Experience (Sophomores). 1 Hour

This service learning minicourse fulfills the meeting requirements for the Dayton Civic Scholars program and combines classroom discussion, required reading and community speakers to help students integrate academic learning with service learning. Emphasis is on social justice and urban issues in the city of Dayton. Requirements include 60 hours of volunteer service and conference attendance OR an internship, a structured reflection journal, required readings, class participation and a senior capstone project.

## UDI 392. Dayton Civic Scholar (Juniors). 1 Hour

This service learning minicourse fulfills the meeting requirements for the Dayton Civic Scholars program and combines classroom discussion, required reading and community speakers to help students integrate academic learning with service learning. Emphasis is on social justice and urban issues in the city of Dayton. Requirements include 60 hours of volunteer service and conference attendance OR an internship, a structured reflection journal, required readings, class participation and a senior capstone project.

## UDI 393. Community Service Internship. 3 Hours

The Community Service Internship course is designed to support the Semester of Service nonprofit community service experience. Students will focus on understanding community building practices (specifically the Fitz Center guiding principles for community building), institutional and policy impacts on communities and increase our ability to be community leaders that engage in social action throughout our lives.

## UDI 394. Civic Scholar Experience II. 1 Hour

This mini-course will prepare students to get the greatest possible benefit from their participation in the study abroad offering, 'Investing a Great City: Integrated London ISSAP 2006'.

## UDI 395. Civic Scholar Experience IV. 1 Hour

This service-learning minicourse fulfills the meeting requirements for the Dayton Civic Scholars program and combines classroom discussion, required reading and community speakers to help students integrate academic learning with service-learning. The emphasis is on social justice and urban issues in the city of Dayton. Requirements include 60 hours of volunteer service and conference attendance or an internship, structured reflection journal, required readings, class participation and a senior capstone project. Open only to Dayton Civic Scholars.

UDI 396. Introduction to Medical Terminology. 1 Hour
No description available.
UDI 398. Civic Scholar Experience V. 1 Hour
No description available.

## UDI 399. Civic Scholar Experience VI. 1 Hour

This service-learning minicourse fulfills the meeting requirements for the Dayton Civic Scholars program and combines classroom discussion, required reading and community speakers to help students integrate academic learning with service-learning. The emphasis is on social justice and urban issues in the city of Dayton. Requirements include 60 hours of volunteer service and conference attendance or an internship, structured reflection journal, required readings, class participation and a senior capstone project. Open only to Dayton Civic Scholars.

UDI 400. UD Interdisciplinary Experience II. 6 Hours No description available.

UDI 403. Peers Advocating for Violence Education (PAVE). 1 Hour The PAVE mini-course is an intentionally designed sequence in which the Peers Advocating for Violence Education come together to explore power based personal violence through research about violence on college campuses, perpetration patterns, Title IX, neurobiology of trauma, effective educational practices, and mastering presentation skills. Through discussion, reading, reflection assignments, and presentations, students will have the opportunity to explore their own values and perspectives around these topics, and grow in their ability to engage their peers around these challenging discussions. Abbreviated Course Description: This course is designed to support students as they serve as PAVEs (sexual violence prevention peer educators) at UD, by exploring topics such as perpetration patterns, neurobiology of trauma, educational pedagogy, and mastering presentation skills. Application and acceptance into Peers Advocating for Violence Education is required.

## UDI 404. Q*mmunity Leaders. 1 Hour

Through this mini course, Q*mmunity Leders will explore identities and experiences of LGBTQ+ college students through discussion, reading, reflection assignments, and presentations. Participants will learn about and reflect upon their own multidimentional identities and values, and how issues of privilege and oppression make the LGBTQ+ community complex and diverse. Students will develop their own leadership capacity through building skills in public speaking, presentation, facilitation and conversation across difference. $Q^{*}$ mmunity Leaders will grow in their ability to engage theirpeers around these challenging discussions.

## UDI 410. Maxie: Integration. 1 Hour

No description available.

## UDI 415. The River Steward Experience II. 1 Hour

This course will be a seminar for the River Stewards, the student group of the Rivers Institute at the University of Dayton. The course will be available ONLY for River Stewards. Like the River Steward Experience Year I, this course will highlight aspects of leadership development and civic engagement through education, experience and action in an interdisciplinary setting. Furthermore, participants in the Year II minicourse will, under the supervision of the instructor, choose many of the topics and facilitate many of the discussions throughout the semester, as well as begin work on their senior service project. The Great Miami River Watershed will serve as the focus for community engagement and meaningful learning.

## UDI 416. The River Steward Experience II. 1 Hour

This course will be a seminar for the River Stewards, the student group of the Rivers Institute at the University of Dayton. The course will be available for only River Stewards. Like the River Steward Experience Year I, this course will highlight components of education, action and experience. Further, participants in the Year II mini-course will, under the supervision of the instructor, organize and teach many of the topics covered in the Year 1 course. The Great Miami River will serve as the focus for community engagement and meaningful learning. The course will have primarily junior enrollment. It will require commitments beyond the classroom and readings.

## UDI 419. Forum for-Young Catechetical Learners. 1 Hour

Addresses the key themes of The National Directory for Catechesis regarding "The Tasks of Catechesis and Faith Formation". Themes include: a) Introduction to the Catechetical Ministry of the church; b) The Vocation of the Catechist; c) Faith Formation; and, d) Fundamentals for Designing Catechetical Plans.

## UDI 421. UD Post-Undergraduate Mini Course. 1 Hour

This mini-course is designed for graduating seniors who are considering participating in service after graduation. Students will explore opportunities to live out their vocation as well as come to a better understanding of spirituality, community living and discerning God's call.

UDI 471. Act III: Creative Design (Research and Design). 1 Hour Part one of the two part experiential learning capstone will focus on creative mission collaboration between the certificate cohort, identifying local and/or regional community partners, creative mission labs, research infusion, and proof of humanity-centered design experience in relation to both discipline of study and community implementation. This course is "permission only." Students must be a declared certificate student of the Undergraduate Certificate for Applied Creativity for Transformation with successful completion of ACT I: UDI 371, ACT II: UDI 372. Prerequisites: UDI 371, UDI 372.

UDI 472. Act IV: Creative Application (Innovate and Implement). 1 Hour Through the development of Ikigai+ purpose-based innovations, students will execute humanity-centered designs to cultivate marketable ideas and/or experience to creative shift perspectives within or through their degrees of study. This course is "permission only." Students must be a declared certificate student of the Undergraduate Certificate for Applied Creativity for Transformation. Prerequisite(s): UDI 371, UDI 372, UDI 471.
UDI 499. Continuing Education. 1 Hour
No description available.

## Interdisciplinary-Bus Courses <br> Mini Courses

Mini-courses are special, short-term, interdisciplinary credit courses developed by University faculty, staff, or students, with the advice and
consent of a faculty member, to meet specific, current needs or interests not covered in the regular curricula. They are free of charge to all fulltime undergraduate students and graduate students. They are also open to part-time and non-UD students for credit or audit. Mini-courses carry between $1 / 2$ of one semester hour of credit up to three semester hours of credit. Classes can be in various sequences, extending over several weeks or concentrated within a few days. Some mini-courses take the form of workshops. Occurring at various times in the year, students may add mini-courses to their schedules anytime during the term. For a sample listing of mini-courses, click here (p. 60).

## Prelaw

The Prelaw Program serves undergraduate students from all areas of the University interested in exploring a potential legal career. We serve as a resource to assist students discern whether they have a vocation for the law, and then if they determine that is their path, to provide them with opportunities to acquire the knowledge and skills necessary for successful preparation for law school and a future legal career. Students interested in legal careers should choose their undergraduate majors to match their individual interests and abilities, but should contact the Prelaw Program as early as possible so they can receive effective guidance for exploring a potential legal vocation. The interdisciplinary Prelaw Studies minor is a specific interdisciplinary curriculum within the Prelaw Program for students who are planning to attend law school.

The interdisciplinary Prelaw Studies minor enhances students' preparation for law school by promoting both the development of skills considered essential by law schools and legal professionals (critical reasoning, writing and analytical skills) and professional behavior skills. The Prelaw Program, i.e., the Director together with fifteen additional Prelaw faculty advisers, does this through curriculum guidance for developing the skills set needed for success in their future legal education and career combined with mentored, meaningful, real-world participatory experiential learning that builds applied professional skills, like our award-winning Mock Trial team and our legal internships program. Throughout the academic year we support students with law school admissions fairs, aid in preparing for the Law School Admission Test (LSAT), including simulated tests and prep workshops, and individual assistance in law school application preparation and law school selection. Moreover, we offer a strong sense of community for Prelaw students with our undergraduate chapter of Phi Alpha Delta and other opportunities for development based on the individual student's talents, interests and goals.

For further information contact the Prelaw Program in Alumni Hall, Room 117; phone (937) 229-4229; prelaw@udayton.edu.

## Reserve Officers Training Corps (ROTC)

The Department of Military Science offers the Army ROTC training program on campus, leading to a commission as a second lieutenant in the U.S. Army at the time of graduation. For more information, visit the Department of Military Science.

In coordination with Wright State University, the Department of Aerospace Studies offers the Air Force ROTC training program at Wright State University. Successful completion of the program provides the
opportunity to become a commissioned officer in the United States Air Force.

## Special Programs and Continuing Education

To serve adults in the Dayton community, the University provides a variety of noncredit courses, many in the form of workshops, seminars, study tours and conferences. These are planned to meet the educational and training needs of organizations and of the community and are held both on and off campus. This office also administers Road Scholar, OSHER Lifelong Learning Institute, Senior Fellows and New Horizons Music, for persons fifty and over. Continuing Education Units (CEU) are awarded for a charge for some offerings.

## University Honors Program

The University Honors Program (UHP) provides curricular offerings, programming and benefits to undergraduates who achieve and maintain superior academic records. Students earn the designation "University Honors student" in one of two ways. Entering first-year students with outstanding academic credentials are accepted into the Honors Program upon admission to the University. Students may also enter the Honors Program after their first year with a minimum 3.5 grade-point average. All University Honors students are expected to maintain at least a 3.5 GPA.

Membership in the University Honors Program requires continued progress towards one of the Honors Program-designated diplomas. Honors students complete the requirements for an Honors diploma in one of two ways: by earning 15 Honors credits and completing a sixcredit Honors thesis project or by earning 21 Honors credits without a thesis. To receive the Honors with Distinction diploma, Honors students earn 21 Honors credits and also complete the six-credit Honors thesis project for a total of 27 Honors credits. Complete details on maintaining membership and benefits are spelled out on the UHP website (https://www.udayton.edu/honors). Students who meet the University Honors Program graduation requirements will earn an Honors Programdesignated diploma.

Students are offered a selection of Honors courses each term. In most instances, first-year University Honors students will enroll in either an exclusive first-year Honors seminar (ENG 200H) or first-year Core courses. Both of these options include designated honors housing. In line with the Common Academic Program (CAP), Honors students are encouraged to complete no more than 6 Honors credits in 100-level courses and 6 Honors credits in 200-level courses. A limited number of upper class Honors courses that complete either CAP or major course of study requirements are also available each semester. Students who have completed more than 75 hours may also earn Honors credits by arranging contract Honors courses with individual professors, provided that the contract is agreed upon and approved by the department Chairperson prior to the start of class. Complete directions are on the UHP website (https://www.udayton.edu/honors) and students should initiate the process with the UHP. All honors courses will be designated as such on the student's academic transcript.

Student may also earn Honors credits through coursework associated with the Chaminade Scholars Program, Dayton Civic Scholars Program, River Stewards Program, Core Program, study abroad programs and by completing graduate level courses for undergraduate credit. The Honors credits earned are not necessarily one for one and these Honors credits may not appear in the "Honors" section of the student transcript. Honors
students must earn a grade of $B$ or better for any Honors courses or other Honors credit-eligible coursework to earn Honors credits towards the Honors diploma requirements.

Honors credits may also be earned via approved non-academic credit experiences such as internships and co-ops, through successful completion of the Berry Summer Thesis Institute, the D.C. Flyers Program, one of the Global Flyers programs, and/or by completing the application process for a national fellowship through the Office of Fellowship Advising led by the UHP Associate Director. Specific ways of earning Honors credits can be found on the Honors Program website (https://www.udayton.edu/honors).

Numerous benefits are available to members of the University Honors Program. The University Honors Program sponsors speakers, cultural events, the Honors Art Exhibition and the Honors Students Symposium each year. First-year Honors students can participate in the Honors Student Welcome prior to the start of classes and have the option of being housed with their first-year seminar or Core cohort. Upper class Honors students may request Honors housing through the Special Interest housing process. University Honors students benefit from early registration. They also receive graduate-level library benefits and enjoy the use of a special Honors study room in the library and access to the Honors Students Center in Alumni Hall. To receive benefits, students must be UHP members in good standing, their GPA must be 3.5 or above and they may not be in violation of the University code of conduct.

University Honors students undertaking Honors thesis projects may apply for thesis grants, outstanding projects may be eligible for funding through the Palermo Honors Program Founders Fund. Grants may also be available for Honors students who present their academic research at professional conferences. University Honors students completing at least sixty semester hours are eligible to apply to the Cordell W. Hull International Fellows Fund for University Honors students. Established in 1997-98, this fund awards grants to support international learning, leadership and service projects. Finally, a limited number of upper-class awards may be made to Honors students who demonstrate academic excellence and financial need. Upper class scholarships are also given to students who successfully complete the Berry Summer Thesis Institute and elect to complete an Honors thesis project.

## Libraries and Research Services

The University Libraries include:

- Marian Library (p. 71)
- Roesch Library (p. 72)
- School of Law Library (p. 72)

Also in this section:

- Access to Other Resources (p. 71)
- Research Institute (UDRI) (p. 72)
- School of Education and Health Sciences Curriculum Materials Center (p. 72)


## Access to Other Resources

OhioLINK: The University Libraries are a member of OhioLINK, a consortium of more than 120 Ohio academic libraries and the State Library of Ohio, providing: access to nearly 50 million books and other library materials; more than 100 electronic research databases; millions of electronic journal articles; more than 100,000 e-books; nearly 85,000
images, videos and sounds; and nearly 60,000 theses and dissertations from Ohio students.

Interlibrary loan: For materials not available at the University of Dayton or through OhioLINK, the University Libraries provide an interlibrary loan service to faculty, staff and registered students. Types of materials borrowed may include books; videos and DVDs; music CDs; copies of journal, magazine and newspaper articles; microfilms; and dissertations.

Uncommon materials: As an associate member of the Center for Research Libraries (CRL), University Libraries provide access to the CRL's 5 million newspapers, journals, books, pamphlets, dissertations, archives, government publications and other resources from Sub-Saharan Africa, Eastern Europe, Latin America, the Middle East, South Asia, Southeast Asia, North America and Europe. Collections focus on news; law and government; finance; the history of science, technology and engineering; and the history and economics of agriculture.

Privileges at other libraries: Membership in the Library Division of the Southwestern Ohio Council for Higher Education (SOCHE) provides students, staff and faculty with access to materials in SOCHE member libraries. Graduate students have direct onsite borrowing privileges at all OhioLINK libraries and at nearly all SOCHE libraries.

## Marian Library

## Sarah Burke Cahalan, Director

The Marian Library (https://www.udayton.edu/imri/marian-library), on the seventh floor of the Roesch Library, houses the world's largest collection of published materials on the Virgin Mary. Its comprehensive collection is devoted to information about and references to the Virgin Mary found in works on Scripture, doctrine, history, tradition, art, culture, spirituality and devotion. Since its opening in 1943, the Marian Library's outreach has taken many forms in order to reach all who wish to know, love and serve Mary:

- Materials in more than 100 languages
- More than 100,000 circulating books
- More than 12,000 rare books
- 2,500 audio-visual items
- 175 archival collections, including 30,000 Marian postcards and a nearly complete set of Marian postage stamps
- 3,600 Nativity sets from around the world
- All About Mary (https://www.udayton.edu/imri/mary), a comprehensive encyclopedic online tool with more than 1,300 entries, many of which are answers to questions from the public
- More than 100 art exhibitions since 1988
- A blog with weekly entries by Marian Library faculty and staff
- A diverse assortment of digital archival materials available for download

Publications include Marian Library Studies (original research on Marian topics); the twice-yearly Marian Library Newsletter; and Marian Studies (papers given at the annual meeting of the Mariological Society of America, which is headquartered at the Marian Library). The Marian Library's collections can be accessed via the University Libraries' online catalog. Hours and information on current art exhibits can be found on the website (https://www.udayton.edu/imri/marian-library).

## Research Institute (UDRI)

The University includes research as one of its stated purposes. In addition to faculty members in academic departments, a large staff of research scientists, engineers and technicians conduct basic and applied research. Most of these activities are externally funded and are conducted in the laboratories of the University of Dayton Research Institute.

Several hundred students are employed in research programs in accord with the University's emphasis on integration of research and instruction. In addition to financial benefits, this research participation provides students with valuable experience and an exposure to issues at the forefront of contemporary science and engineering.

## Roesch Library

Roesch Library has more than 1 million print and electronic books, subscribes to more than 300 databases and provides access to more than 100,000 print and electronic journals. Through OhioLINK, a statewide consortium of college and university libraries, students, faculty and staff can access nearly 50 million additional items at member institutions, delivered on demand within a few days. A Federal Depository Library since 1969, the University also provides access to government records in physical and electronic forms.

With limited exception, Roesch Library is open every day, normally until 5 a.m. during regular weeks of the term and 24 hours during exam weeks. Research and writing assistance is available in person in the first-floor Knowledge Hub or via email, telephone, text message or online chat. These services will be maintained during renovations planned for 2018-19; temporary relocations will be communicated through signage and various campus media.

Computers, printers, copiers and scanners are available, as well as cameras, phone chargers, e-readers, tech-enabled team tables, and study rooms for individuals and groups. Wi-Fi is available throughout the building.

The Libraries also provide all University of Dayton students, faculty and staff with an online subscription to (https://myaccount.nytimes.com/ grouppass/access)The New York Times free of charge. The first-floor gallery features several exhibitions each year, and community programs address a variety of curricular topics and current issues. An open-access institutional repository, eCommons (http://ecommons.udayton.edu), provides a permanent and discoverable electronic archive of University scholarship, culture and documents. For more information or to browse the catalog, visit the website (https://www.udayton.edu/libraries).

## School of Education and Health Sciences Curriculum Materials Center

The Brother Louis J. Faerber, S.M., Curriculum Materials Center (CMC) houses the SEHS's specialized education collections and is located on the sixth floor of Brother Raymond L. Fitz Hall. Its collection includes: professional education books and journals; literature for children and young adults; elementary, middle and secondary textbooks; standardized assessments; teaching aids (games models, kits \& manipulatives); DVDs; CDs; e-texts; charts; material kits; and other resources. A copier, four networked computer workstations, a comb binder, laminator, Ellison and

Accu-Cut die cutting machines, and an assortment of letter and shape dies are available for student use.

## School of Law Library

The University of Dayton School of Law's Zimmerman Law Library (https://www.udayton.edu/law/library) in Joseph E. Keller Hall provides access to 300,000 printed materials, microfilms and legal databases on Anglo-American, foreign, comparative and international law. The Library also has a host of bar exam preparation materials and academic support resources. Its open-stack arrangement permits easy access to all materials, and Library faculty and staff are readily available to provide assistance to law school students, faculty and staff.

Open until midnight Sunday through Thursday and until 10 p.m. Friday and Saturday during the academic terms, the Zimmerman Law Library provides 500 seats for study and research, an abundance of electrical outlets and several computers with Internet access for public use. Group study rooms are available to current law school students, faculty, and staff, and wireless access is available with a UD login and password. The Zimmerman Law Library is generally open to undergraduate students, lawyers, judges and the public; however, hours and access may be more limited.

## Student Life and Services

At the University of Dayton, you're not alone. And not just because you will make friends at every turn, but because our faculty, staff and community are eager to help you along your path. To guide you, advise you and even help you land a job after graduation.

As a Catholic, Marianist institution, our educational philosophy addresses the needs of the whole person: mind, body and spirit. You will find a plethora of offices that are here to support you every step of the way.

## Affirmative Action Office

The Compliance and Affirmative Action Office aids in the implementation of the University's commitment to equal opportunity, affirmative action and diversity. This office ensures campus compliance with Federal, State and Local laws pertaining to non-discrimination and affirmative action.

## Athletics

Many people throughout the country have come to know the University of Dayton through the accomplishments of its intercollegiate athletic teams. The mission of the Division of Intercollegiate Athletics at the University of Dayton reflects the mission of the University. That mission is embodied in the following core purposes:

- To educate the total person by integrating the primary academic purposes with educational possibilities and opportunities for young people beyond the classroom;
- To teach the value of community and family through collaboration and teamwork;
- To instill the fundamentals of sportsmanship, adhering to the values of respect, fairness, civility, honesty and responsibility;
- To teach the tools of achievement, including self-discipline, personal responsibility and the setting of high standards;
- To develop the individual talents of our student-athletes within the context of shared team goals;
- To enhance diversity and minority opportunity at the University of Dayton;
- To advance the University of Dayton locally, regionally and nationally through the more highly visible sports, particularly the men's basketball program.

There are seven men's intercollegiate sports:

## Fall

- Football
- Soccer
- Cross Country

Winter

- Basketball


## Spring

- Baseball
- Golf
- Tennis

There are ten women's intercollegiate sports:
Fall

- Volleyball
- Soccer
- Cross Country


## Winter

- Basketball
- Indoor Track

Spring

- Softball
- Rowing
- Golf
- Tennis
- Outdoor Track

Cheerleading tryouts, open to all students, are held each year.
Any student, male or female, who plans to participate in a varsity sport, must be certified through the NCAA Initial-Eligibility Clearinghouse. Additionally, student-athletes are required to complete a physical examination and provide documentation of their medical history and current insurance coverage.

The University of Dayton and its Division of Athletics are committed to abiding by the rules of the NCAA, the Atlantic 10 Conference and other affiliated conferences. The volume and complexity of the NCAA rules prohibits addressing all the possible scenarios that may impact athletic eligibility. Therefore, you are encouraged to visit the Dayton Flyers website (http://www.daytonflyers.com) and NCAA website (http:// www.ncaa.org) to access the various rules and policies which assist our University in continuing to operate with honor and dignity.

Contact the Compliance Staff if you should have any questions.
Athletics Division Compliance Office

300 College Park
Dayton, OH 45469-1230
Phone: (937) 229-4208
Fax: (937) 229-4969

## Bookstore

The UD Bookstore is proudly owned and operated by the University of Dayton. Its primary purpose is to provide the University community with all required course materials as well as common school supplies essential for student success. Its course offerings include a variety of new, used, rental and digital options for most titles. The UD Bookstore also offers officially licensed apparel and gifts, and for your convenience, offerings also include cosmetics, over the counter medicines, technology accessories, gift cards and more. Services available include RTA bus passes, textbook buyback, graduation regalia and related services, and special ordering services. All major credit cards are accepted, as well as cash, personal check (ID required), textbook scholarship and Flyer Express. Also visit other University Retail Operations locations Flyer Spirit on Brown Street and the School of Law Bookstore in Keller Hall. More information can be found on our website (https://www.udayton.edu/ bookstore).

## Campus Ministry

Faith formation and reflective religious dialogue play important roles in the education and development of the whole person at the University of Dayton. As a primary agent in faith formation at UD, Campus Ministry, inspired by the University's Marianist tradition, forms persons and communities in a lived faith, expressed in worship, in challenging and compassionate relationships, and in commitment to justice and service.

With thirty staff persons and a wide variety of programs, UD has one of the largest and most active campus ministry programs anywhere.

Informed by the Roman Catholic Tradition, the vast majority of our programs appeal to students from different Christian backgrounds and those of other faiths. A full-time protestant campus minister serves as a part of the campus ministry team. Campus Ministry also connects students from other faith traditions to their respective faith communities off campus. A number of independent, religiously based student organizations exist on campus. Together, these provide a range of options and opportunities for students to be a part of a faith community during their time at UD.

Our primary activities for students are outlined below.

## Residence Life Ministry

Each residential area has campus ministers who actively engage students in faith based activities. Student leaders guide participation in activities such as faith sharing groups, bible studies, retreats, Mass, service and social opportunities, and other prayer experiences. In these and other ways, campus ministry is able to accompany, encourage and support students in areas of leadership, personal growth and spiritual development.

## Center for Social Concern

Campus Ministry's Center for Social Concern is committed to faithbased social justice education, including direct service to the poor and marginalized, work on behalf of social justice, and changing unjust structures in society that oppress and marginalize human beings. The Center for Social Concern's regular BreakOut Trips, Summer Immersion Trips and the Summer Appalachia Program offer opportunities for service
and justice education in domestic and international settings. Guest speakers and a number of other activities also contribute to these goals. At the heart of it all is a wide array of opportunities to reflect on the service and justice work in the context of faith.

## Retreats and Faith Communities

Over twenty retreats are offered each year for UD students. The retreats vary in size, style, theme and focus to provide opportunities for faith development in many ways. There are quiet relaxing guided retreats, wilderness retreats, retreats specifically for first-year students and graduate students, large community focused retreats, interdenominational retreats and more that foster faith development through activities, discussion and prayer. Most retreats are led by student teams who prepare through weekly meetings.

Students also join small faith communities called Madeleine Groups. These student led groups meet regularly and focus in unique ways including faith sharing, scripture study and theological reflection.

Campus Ministry's Program for Christian Leadership offers Callings, a pre-orientation experience for incoming first-year students focused on fostering faith, vocation and leadership for new UD students as well as Madeleine Groups communities, retreat and leadership experiences.

## Liturgies and Prayer

Students, faculty and staff are active in the liturgical life of the University as lectors, servers, Eucharistic ministers, music ministers, Mass coordinators and hospitality ministers at both daily and Sunday celebrations of the Eucharist. The sacrament of Reconciliation and Eucharistic adoration are scheduled regularly, and during the seasons of Advent and Lent, sung weekly Vespers are offered along with communal Reconciliation services. An interdenominational Christian worship service is held every Sunday during the academic year. Other opportunities for worship are available in the local community.

## Campus Recreation

The Department of Campus Recreation is located in the RecPlex, at 2 Evanston Avenue (https://udayton.edu/studev/health_wellness/ campusrec/contact). The RecPlex, which opened in January 2006, houses a state of the art recreation facility. Full-time undergraduate students are eligible to use the RecPlex with their UD Student ID. The facility may be used by graduate students who purchase a Campus Recreation Membership (https://udayton.edu/studev/health_wellness/ campusrec/about/membership.php).

## RecPlex Highlights

- Main Gym with four full-sized wood basketball courts and three racquetball courts, one of which can be converted for squash;
- MAC Gym with two rubberized courts surrounded by a professional grade dasher board system adequately sized to play a variety of sports including tennis, indoor soccer, basketball, volleyball and floor hockey;
- Aquatic Center with a 25 yard eight lane lap pool, four-foot deep vortex leisure pool, diving well and an eight-person spa;
- 35 ft . Rock Wall with included bouldering cave;
- Fitness Studios A, B and C which are used for a variety of instructional and group fitness classes;
- 10,000 sq. ft. Fitness Floor home to a wide variety of cardio machines and strength training stations;
- Wellness Assessment Lab which offers services such as athletic training and personal training consultation;
- Four lane $1 / 8$ of a mile rubberized jogging track.


## Programs and Facilities

Campus Recreation offers many programs and facilities for students including:

- Intramural Sports (https://udayton.edu/studev/health_wellness/ campusrec/intramural-sports)
- Sport Clubs (https://udayton.edu/studev/health_wellness/ campusrec/sport-clubs)
- Aquatics (https://udayton.edu/studev/health_wellness/campusrec/ aquatics)
- Fitness Programs (https://udayton.edu/studev/health_wellness/ campusrec/fitness)
- Outdoor Education Center (https://udayton.edu/studev/ health_wellness/campusrec/outdoor) and Rock Wall (https:// udayton.edu/studev/health_wellness/campusrec/facilities/rockwall.php)
- Strength and Cardio Equipment (https://udayton.edu/studev/ health_wellness/campusrec/fitness/cardio-strength-training.php)
- Stuart Field - (https://udayton.edu/studev/health_wellness/ campusrec/facilities/stuart-field.php) a 5+ acre outdoor turf facility. This resource matches the quality of the RecPlex and provides year round access and a consistent surface for sports programming.


## Intramural Sports

Campus Recreation provides a variety of Intramural activities in which anyone can find exercise surrounded by a spirit of fun and competition uniquely enhanced by our Marianist values. Activities include:

- Softball
- Flag Football
- Battleship
- Indoor and Outdoor Soccer
- Volleyball and Sand Volleyball
- Indoor and Outdoor Basketball
- Dodgeball
- Racquetball
- Tennis
- Floor Hockey

All students are invited to participate; ability is not important, just the desire to play. Please contact udcrintramurals@udayton.edu with questions.

## Sport Clubs

Another popular feature of Campus Recreation is the Sport Club Program. Currently, there are 36 recognized Sport Clubs on campus. The Sport Club Program offers students the opportunity to participate in a highly organized activity, while at the same time learning and developing new skills. Anyone interested in joining a Sport Club is encouraged to come in and speak with the Assistant Director of Competitive Sports (mferdinand1@udayton.edu).

## Aquatics

Just for fun or with competition in mind, our Swim Instructors and Swim Lesson program (https://udayton.edu/studev/health_wellness/ campusrec/aquatics/lessons) will help anyone reach their goals! Age and ability make no difference; it is never too late to learn how to swim or refine one's skills.

## Fitness Programs

Campus Recreation offers several programs to help students achieve healthy habits that will build a lifestyle of strength and wellness. Hit the gym with friends and participate in our Group Fitness Classes (https:// udayton.edu/studev/health_wellness/campusrec/fitness/group-fitness) or small group sessions such as TRX (https://udayton.edu/studev/ health_wellness/campusrec/fitness/trx.php). Personal Trainers (https:// udayton.edu/studev/health_wellness/campusrec/fitness/personaltraining) can also create workouts to meet individual needs.

Questions concerning open recreation hours and scheduled events may be secured from the Campus Recreation Main Office. For more information please visit our website (https://udayton.edu/studev/ health_wellness/campusrec) or call 937-229-2731.

## Career Services

The University of Dayton Office of Career Services (https:// www.udayton.edu/careerservices) is a team of dedicated, caring professionals committed to providing excellent career related-resources, programs, services and opportunities that build confidence and job search skills. We serve as a connecting point between students, faculty, alumni and employers in an increasingly diverse and globally influenced job market. We are a leader in career planning and preparation, balancing the latest technology with personal guidance in the Marianist tradition.

## Career Advising

The Career Services staff is happy to help with your career-related needs at every step of your college career. We can assist you with choosing a major, finding an internship or co-op job, or finding your first full-time position. Students are encouraged to make an appointment with a career advisor, who can also assist you with résumés, interviewing tips, job search strategy and other aspects of the job search. Workshops are offered each fall and spring semester on topics ranging from choosing a major, to utilization of social media in a job search, to acing the top 10 interview questions and much more. Mini courses are offered on Career Readiness and Choosing a Major.

## Student Employment

All University of Dayton students, regardless of financial need, may apply for University-funded employment opportunities on campus. Positions are available in many campus departments, and hourly wage is based on experience and job description. Federal Work Study is awarded to undergraduates who demonstrate financial need and have FAFSA results on file by May 1. Federal Work Study opportunities are available for qualified students both on-campus and with off-campus organizations.

All Student Employment positions are posted at Handshake (https:// www.udayton.edu/careerservices/handshake).

## Career-Related Experiences

The goal of any career-related experience is to provide practical work experience associated with a student's course of study and/or life experience. All University of Dayton students are encouraged to participate in an internship, cooperative education and/or community service learning. These positions are posted in Handshake (https:// www.udayton.edu/careerservices/handshake) and Career Services can assist students in the pursuit of such positions, including program registration, when necessary.

## Opportunities to Connect with Employers

Career Services offers resources and programming throughout the academic year for students to network with organizations from the local area, the Midwest region and beyond. Positions are posted in Handshake (https://www.udayton.edu/careerservices/handshake) for internship, cooperative education and full-time jobs. Career fairs are held each fall and spring semester attracting employers from diverse industries, sizes and regions. Additional opportunities for networking include company information sessions, resume review days and on-campus interviews.

## Flyer First Destination Surveys

Our office, in collaboration with academic units, surveys graduating students to determine their first destinations upon leaving the university. After attempting to contact each student personally, knowledge rates, success rates and average salaries are reported annually. Want to know where our students go to work, study or serve upon graduation? We have that information for you.

## Center for International Programs

The Center for International Programs (CIP) at the University of Dayton provides leadership, strategic planning, coordination and administrative support for the internationalization of campus. In cooperation with other University departments and external organizations, the CIP operates programs and provides services which enhance intercultural education at the University of Dayton and prepares our students as distinctive global citizens ready to learn, lead and serve in the world. The CIP is part of Academic Affairs and Learning Initiatives, under the Office of the Provost. Our areas include:

## Campus Engagement

Campus Engagement directs and supports the coordination of programs and initiatives, infrastructure development and campus partnerships that foster intercultural engagement and development for faculty, staff and students. In addition, campus engagement, through planning and collaboration, guides the communication strategy for the center.

## Education Abroad

Education Abroad provides guidance and expertise for education abroad advising, faculty-led program design and delivery, exchange opportunities and risk management. Education abroad focuses on increasing access to and quality of global experiences for undergraduate and graduate students and faculty, by engaging them in study, research, work and service experiences abroad.

## International Student and Scholar Services

International Student and Scholar Services (ISSS) provides students and exchange visitors with immigration advising, workshops and orientation, as well as social and extracurricular activities. ISSS extends its services and support to international faculty and research scholars and their dependents. Through collaboration with other departments
and organizations, ISSS advocates on behalf of international students to ensure their academic, personal and career goals.

## Intensive English Program

The Intensive English Program (IEP) welcomes a diverse community of international learners to prepare them for success in their academic careers by providing English language instruction rooted in best practices. IEP's diverse team of TESOL professionals guides students toward autonomy as they learn, explore and practice the habits necessary for success in U.S. higher education. Together with University academic departments, IEP creates and facilitates opportunities for intercultural exchange.

## Partnerships and Exchanges

Partnerships and Exchanges seeks, builds and maintains relationships with institutions and organizations all over the world for the purpose of increasing direct global opportunities for UD faculty, staff, students and partners abroad. Partnerships and Exchanges supports activities that include education abroad programs, joint international research, dual degree agreements, faculty mobility to teach and achieve professional development, and other special enrollment programs.

## Center for Student Involvement Kennedy Union

A variety of cultural, educational, social and recreational activities are presented in Kennedy Union to enrich and enhance campus life and foster a spirit of community. In addition, the Center for Student Involvement provides support, direction and programming opportunities for students and recognized student organizations. Activities in the union include game shows, trivia contests, movie nights, concerts, theatrical productions, lectures, dance ensembles, performances and recitals by students and faculty members. Meeting rooms, the Ballroom, Boll Theatre and University vans are available for use and can be reserved by calling 937-229-3333 (Kennedy Union Room 241). Information about student organizations can be found at go.udayton.edu/involvement or by calling 937-229-3333.

The John F. Kennedy Memorial Union, centrally located on the campus, offers comfortable surroundings and a variety of services for the University community. Lounges provide space for discussion, studying and socializing. A lounge for commuter students is located on the first floor, with lockers available for rent. The Hangar game room on the ground floor includes bowling lanes, pool tables, dart boards, lounge space and the Galley cafe. The food court, automatic teller machines, charging stations, display cases and vending machines are housed in the Union, as are student offices for the Student Government Association, Campus Activities Board, Christmas on Campus, Daytonian Yearbook, three values-based Greek Councils, Flyer News and Orpheus literary magazine. Also in the Union are the Information Center, Box Office, the Office for Student Leadership Programs, the Campus Card Services Office, Flyer TV and Kennedy Union Dining Services.

The Center for Student Involvement is responsible for granting recognition to student organizations, registering all student organizationsponsored events, providing resources and support for organization leaders and advisers, publicity approval and late-night programming for students (\#UDLateNight). The office works directly with commuter students, Student Government Association, Interfraternity Council, National Pan-Hellenic Council, National Panhellenic Conference, Flyer News, Flyer Radio, Daytonian Yearbook, Orpheus, Campus Activities

Board, Christmas on Campus, and all additional recognized student organizations.

# Center for Alcohol and Other Drug Resources and Education 

## Mission

The Center for Alcohol and Other Drugs Resources and Education (C.A.D.R.E) supports the Marianist principles of community living by delivering science-based risk-reduction alcohol and other drugs prevention education, interventions, and recovery support. The Center contributes to the educational mission of the University through early identification and intervention services in support of student academic success and retention.

We Are Here To Help!

The Center for Alcohol and Other Drugs Resources and Education provides a variety of services to help you make healthy and responsible decisions regarding alcohol and other drugs. We also provide information and resources for students who are in recovery or who wish to abstain from substance use.
Our first priority is the health and safety of our students. We understand that along with academics, having fun is a part of the college experience. We want to know that students are making the safest and most responsible decisions regarding alcohol. We are here to provide you with the information, resources, and support that you need. The goal is to ensure that all UD students have a safe, healthy, and successful college experience.
Schedule an alcohol check-up and receive professional feedback on your drinking habits. Learn how to adopt healthy behaviors. If you have concerns or think you may have a problem, the substance education program provides individual sessions with a counselor along with group sessions with an alcohol and other drug professional. Drop in for one or more of our support groups.

Center for Alcohol and Other Drug Resources and Education is located at Lawnview Apartment \#106. Hours are 8:30 a.m. - 4:30 p.m., Monday Friday.

Center for Alcohol and Other Drug Resources and Education
300 College Park
Dayton, OH 45469-2610
(937) 229-1233

## Commuter Student Services

Commuter Student Services provides an essential aspect to the University of Dayton campus. Commuter students' knowledge and pride of the Dayton area help make out-of-town students feel more comfortable and at home while at the University. A lounge for commuter students is located in Kennedy Union 118 which is used for study, relaxation and meeting friends. A microwave and refrigerator are provided for the convenience of commuter students. Lockers are also available in the ounge and can be rented on a yearly basis.

The commuter advisor, at (937) 229-3333, provides services and facilities to meet the educational, developmental and physical needs of these students and maintains contact with the academic and nonacademic areas of the University to increase understanding of these specific needs.

## Counseling Center

The main purpose of the Counseling Center is to assist students in self-development, including personal adjustment, career planning and social skills building. All students in need of objective insights or merely "a listening ear" are encouraged to make use of the Center's services. No student's concern is too minor to explore. This is usually accomplished through one-on-one and group counseling, although there are opportunities for workshops on certain topics, consultation and outreach programming for student, faculty and staff groups. The Center also provides career and personality testing services.

Because counseling often involves sensitive personal matters, discussions between counselors and students are strictly confidential. An exception occurs when students' problems become life threatening. The University and the student may enter into a contract to establish conditions regarding required treatment/assessment, if there is imminent danger. The student may decide to use the services offered by the University or to receive treatment elsewhere. In the latter case, periodic review by the University is required to confirm that contract conditions are met. For the welfare of the student, problems warranting treatment more intensive than the University can offer may require temporary medical withdrawal from the University. The student may be readmitted to the University upon acceptable completion of contract conditions. In life threatening circumstances, the University assumes the position that the parents or guardians of the student generally should be notified, and it will initiate such notification if the student has not done so within an appropriate time, refuses to do so or is unable to do so. Other exceptions to confidentiality include receiving a court order or when evidence suggests abuse or endangerment to a person under the age of 18 or over 60.

Matriculating undergraduates, graduate assistants and law students are eligible for services at no charge. Other graduate students, Intensive English Program participants and non-matriculated undergraduate students pay on a fee-for-service basis. Contact us (https://udayton.edu/ studev/health_wellness/counselingcenter) for information about charges and services. The Center is accredited by The International Association of Counseling Services, Inc.

## Dining Services

The University of Dayton Dining Services operates two full-service a la carte student dining facilities located in Kennedy Union and Marycrest Complex, and two restaurants, Passports and The Grainary, located in the V.W. Kettering Residence Hall. The Brown St. Bistro, located in Fitz Hall, offers made to order sandwiches and salads, The Emporium, a mini grocery store with a full service deli, is located in the Marianist Residence Hall, and Stuart's Landing, a convenience store, is located in Stuart Hall Complex. Dining Services also operates The Galley, a pretzel/ice cream/ gourmet coffee shop located in Kennedy Union, and The Chill, a juice bar with healthy snack options located in the RecPlex. All students living in Marycrest, Stuart, Founders, Marianist and Virginia Kettering Residence Halls are required to purchase a meal plan. Meal plan options are as follows:

- Standard Plan - This structured meal plan has a spending allowance associated with it during specific meal periods. If you don't spend the entire allowance for that meal, you lose it. This plan starts with breakfast the first day of classes.

Note: Only one block of funds may be used during each meal period. For example, two blocks may not be used during the lunch meal period on the same day.

- The Flexible Plan - This is a debit style meal plan and provides complete flexibility, with no specific meal periods and no spending allowances.

Note: There are no refunds on debit plan balances, however, 100\% of balances remaining at the end of fall semester will roll over to the spring semester. Plan participation charge applies.

All students living in residence halls must have one of the following:

- Standard Plan (3 blocks per day, 7 days) - \$2,640.00/semester
- Flexible Plan (debit account) - \$2,640.00/semester

When a student does not choose a meal plan the default plan is the Flexible Plan.

Non-resident students may purchase a Neighborhood meal plan (debit account).

For complete information on meal plans, please visit our website (http:// dining.udayton.edu).

## FlyerCard

The FlyerCard is the official photo identification card at the University of Dayton. Your FlyerCard must be presented for purchases using your FlyerCard account(s), admission to the RecPlex, library services and building access.

Your FlyerCard can be used as a form of payment for food, textbooks, supplies, laundry, printing and other essential services. It is safe, fast and convenient to use. You can view your transactions and the balance of your accounts by choosing the "My Account" (https:// flyerexpress.udayton.edu/AddFlyer.aspx) link.

To get your FlyerCard, stop by the Campus Card Services office located in the Kennedy Union lobby. The first FlyerCard received is issued at no charge. All students must be registered for classes before receiving their card. Visit the FlyerCard website (http://FlyerCard.udayton.edu) for a detailed view of the FlyerCard program.

## Flyer Express

Flyer Express is a declining-balance prepaid account accessed with your FlyerCard. It is the convenient way to pay for products and services on and off campus. Your Flyer Express account eliminates the need to carry cash and saves you the hassle of searching for correct change. Flyer Express has you covered with whatever you need, 24 hours a day, 365 days a year. It is safe, fast and convenient to use. The money in your Flyer Express account is carried over from one semester to the next and from year to year.

The Card Services office offers you multiple options to deposit funds into your account.

[^1]Flyer Express is accepted at:

- All Dining Service locations
- Art Street Cafe
- The Blend
- The Blend Express
- Bookstore
- Campus Copy Center
- The Chill
- Flyer Spirit
- The Galley
- The Hangar
- KU Box Office
- Post Office
- Residence Hall laundry
- Roesch Library
- Stuart's Landing
- UDit Help Desk
- Selected vending areas
- Selected off campus businesses

Flyer Express is used to pay for printing in the Library and many computer labs.

Visit our website (http://FlyerCard.udayton.edu) for a current listing of off campus vendors that accept Flyer Express.

## Health Center

Medical care is available at the Health Center to all full-time and parttime undergraduate, graduate and law students. During the academic year, the Health Center is open from 8:30 a.m. to 5:00 p.m. on weekdays, except University holidays. A physician is available for consultation every weekday morning and afternoon throughout the year, except University holidays. Summer hours are 8:30 a.m. to 4:30 p.m. with limited physician hours. Students should call the Health Center to schedule an appointment at (937) 229-3131, or schedule/cancel appointments through our portal at myhealth.udayton.edu. In case of emergency, call Public Safety at (937) 229-2121.

Pre-admission physical examinations are not required, but students with chronic health problems are advised to have their physicians send records or recommendations to the medical director. Every student born after 1956 is required to show evidence of immunity to measles, mumps and rubella. All students are required to fill out a tuberculosis screening questionnaire. Students living in on-campus housing also have specific requirements for meningitis and hepatitis B vaccines, specified by Ohio law. A link to the Health Requirements form is located on the Health Center website (http://www.udayton.edu/studev/healthcenter) .

Undergraduate and law students are eligible for Health Center office visits at no extra charge. Graduate and IEP students pay on a fee for service basis at the Health Center. The charge for a physician visit ranges from $\$ 45$ to $\$ 65$, depending on the length of the visit and the type of services provided. Charges for medicines dispensed, allergy injections, immunizations, laboratory tests, x-ray examinations, and miscellaneous items are billed to ALL STUDENTS.

The University believes it is the responsibility of each student to have health insurance and therefore expects students will have it for the entire time they are enrolled. Having health insurance protects both the student and the community. International students are required to provide evidence that they have health insurance that will cover them the entire
time they are a student at the University of Dayton. The University is not responsible for covering health care costs. All charges incurred at the Student Health Center are reported to UD's Office of Student Accounts. Inquiries regarding bills should be made at the Health Center between 9:00 a.m. and 3:00 p.m. weekdays. Itemized statements can be provided upon patient request, but these are not automatic and the Health Center does not bill outside insurance companies directly. However, students should bring a copy of their health insurance/pharmacy cards to each visit.

## Housing and Residence Life

One of the most challenging and growth-oriented experiences available to students is residential living. The University strives to provide a cocurricular environment that both supports and challenges students to reach their full potential. Understanding, mutual respect and openness to diversity foster the development of a positive community.

In order to attain this goal, professional, graduate and undergraduate staffs in the Department of Housing and Residence Life are creating living and learning environments within University residence halls, suites, apartments and houses. A student elected governance board or council represents residential student opinions and assists the residence life staff in providing programmatic initiatives for each on-campus living area.

All first- and second-year students are required to live in UD housing unless they are married, are twenty-one years of age or older, or are local residents living with their legal guardian at their permanent residence within 40 miles of the University of Dayton campus. Junior and senior students have the opportunity to live in UD apartments and houses or to choose to live in non-University housing.

Upon official acceptance to the University of Dayton, the Office of Enrollment Management provides students with information and instructions for securing residential living accommodations. Questions regarding housing can be directed to Housing and Residence Life: (937) 229-3317; housing@udayton.edu (housing@notes.udayton.edu); website (http://housing.udayton.edu).

## International Student and Scholar Services Office

International Student and Scholar Services (ISSS) provides students and exchange visitors with immigration advising, workshops and orientation, as well as social and extracurricular activities. ISSS extends its services and support to international faculty and research scholars and their dependents. Through collaboration with other departments and organizations, ISSS advocates on behalf of international students to ensure their academic, personal and career goals.

## Office of Community Standards and Civility Mission:

The purpose of the Student Conduct System and the Code of Conduct (https://udayton.edu/studev/dean/civility) are to: maintain a campus environment that is conducive to learning; protect the university's educational mission; maintain reasonable order; protect the community; and assist in the character development of
each student or student organization. The Standards of Behavior and Code of Conduct (https://www.udayton.edu/studev/dean/ civility/2014-2015StudentHandbookPDF2014.pdf) are applicable to all students and student organizations regardless of where a violation may occur.

## Office of Learning Resources

The Ryan C. Harris Learning Teaching Center (LTC) Office of Learning Resources (OLR) is Your Partner in Learning. We offer a wide variety of services designed to meet individual learning needs. Services offered through OLR are free of charge for all students.

## Academic Coaching and Consultations

Discuss goals, motivation, transition to college and study skills. Obtain referrals to campus and community resources. Request an informal disability screening.

## Courses offered

| UDI 175 | The Art \& Science of Learning | 2 |
| :--- | :--- | :--- |
| UDI 149 | Learning Connections | 2 |

## International Student Learning Support

Meet with staff or peer coaches, individually or in groups, or attend a seminar to develop skills for learning in a diverse community.

## Tutoring

Take advantage of tutoring with trained peer tutors for selected courses. Available to all students. Check the Learning Support Guide on the OLR website (https://www.udayton.edu/ltc/learningresources) for hours.

## Services for Students with Disabilities

Meet with disability specialists for individual consultations, disability management, and services including academic and testing accommodations, alternative formats, and assistive technology with training.

## Supplemental Instruction

Attend regular group study sessions led by trained leaders who help students master course material. Available in selected courses. Check the Learning Support Guide on the OLR website (https:// www.udayton.edu/ltc/learningresources) for courses.

## Online Resources

Check out the OLR website (https://www.udayton.edu/ltc/ learningresources) for study tips, self-assessments, apps, learning technologies and other resources including the full Learning Support Guide.

## The Write Place

Offers peer-to-peer writing consultations in the Knowledge Hub on the first floor of Roesch Library. Online feedback on writing is also available. Visit the Write Place website (https://www.udayton.edu/ltc/writeplace) for hours and other info.

## Office of Learning Resources: Students with Disabilities

The Ryan C. Harris Learning Teaching Center's (LTC) Office of Learning Resources (OLR) focus is to provide an equitable opportunity to participate freely and actively in all areas of university life. Disability Services are targeted to all students with disabilities, chronic health, dietary or psychiatric conditions and students with temporary conditions that are impacting the university experience. OLR provides access to programs and services through academic and testing accommodations, parking and housing accommodations, individual consultations, ongoing disability management, assistive technology and production of alternative format course materials.

For students with disabilities, OLR:

- Shares the responsibility for coordination of accommodations with the student, faculty and staff at the University.
- Encourages the development of self-advocacy and self-determination skills.
- Assists in the interactive process between students and faculty for determining and implementing reasonable accommodations.
- Ensures registered students with disabilities access to university programs and services through reasonable accommodations.
- Assists the university community in understanding the concept and the realities of disability, and in working to eliminate barriers that limit the opportunities for students with disabilities at the University.
- Assists the University in complying with the provisions of Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, and the ADA Amendments Acts (ADAAA) of 2008.

OLR does not provide special, structured programs specifically for students with disabilities.

For more information about OLR services for students with disabilities, please visit our website (https://www.udayton.edu/ltc/ learningresources). (http://www.udayton.edu/ltc/learningresources/\#3)

## The Academic Accommodation Process

The LTC's Office of Learning Resources (OLR) asks students who wish to make an official request for disability accommodations to contact OLR. It is the responsibility of the student to make their request for accommodations in a timely manner.

Students may initiate the accommodation process by completing the Initial Accommodation Request form online (https://udaytonaccommodate.symplicity.com/public_accommodation) or setting up an appointment with our disability staff to address specific accommodations or questions and concerns about access. The Initial Accommodation Request form is required before accommodations can be finalized.

During the appointment, we will discuss the barriers/difficulties the student anticipates, or is facing, and the kinds of accommodations that may be appropriate while attending classes and participating in community life at the University of Dayton. This may include academic, housing, dietary and parking needs. When applicable, a letter which outlines specific academic accommodations will be provided. The Accommodation Letter will be used by the student to aid in discussion of academic accommodations with their professors. For housing, dietary,
and parking, the student will receive an email notification of the decision for these requests and any additional actions needed by the student.

Students will request an accommodation letter each semester via the online process outlined on our website.

## Please contact OLR for assistance.

Office: Roesch Library, Learning Teaching Center (Ground Floor),
Room 023
Phone: (937) 229-2066
TTY: (937) 229-2059
Fax Number: (937) 229-3270
Email: disabilityservices@udayton.edu
Mail: University of Dayton
Office of Learning Resources
Attn: Disability Services
300 College Park
Dayton, OH 45469-1302
For additional information, please visit our website (https://
www.udayton.edu/ltc/learningresources).

## Office of Multicultural Affairs

The University of Dayton is committed, in the spirit of our Marianist values, to creating an environment that embraces cultural diversity. The Office of Multicultural Affairs, in the division of Student Development, provides services to support the academic achievement, as well as, social and cultural engagement of multicultural students, and assists in enhancing the understanding that all UD students have of themselves and others through co-curricular experiences. Staff members in the Office of Multicultural Affairs collaborate with campus and community partners to provide a supportive community that promotes academic success.

Major programs and services offered by the Office of Multicultural Affairs (OMA):

Academic Excellence - Support is offered to students through academic consultations, tutoring and workshops. OMA works in collaboration with other academic and student service offices to assist students in achieving their academic goals.

Cultural Programming - OMA in collaboration with other departments supports the University of Dayton's academic mission by providing educational opportunities that assist students in understanding their cultural identity, as well as the experiences of others. Students can become involved in a variety of experiences, including with Culture Fest, Culture Heritage Month programmings recognized on campus and nationally, and the Intercultural Talent Showcase.

Leadership Development - A variety of leadership initiatives are offered, including the annual OMA Retreat, the Program to Engage and Exchange Resources for Students (PEERS) and the Colors of Leadership Conference. The leadership skills of students involved with multicultural student organizations are enhanced through group and individual meetings that occur on a monthly basis with student leaders involved with Kindred Presidents.

Social Justice and Inclusion - OMA provides opportunities for students, faculty and staff to participate in critical dialogue around difference and social justice. Participants can attend presentations, brown bag discussions, mini-conferences and other events to gain skills and resources on how to lead and engage in difficult conversations. Students
interested in actively promoting dialogue and/or facilitating workshops and conversations can participate in the Diversity Peer Educators (DPE) program to engage other members of the community to serve as change agents.

Staff \& Facility - The OMA staff members are excellent resources. Stop by the office to speak to a staff member, and to use the facility to study, to socialize or to attend an event. Ample study and programming space is available in OMA, which is located on the first floor of Alumni Hall. Contact OMA at 937-229-3634 or oma@udayton.edu to reserve a room or to inquire about after-hours access.

## Privacy Rights of Parents and Students

In compliance with Section 438 of the General Education Provisions Act, the University of Dayton has published regulations designed to protect the privacy of parents and students as to the access and to the release of records maintained by the institution.

## Public Safety

The Department of Public Safety seeks to provide a safe and secure environment for the entire University of Dayton community, which includes the students, faculty, staff and visitors. The department provides police, parking, emergency management and emergency medical services to the UD campus community. The Student Cadet program is also operated by Public Safety. Public Safety offices are located on the first floor of Fitz Hall. For additional information about Public Safety services, please visit our website (https:// www.udayton.edu/publicsafety).

## Police

Police operations include enforcement of laws and campus regulations, criminal investigation, crime prevention and providing for the physical security of University of Dayton property and interests. The department has primary jurisdiction for law enforcement and criminal investigation on all University of Dayton owned or controlled property, and all public property within the defined campus boundaries according to the mutual aid agreement with the City of Dayton Police Department. Police officers are all graduates of the Basic Police Academy and are sworn law enforcement officers.

Emergency assistance is available 24 hours per day, seven days a week. Call 911 in the event of an emergency, or (937) 229-2121 for all other assistance. Telephones not on the UD network will call the Regional Dispatch Center when dialing 911.

## Parking Services

Parking Services is responsible for the management of the University's more than 7,500 parking spaces located in 61 parking lots and with enforcement of parking regulations. Lots are patrolled daily by Parking Services representatives who issue citations to violators. The following information applies to student parking:

- Campus parking facilities are extremely limited. We recommend you determine parking availability before bringing a vehicle to campus, as street parking is also severely restricted in the vicinity of campus.
- All vehicles parked on University of Dayton property must have a valid parking permit displayed, except during open parking hours.
- First-Year residential students will NOT be permitted to bring vehicles to campus.
- Graduate/law students and graduate assistants will be sold student parking permits.
- Commuting students will be sold permits for Lot S1.
- Students living in landlord housing within one mile of campus will be sold resident student permits.
- Resident student parking priority will be given to upper class students with the highest priority being given to students with disabilities.
- Information concerning permit sales will be disseminated to students annually.
- All students are required to apply online at parking.udayton.edu
- Evening students are sold $N$ (night) permits, which are valid in Lots A, B, C, D, G, P, S1, S2 and River Campus lots after 4:00 p.m. and anytime during weekends in any campus parking lot except those marked with a double letter.
- Student permits will be honored in any student parking lot during the summer sessions.
- Students may contact Parking Services at (937) 229-2128, Monday-Friday, 8:00 a.m. to 4:30 p.m., or at parking@udayton.edu (parking@notes.udayton.edu).


## Emergency Medical Services

The Department of Public Safety also provides around the clock emergency medical services, primarily through the support of the University of Dayton Emergency Medical Services, a student volunteer organization. University of Dayton Emergency Medical Services is comprised of full-time undergraduate students who receive their training and equipment from the Department of Public Safety. All University of Dayton Emergency Medical Services members are nationally registered EMTs and volunteer their time to serve the community.

## Student Cadet Program

The Student Cadet Program consists of part-time student employees who operate the Student Escort Service through the Department of Public Safety. The Student Escort Service is a program that provides free transportation for students within the campus community with a focus on crime prevention.

## Student Handbook

Each student at the University of Dayton is responsible for knowing and observing the policies, regulations and procedures contained in the official student handbook. This publication also provides useful information on such subjects as University services, student organizations and resource numbers.

The entire Student Handbook is available here (https:// www.udayton.edu/studev/about).

All Student Handbook information provided on the website may be printed from personal computers and printers.

The "University of Dayton Student Standards of Behavior" section of the the Student Handbook is printed in booklet form and distributed to all residents of UD owned housing facilities. The handbook is also available at the Kennedy Union Information Desk for students living in other residences.

Changes in disciplinary policies and procedures made during an academic year will be announced to the student population via campus email. Informing students of policy and procedure changes via campus e-
mail is considered official notification. The website version of the Student Handbook will be updated upon implementation of said change.

## Women's Center

The Women's Center is open to all students who want to think about the ways in which gender intersects and impacts our lives.


#### Abstract

Educate Through the programming and resources provided by our staff, within the Center, and on our website, members of the UD community can explore topics around feminism and gender roles, healthy living and positive body image, and diversity and inclusion.


- Physical Space (https://www.udayton.edu/womenscenter/ community): we have a comfortable, relaxed space on the second floor of Alumni Hall where students can study, have group meetings, or just hang out. The Center also has several spaces that can be reserved (https://www.udayton.edu/womenscenter/community/ reserve-space) by any University of Dayton student, faculty or staff.
- Resource Library (https://www.udayton.edu/womenscenter/ community/center-resources/library.php): our resource library in 208 Alumni Hall offers a wide range of books, magazines, periodicals, brochures and other multimedia that can be checked out using your UD ID. Feel free to stop in and browse, or search for materials through the UD Roesch Library catalog.


## Advocate

We strive to be agents of positive change by identifying gender-related needs and issues, evaluating the effectiveness of existing programs and services, and being active participants in institutional strategic planning efforts around equity and inclusion.

- Lactation Rooms (https://www.udayton.edu/womenscenter/info/ parenting/lactation.php): the Women's Center works with Facilities Management and Human Resources to maintain five lactation rooms on campus for mothers to breastfeed or privately express breast milk.
- Pregnancy and Parenting Resources (https://www.udayton.edu/ womenscenter/info/parenting): the Women's Center strives to make UD as inclusive and supportive as possible for all students with dependent children. This includes policy recommendations, evaluation of services, and updating a resource list of campus and local community resources for students with dependents.


## Empower

The Women's Center provides support and resources for personal development and professional advancement.

- Salary Negotiation Workshops (https://www.udayton.edu/ womenscenter/programs/start-smart): our staff are trained Start Smart Salary Negotiation workshop facilitators; these workshops are designed for undergraduate and graduate students about to enter the job market. By using the skills taught in this workshop, you are prepared to negotiate your starting salary and improve your lifelong earning potential.
- Mentoring Program: the Women's Center's Peer Mentoring Program provides undergraduate students an opportunity to be active members of the Women's Center through hands-on experience while receiving mentorship and guidance from the Center's Graduate Assistant. Participants are able to further develop their leadership skills and can explore new ways of engaging with their community.


## Contact:

Alumni Hall, 2nd Floor
300 College Park
Dayton, Ohio 45469-0322

- E-mail: womenscenter@udayton.edu
- Phone: 937-229-5390
- Website: www.udayton.edu/womenscenter


## Connect:

- F (https://www.facebook.com/UDaytonWomensCenter)acebook (https://www.facebook.com/UDaytonWomensCenter): @udaytonwomenscenter
- T (https://twitter.com/UDwomenscenter)witter (https://twitter.com/ UDwomenscenter): @udwomenscenter
- I (https://www.instagram.com/UDwomenscenter)nstagram (https:// www.instagram.com/UDwomenscenter): @udwomenscenter


## The University of Dayton

In the summer of 1849, Father Leo Meyer and Brother Charles Schultz, the first Marianist missionaries to America, journeyed from Alsace in France to Cincinnati, Ohio, where they intended to establish a base for the order in this country. They arrived, however, during a cholera epidemic, so Bishop John Purcell of Cincinnati soon sent Father Meyer to Dayton to minister to the sick of Emmanuel Parish. Here he met John Stuart, whose little daughter died of cholera the year before. Mr. Stuart wanted to sell his Dayton property and return with his wife to Europe. On March 19, 1850, the feast of St. Joseph, Father Meyer purchased Dewberry Farm from him and renamed it Nazareth. Mr. Stuart accepted a medal of St. Joseph and a promise of \$12,000 at 6\% interest in return for 125 acres, including vineyards, orchards, a mansion and various farm buildings. Meanwhile, more Marianists arrived, and Nazareth became the first permanent foundation of the Society of Mary in the Western Hemisphere.

The University of Dayton had its earliest beginnings on July 1, 1850, when St. Mary's School for Boys, a frame building that not long before had housed farm hands, opened its door to fourteen primary students from Dayton. In September, the classes moved to the mansion, and the first boarding students arrived. Father Meyer served as administrator, Brother Maximin Zehler taught, Brother Schultz cooked, and Brother Andrew Edel worked as farmer-gardener.

Five years later the school burned to the ground, but within a year classes resumed. By 1860, when Brother Zehler became president, enrollment approached one hundred. The Civil War had little direct effect on the school because most of the students were too young to serve. St. Mary's grew as college preparatory courses were started in 1861. Then came a novitiate and a normal school for Marianist candidates. An old history refers to the period of 1860-75 as "the brick-and-mortar years." The Chapel of the Immaculate Conception was completed in 1869. In 1870, visitors marveled at new St. Mary Hall, the largest building in Dayton, and called it "Zehler's Folly." The new "college department" moved into it in 1871. (St. Mary Hall is now listed in the National Register of Historic Places.)

In 1882, the institution was incorporated and empowered to confer collegiate degrees under the laws of the State of Ohio. In 1883, another devastating fire visited the campus, but this time some of the buildings were saved. The statue now known as Our Lady of the Pines was erected
in gratitude, and the following year St. Joseph Hall was built, symbolizing the renewed confidence of the Dayton Marianists. In a more famous emergency, the school was spared by water as it had not been by fire. Because of its hillside location, it survived the Great Flood of 1913 untouched and was able to give shelter to 600 refugees.

St. Mary's had reorganized in 1902 into four departments-classical, scientific, academic and preparatory. In 1905, it added the Commercial Department, which would become the Department of Commerce and Finance in 1921, the Division of Business Organization in 1924 and ultimately the School of Business Administration. Four engineering departments, appearing from 1909 to 1920, were to become the Engineering Division. In 1915, the Marianist training program (novitiate and normal school) was moved to Mount St. John's.

Known at various times as St. Mary's School, St. Mary's Institute and St. Mary's College, the school assumed its present identity in 1920, when it was incorporated as the University of Dayton. The same year, the elementary division was closed, the Division of Education was organized, and the University started its tradition of evening and Saturday classes to serve adults in the surrounding community. In 1922, the College of Law opened, also with evening classes. Other graduate programs followed, to augment the professional degree programs which distinguished the University from many of Ohio's other independent institutions of higher learning. In 1923, the first summer session was held; its classes, like those of the law college, were open to women as well as men.

The 1930s, with the Great Depression, were in many ways a time of retrenchment for the University of Dayton as for most other American schools. The Dayton Marianists had survived cholera, smallpox and influenza, wars, fire and flood and (in 1924) a Ku-Klux-Klan cross-burning on the campus. In 1935, even as the University turned its preparatory school functions over to Chaminade High School and graduated what was to be its last class in law for almost forty years, it inaugurated a college for women, with sisters of Notre Dame in charge of twentyseven entering female students. Two years later, the college for women closed; all divisions opened to women, and the University became fully coeducational.

Enrollment had passed a thousand when World War II broke out. By 1950, with the return of the veterans, it reached more than 3,500. In 1967, it topped 10,000. But then, with the expansion of a community college and the establishment of a state university nearby, enrollment declined, and the resulting retrenchment was exacerbated by rising inflation and the energy crisis. Nor did the social turbulence and activism of the late 1960s and early 1970s bypass the University of Dayton. Some students and faculty protested against the Vietnam War, compulsory ROTC, and defense-related research activities. They campaigned also for changes in the curriculum, seeking more opportunities for meeting personal needs and goals. In response, the University gave greater responsibility to students for their own academic decisions, and it initiated interdisciplinary programs, self-directed learning and various experimental courses and methods. Meanwhile, the profile of the student body changed. The 1960s saw significant increases in female and minority students. In the 1970s, there was a shift to a largely residential student body, and at the same time, many more "nontraditional" (older) students matriculated. By the mid-1970s, total enrollment steadied at more than 10,000, with about 6,000 full-time undergraduates.

The University held its first general public fund-raising campaign in order to erect Wohlleben Hall in 1958 and Sherman Hall in 1960. Both campus and off-campus residences, residence halls, apartments and houses were added and improved as such emergency accommodations
as surplus Army barracks and an adapted Army hospital (renamed the West Campus) were phased out.

Long-range planning has helped integrate new buildings and old and made the campus more livable by increasing its beauty as well as its efficiency. In 1986, old and new combined in the design of the Anderson Center between Rike Hall and Miriam Hall. When fire ravaged St. Joseph Hall in 1987, the University was able to rebuild and restore it without harming the architectural integrity of that historic corner of campus. Keeping pace with the needs of the University, the Jesse Philips Humanities Center opened in 1993, and Joseph E. Keller Hall was built for the School of Law in 1997. In addition, the University has renovated Miriam Hall, converted its child care center into an early childhood demonstration school called the Bombeck Family Learning Center and completed the first phases of a modern Science Center. In 2002, the University of Dayton Arena underwent a modernization, placing it among the best venues for basketball in the country. The Donoher Basketball Center, a major addition to the UD Arena giving UD a premier basketball facility for both playing and training, was dedicated in 1998.

As the University of Dayton entered the 21 st century, it built modern student facilities, including ArtStreet and Marianist Hall (2004) and RecPlex (2006).

The edifices are not the only changes on campus. In 1960, the University reorganized academically and administratively. Administrative changes saw the formation of the College of Arts and Sciences from what had been two separate units. Other divisions became the Schools of Business Administration, Education and Engineering. In 1970, the University charter was amended and lay members now joined the Marianists on the Board of Trustees. In 1974, the School of Law reopened.

Academically, the University has continued to expand and enrich its offerings and support services, especially since mid-century. Graduate studies, abandoned during World War II, resumed in 1960, with the School of Education leading the way. In 1969, the Department of Biology inaugurated the first doctoral program since 1928. The School of Engineering introduced two doctoral programs in 1973, and in 1992, the first doctoral degrees in educational leadership were awarded. In 1997, the Board of Trustees approved a doctoral program in theology with a focus on the Catholic experience in the United States. It was the first such doctoral program on a Catholic campus nationally.

In 1975, the Marian Library, which had grown to international renown since its inception in 1943, founded the International Marian Research Institute (IMRI), which was incorporated in 1984 as a branch of the Marianum in Rome. IMRI is empowered to confer licentiate and doctoral degrees in theology, with a specialization in Mariology. The Marian Library now holds the world's largest collection of print materials on Mary, the mother of Jesus.

For all undergraduates, a general education plan was adopted in 1983 to foster integration of the liberal arts in a professional education. In 1990, the Academic Senate approved a revision of the general education requirements that called for an integrated base of four humanities courses complemented by clusters of other courses, requiring various disciplines to focus on a single theme. The Academic Senate revised and renamed the general education requirements again in 2010 to emphasize seven mission-related student learning outcomes: scholarship, faith traditions, diversity, community, practical wisdom, critical evaluation of our times, and vocation. The Common Academic Program (CAP), taken by all undergraduates, integrates all aspects of students' University experiences beginning with courses in the Humanities Commons
and culminating in a Capstone experience. The University has always maintained a tradition of innovation. In 1874, St. Mary's Institute's new Play House gymnasium was the only one of its kind in Ohio, and it is probable that the first organized basketball game in the state took place there. A system of elective studies was inaugurated in 1901. In 1924, the University was the first school to be granted a charter by the National Aeronautical Association. It was one of the first in the nation to offer a course in biophysics (1935). In 1948, it was a pioneer in student ratings of professors, and in 1952, it invited persons over 60 to attend its evening classes as guests. Its graduate program in laser optics was one of the earliest in the country. It was one of the first educational institutions to adopt electronic data-processing equipment and to offer degrees in computer science. In 1999, the University of Dayton was the first in the nation to offer an undergraduate degree program in human rights. The University is currently developing partnerships with top universities in China, including Nanjing University, one of that nation's leading research institutions.

More than just a breeding ground for academic excellence, the University also responds to the needs of society and the region.

Sponsored research at the University began in 1949 with a few faculty members and student assistants doing part-time research for industry and government agencies. In 1956, the University of Dayton Research Institute (UDRI) was formed to consolidate the administration of the growing research activities. Annual research volume has increased from $\$ 3,821$ in 1949, to more than $\$ 90$ million today. The University of Dayton ranks second in the nation in funding for materials research.

Named for Brother Raymond L. Fitz, S.M., the University's longest-serving president, the Fitz Center for Leadership in Community, founded in 2002, connects students and faculty to the community through service learning, social justice and ongoing involvement.

Among the University's other community collaborations is the Dayton Early College Academy, a public high school founded in partnership with the Dayton Public Schools. DECA, whose first class graduated in 2007, is the only charter school in the country operated by a Catholic university.

The University's long-range plans include incorporating nearly 50 acres purchased from NCR in 2005. The land, lying between the academic core of campus and the Arena Sports Complex, increased the size of campus by nearly a quarter.

From its humble roots as a private boarding school for boys, the University of Dayton today ranks among the best Catholic universities in the country. It is the largest independent university in Ohio and draws students from around the country and the world.

## Academic Calendar 2017-2018

The University of Dayton operates under an early semester, split thirdterm calendar. The academic year begins with the fifteen-week fall term, which ends before Christmas. The spring term, also fifteen weeks, begins in January and ends early in May. The third, or summer term, is split into two complete sessions of six weeks each.

Students may enroll for the traditional fall and spring semesters and have a four-month summer vacation; or they may add half terms or full terms to enrich their programs or speed the completion of their degree requirements. The University issues diplomas at the end of each term and holds ceremonies in May and December. Students who must earn their own money can have extra time for employment in spring and summer; or they may enroll for the third term and work during the fall or the spring
term, when the employment market is not crowded with other college students.

## Fall 2017

| Date | Description |
| :---: | :---: |
| Mon, Aug 7 | Degrees conferred--no ceremony |
| Wed, Aug 16 | New Graduate Assistant Orientation |
| Thu, Aug 17 | New Faculty Orientation |
| Fri, Aug 18 | Incoming First Year students move into UD Housing |
| Sat-Tue, Aug 19-22 | New Student Orientation |
| Sun, Aug 20 | Upperclass students move into UD Housing |
| Tue, Aug 22 | New Student Convocation |
| Tue, Aug 22 | Last day to complete registration |
| Wed, Aug 23 | Classes begin at 8:00 a.m. |
| Tue, Aug 29 | Last day for late registration, change of grading options and schedules |
| Mon, Sep 4 | Labor Day-no classes |
| Mon, Sep 11 | Last day to change Second Session and full Summer Term grades |
| Wed, Sep 13 | Last day to drop classes without record |
| Fri, Sep 15 | Faculty Meeting-Boll Theatre |
| $\begin{aligned} & \text { Fri-Sun, Sep } \\ & 15-17 \end{aligned}$ | Family Weekend |
| Fri, Sep 22 | Academic Senate Meeting (KU Ballroom) |
| Wed, Oct 4 | Mid-Term Break begins after last class |
| Mon, Oct 9 | Classes resume at 8:00 a.m. |
| Sun, Oct 15 | Last day for Graduate and Doctoral students to apply for December 2016 graduation |
| Fri, Oct 20 | Academic Senate Meeting (KU Ballroom) |
| Wed, Oct 18 | First-Year students' midterm progress grades due by 4:00 p.m. |
| Sun, Oct 22 | First Year Arts Immersion Performance |
| Wed, Nov 1 | Last day for Undergraduate students to apply for May 2017 graduation |
| Fri, Nov 10 | Academic Senate Meeting (KU Ballroom) |
| Mon, Nov 13 | Last day to drop classes with record of W |
| Tue, Nov 21 | Thanksgiving recess begins after last class |
| Sat, Nov 25 | Saturday classes meet |
| Mon, Nov 27 | Classes resume at 8:00 a.m. |
| Fri, Dec 1 | Academic Senate Meeting (KU Ballroom) |
| Thu, Dec 7 | Last day of classes |
| Fri, Dec 8 | Feast of the Immaculate Conception/Christmas on Campus-- no classes |
| Sat, Dec 9 | Study Day |
| Sun, Dec 10 | Study Day |
| Mon-Fri, Dec $11-15$ | Exams--Fall Term ends after final examinations |
| Fri, Dec 15 | University Housing closes for Christmas Break at 6:00 p.m. |
| Sat, Dec 16 | Diploma Exercises at 9:45 a.m. |
| Tue, Dec 19 | Grades due by 9:00 a.m. |
| Thu, Dec 21 | End of term processing officially complete |

Mon, Jan 22 Last day to change Fall Term grades

## Christmas Break

Date Description

Sun, Dec 17
Mon, Jan 15
Christmas Break begins
Christmas Break ends

## Spring 2018

| Date | Description |
| :---: | :---: |
| Fri, Jan 12 | Last day to complete registration |
| Sun, Jan 14 | University Housing reopens for Spring Term at 8:00 a.m. |
| Tue, Jan 16 | Classes begin at 8:00 a.m. |
| Fri, Jan 19 | Academic Senate Meeting - Location TBD |
| Mon, Jan 22 | Last day for late registration, change of grading options and schedules |
| Mon, Jan 22 | Last day to change Fall Term grades |
| Thu, Feb 1 | Last day for Graduate and Doctoral students to apply for May 2017 graduation |
| Mon, Feb 5 | Last day to drop classes without record |
| Fri, Feb 16 | Academic Senate Meeting (KU Ballroom) |
| Fri, Feb 23 | Faculty Meeting/Academic Senate Meeting (KU Ballroom) |
| Wed, Feb 28 | Spring Break begins after last class |
| Thu, Mar 1 | Thursday only Graduate classes meet |
| Mon, Mar 5 | Classes resume at 8:00 a.m. |
| Wed, Mar 14 | First-Year students' midterm progress grades due by 4:00 p.m. |
| Thu, Mar 15 | Last day for Undergraduate students to apply for August 2017 graduation |
| Fri, Mar 16 | Academic Senate Meeting (KU Ballroom) |
| Wed, Mar 28 | Easter Recess begins after last class |
| Sun, Apr 1 | Last day for Undergraduate students to apply for December 2017 graduation |

Mon, Apr 2 Easter Monday--no day classes-- classes resume at 4:30 p.m.

| Mon, Apr 9 | Last day to drop classes with record of W |
| :--- | :--- |
| Wed, Apr 18 | Bro. Joseph W. Stander Symposium-Alternate Day of <br> Learning |

Fri, Apr 20 Academic Senate Meeting (KU Ballroom)
Fri, Apr 27 Last day of classes
Sat, Apr 28 Study Day
Sun, Apr 29 Study Day
Mon-Fri, Apr 30- Exams--Spring Term ends after final examinations

## May 4

Fri, May $4 \quad$ University Housing closes for Spring Term at 6:00 p.m.
Sat, May 5 Doctoral/Graduate Commencement Exercises at 12:45 p.m.

Sun, May $6 \quad$ Undergraduate Commencement Exercises at 9:45 a.m.
Tue, May $8 \quad$ Grades due by 9:00 a.m.
Thu, May 10 End of term processing officially complete
Fri, May 11 Faculty Meeting-KU Ballroom
Mon, Jun 11 Last day to change Spring Term grades

| S | Session |
| :---: | :---: |
| Date | Description |
| Fri, May 11 | Last day to complete registration |
| Sat, May 12 | Saturday classes begin |
| Mon, May 14 | Classes begin at 8:00 a.m. |
| Tue, May 15 | Last day for late Summer Term- First Session registration, change of grading options and schedules |
| Thu, May 17 | Last day for late full Summer Term registration, change of grading options and schedules |
| Wed, May 23 | Last day to drop without record from First Session classes |
| Mon, May 28 | Memorial Day-no classes |
| Mon, Jun 4 | Last day to drop without record from full Summer Term classes |
| Mon, Jun 11 | Last day to drop with record of W from First Session classes |
| Mon, Jun 11 | Last day to change Spring Term grades |
| Fri-Sat, Jun 22-23 | Exams--full Summer Term classes do not meet First Session ends after final examinations |
| Tue, Jun 26 | Grades due by 9:00 a.m. |
| Thu, June 28 | End of term processing officially complete |
| Sun, Jul 1 | Last day for Graduate and Doctoral students to apply for August 2017 graduation |
| Thu, Jul 26 | Last day to change First Session grades |
| Summer 2018--Se | cond Session |
| Date | Description |
| Fri, Jun 22 | Last day to complete registration |
| Sat, Jun 23 | Saturday classes begin |
| Mon, Jun 25 | Second Session classes begin |
| Tue, Jun 26 | Last day for late Summer Term-Second Session registration, change of grading options and schedules |
| Sun, Jul 1 | Last day for Graduate and Doctoral students to apply for August 2017 graduation |
| Wed, Jul 4 | Independence Day-no classes |
| Fri, Jul 6 | Last day to drop without record from Second Session classes Term classes |
| Mon, Jul 16 | Last day to drop with record of W from Second Session and full Summer Term classes |
| Thu, Jul 26 | Last day to change First Session grades |
| Fri-Sat, August 3-4 | Exams--Second Session and full Summer Term end after final examinations |
| Mon, Aug 6 | Degrees conferred--no ceremony |
| Tue, Aug 7 | Grades due by 9:00 a.m. |
| Thu, Aug 9 | End of term processing officially complete |
| Mon, Sep 10 | Last day to change Second Session and full Summer Term grades |

Subject to change

## FALL 2015

| Date | Description |
| :--- | :--- |
| Mon, Aug 3 | Degrees conferred--no ceremony |
| Thu, Aug 20 | New Faculty Orientation |


| Sat-Tue, Aug <br> 22-25 | New Student Orientation |
| :--- | :--- |
| Sun, Aug 23 | Upperclass students move into UD Housing |
| Tue, Aug 25 | New Student Convocation |
| Tue, Aug 25 | Last day to complete registration |
| Wed, Aug 26 | Classes begin at 8:00 a.m. |
| TBD | New Graduate Assistant Orientation 8:30 a.m. - 4:00 <br> p.m. |
| Wed, Sep 3 | Last day for late registration, change of grading <br> options and schedules |
| Mon, Sep 7 | Labor Day - no classses |

## SPRING 2016

## Date Description

Fri, Jan 15
Tue, Jan 19 Classes begin at 8:00 a.m.
Mon, Jan 25 Last day for late registration, change of grading options and schedules
Mon, Jan 25 Last day to change Fall Term grades
Mon, Feb 1 Last day for Graduate and Doctoral students to apply for May 2015 graduation

| Mon, Feb 8 | Last day to drop classes without record |
| :--- | :--- |
| Wed, Feb 24 | Spring Term Break begins after last class |
| Thu, Feb 25 | Thursday only Graduate classes meet |
| Mon, Feb 29 | Classes resume at 8:00 a.m. |
| Tue, Mar 15 | Last day for Undergraduate students to apply for <br> August 2015 graduation |
| Wed, Mar 16 | First-Year students' midterm progress grades due by <br> 4:00 p.m. |
| Wed, Mar 23 | Easter Recess begins after last class |
| Mon, Mar 28 | Easter Monday--no day classes--classes resume at <br> 4:30 p.m. |
| Fri, Apr 1 | Last day for Undergraduate students to apply for |
| Mon, Apr 11 | Lecember 2015 graduation |
| Wed, Apr 20 to drop classes with record of W |  |


| Sat, Jun 25 | Saturday classes begin |
| :--- | :--- |
| Mon, Jun 27 | Second Session classes begin <br> Tue, Jun 28 <br> Last day for late Summer Term-Second Session <br> registration, change of grading options and schedules |
| Fri, Jul 1 | Last day for Graduate and Doctoral students to apply <br> for August 2015 graduation |
| Fri, Jul 4 | Independence Day--no classes |
| Wed, Jul 7 | Last day to drop without record from Second Session <br> classes |
| Mon, Jul 18 | Last day to drop with record of W from Second <br> Session and full Summer Term classes |
| Thu, Jul 28 | Last day to change First Session grades |
| Fri-Sat, Aug 5-6 | Exams--Second Session and full Summer Term end <br> after final examinations |
| Mon, Aug 8 | Degrees conferred--no ceremony |
| Tue, Aug 9 | Grades due by 9:00 a.m. |
| Thu, Aug 11 End of therm processing officially complete |  |
| Mon, Sep 12 | Last day to change Second Session and full Summer <br> Term grades |

## Accreditation

The University of Dayton is accredited by the Higher Learning Commission.

The University of Dayton is also officially accredited by the following agencies:

[^2]The University has the approval of the following:

- American Chemical Society
- American Music Therapy Association
- Association of American Law Schools
- Counselor, Social Worker and Marriage and Family Therapist Board
- Ohio Board of Regents
- State of Ohio Department of Education


## Degrees and Credentials Offered

The University of Dayton offers the following baccalaureate, professional and graduate degrees:

- Bachelor of Arts
- Bachelor of Chemical Engineering
- Bachelor of Civil Engineering
- Bachelor of Electrical Engineering
- Bachelor of Fine Arts
- Bachelor of General Studies
- Bachelor of Mechanical Engineering
- Bachelor of Music
- Bachelor of Science
- Bachelor of Science in Business Administration
- Bachelor of Science in Computer Engineering
- Bachelor of Science in Education
- Bachelor of Science in Engineering Technology
- Master of Arts
- Master of Business Administration
- Master of Computer Science
- Master of Finance
- Master of Financial Mathematics
- Master of Laws
- Master of Mathematics Education
- Master of Physician Assistant Practice
- Master of Professional Accountancy
- Master of Public Administration
- Master of Science
- Master of Science in Aerospace Engineering
- Master of Science in Applied Mathematics
- Master of Science in Bioengineering
- Master of Science in Chemical Engineering
- Master of Science in Civil Engineering
- Master of Science in Computer Engineering
- Master of Science in Education
- Master of Science in Electrical Engineering
- Master of Science in Electro-Optics
- Master of Science in Engineering
- Master of Science in Engineering Management
- Master of Science in Engineering Mechanics
- Master of Science in Management Science
- Master of Science in Materials Engineering
- Master of Science in Mechanical Engineering
- Master of Science in Renewable and Clean Energy
- Master in the Study of Law
- Educational Specialist
- Juris Doctor
- Doctor of Engineering
- Doctor of Philosophy in Biology
- Doctor of Philosophy in Educational Leadership
- Doctor of Philosophy in Electro-Optics
- Doctor of Philosophy in Engineering
- Doctor of Philosophy in Theology
- Doctor of Physical Therapy

The University also offers the following certificates:

- Applied Creativity for Transformation Certificate
- Applied Social Science Research Methods Certificate
- Autism Certificate
- Business Analytics Certificate
- Business Intelligence Certificate
- Business Systems Analysis and Design Certificate
- Catholic Education Certificate
- Catholic School Administration Certificate
- Church Music Certificate
- Computational Finance Certificate
- Cyber-Security Certificate
- Design of Experiments Certificate
- Dyslexia Certificate
- Early Childhood Leadership and Advocacy Certificate
- Financial Risk Management Certificate
- Geographic Information Systems Certificate
- Health Communication Certificate
- Instructional Leadership in Catholic Schools Certificate
- Non-Profit and Community Leadership Certificate
- Pastoral Care Certificate
- Pastoral Counseling for Enhancement Certificate
- Professional Educator Certificate
- Project Management Certificate
- Science, Technology, Engineering and Mathematics Certificate
- Six Sigma Certificate
- Statistical Finance Certificate
- Strategic Public Relations Certificate
- Sustainability Certificate
- Systems Engineering Certificate
- Teaching English to Speakers of Other Languages Certificate
- Technology-Enhanced Learning Certificate
- Urban Teacher Certificate


## Institutional Memberships

The University holds institutional membership in the following:

- American Association of Colleges for Teacher Education
- American Association of Collegiate Registrars and Admissions Officers
- American Association of University Women
- American College Personnel Association
- American Council on Education
- American Society for Engineering Education
- Association of American Colleges and Universities
- Association of American Law Schools
- Association of Catholic Colleges and Universities
- Association of College and University Housing Officers
- Association of Governing Boards of Universities and Colleges
- Association of Independent Colleges and Universities of Ohio
- Association to Advance Collegiate Schools of Business
- College and University Professional Association for Human Resources
- College Board
- Cooperative Education and Internship Association
- Council for Advancement and Support of Education
- Council of Graduate Schools
- Dayton Area Chamber of Commerce
- Dayton Art Institute (sponsoring)
- Institute of International Education
- National Association of College and University Food Services
- National Association of Independent Colleges and Universities
- National Association of Student Personnel Administrators
- National Catholic Education Association
- North Central Association of Colleges and Schools Higher Learning Commission*
- Ohio Academy of Science
- Ohio Association of Colleges for Teacher Education
- Ohio Association of Private Colleges for Teacher Education
- Ohio Campus Compact
- Ohio Continuing Higher Education Association
- Southwestern Ohio Council for Higher Education
* North Central Association

30 N. LaSalle Street, Suite 2400, Chicago, IL 60602
(800) 621-7440
http://ncahigherlearningcommission.org

## Libraries

The University Libraries are comprised of:

- Roesch Library
- The Marian Library
- The University Archives and Special Collections
- The International Marian Research Institute

Roesch Library houses books, journals, videos, DVDs, CDs, government documents and microforms for both graduate and undergraduate students. Roesch Library is open 114 hours a week throughout much of the academic year and 24 hours per day during finals. Reference assistance is provided in a variety of forms including in person, email, IM , telephone and private consultations. Roesch Library subscribes to over 280 databases on a variety of subjects and provides access to more than 69,000 journals in print and electronic formats. Its book (print and electronic) and microform collections include over 1.4 million volumes.

The Libraries also provide comfortable study areas, photocopiers, and individual and group study rooms. Roesch Library has 20 computer workstations located on the first floor and 37 computer workstations
located on the second floor. All workstations provide access to the campus network, OhioLINK resources and the internet. These computers run Microsoft Office applications, SPSS, and audio and video editing software. Group Project Space, also located on the second floor, has ten workstations equipped with double monitors that allow for group collaboration. All floors have data ports and wireless network access that allow students to access campus and information networks through notebook computers.

The Libraries are members of OhioLINK, a cooperative venture of university and college libraries and the Ohio Board of Regents. OhioLINK partners have created a common information network providing rapid access to and delivery of over 49 million items available at college and university libraries across the state. All of the libraries affiliated with OhioLINK provide on-site borrowing privileges to students and faculty associated with the University. Access to the Libraries' Web page, databases and online catalog (http://www.udayton.edu/libraries).

The Marian Library, located on the seventh floor of Roesch Library, is recognized as the world's largest collection of published materials on the Virgin Mary. Its comprehensive collection embraces the works treating the Virgin Mary as found in Scripture, tradition, doctrine, history, art, popular culture, spirituality and devotion. The multi-language collection includes over 95,000 books (6,000 printed before 1800), 200 periodicals, a clipping file of over 60,000 items, a Marian stamp collection, a Christmas crèche collection, statues, medals, postcards and works of art.

Publications include:

- Marian Studies - papers given at the annual meeting of the Mariological Society of America
- Marian Library Studies - original research on Marian topics
- The twice-yearly Marian Library Newsletter

The Marian Library's collections can be accessed via the University Libraries' online catalog. Hours, an explanatory video and information on current art exhibits can be found on the Mary Page (https:// www.udayton.edu/imri).

The Zimmerman Law Library is located in Joseph E. Keller Hall. Its collection contains over 190,000 volumes and over 676,000 physical units of microforms. The open-stack arrangement of the Law Library permits easy access to all materials. For additional information visit our webpage (https://udayton.edu/law/library).

The Brother Louis J. Faerber, S.M., Curriculum Materials Center (CMC) houses the School of Education and Health Sciences' (SOEHS) specialized education collections and is located in Fitz Hall. Its collection includes:

- CDs
- Charts
- Children and young adult literature
- DVDs
- Elementary and secondary textbooks
- Material kits
- Professional education books and journals
- Standardized assessments
- Teaching aids - games and manipulatives
- Other resources

The CMC also houses research projects, theses and dissertations completed for the SOEHS's respective graduate programs. A copier, four networked computer workstations, the Ellison Press, Accu-Cut Machine and an assortment of letter and shape dies are available for student use.

## Mission

The University of Dayton is a comprehensive Catholic university, a diverse community committed, in the Marianist tradition, to educating the whole person and to linking learning and scholarship with leadership and service.

The University of Dayton is a comprehensive university committed to offering a broad range of programs in liberal arts, the sciences and the professions at the undergraduate level, to providing selected programs on the graduate level to meet the needs of the community and region, to sponsoring timely continuing education programs. As comprehensive, the University views learning and scholarship as a shared task of discovering, integrating, applying and communicating knowledge at the intersections of liberal and professional education, across the disciplines and through combining theory with practice.

As Catholic, the University commits itself to a distinctive vision of learning and scholarship that includes: a common search for truth based on the belief that truth can be more fully known and is ultimately one; a respect for the dignity of each human person created in the image and likeness of God; and an appreciation that God is manifested sacramentally through creation and the ordinary things in life. Ultimately, a Catholic vision of the intellectual life is based upon the acceptance of the revelation of God in Jesus Christ as it has been received and handed on by the Church. This challenge calls for integration of the human and the divine, reason and faith, and promotes true understanding through a person's head and heart. The University welcomes persons of all faiths and persuasions to participate in open and reflective dialogue concerning truth and the ultimate meaning of life.

Founded in the Marianist tradition, the University is committed to a vision of a distinctive educational community. As Marianist, the University focuses on educating the whole person in and through a community that supports and challenges all who become a part of it. The University forms an educational community thriving on collaboration by people from diverse backgrounds with different skills who come together for common purposes. The University as Marianist challenges all its members to become servant-leaders who connect scholarship and learning with leadership and service.

This university community-comprehensive, Catholic and Marianist-exists not for itself, but to render service. The University creates an environment in which its members, working in a scholarly manner, are free to evaluate the strengths and weaknesses of their own work and the work of others. In partnership, through the Research Institute, Campus Ministry, as well as numerous student organizations, the University works with others to improve the human community.

## Related University Services

Besides the regular day sessions, the University conducts special as well as regular evening and summer sessions and offers short-term workshops, institutes and conferences. All credited courses, whenever offered or in whatever form, conform to the same standards and are governed by the same policies and regulations prevailing during the regular day sessions.

As part of a comprehensive strategy for adult education through Graduate, Professional and Continuing Education, Special Programs and Continuing Education especially serves the part-time students of the Dayton community to make the University and its course offerings, both credit and noncredit, more easily available to them. Similarly, the Office of International Student and Scholar Services and the Intensive English Program, located in the Center for International Programs, serves students, faculty, staff and visiting scholars from other countries who are studying or working at the University.

To foster interdisciplinary efforts, the Office of the Provost can administer courses designated UDI (University of Dayton Interdisciplinary) to accommodate interschool offerings and experimental programs.

## Southwestern Ohio Council for Higher Education (SOCHE)

Students at the University of Dayton may register for courses for credit at Southwestern Ohio Council for Higher Education institutions (see below for a complete list) at the University of Dayton's rate per credit hour. Students will pay any applicable lab or related fees at the host institution. This policy applies only if the course is not available at the University of Dayton, space in the course is available and pertains only to regular sessions of the academic year. The student also is required to have advisor's permission, must satisfy all course prerequisites and must meet the host institution's admissions requirements. For more information visit our website (https://www.soche.org).

The consortium of 23 colleges and universities was established to promote inter-institutional cooperation and community service. SOCHE holds regular conferences for faculty and staff, serves as a clearinghouse for the exchange of information and promotes projects of educational research and experimentation. Many cooperation programs exist in:

- College finance and administration
- Publishing
- Research
- Teaching
- Other areas

Consortium member schools include:

- Air Force Institute of Technology
- Antioch College
- Antioch University Midwest
- Cedarville University
- Central Michigan University
- Central State University
- Cincinnati State Technical and Community College
- Clark State Community College
- Edison Community College
- Kettering College
- Kettering Foundation
- Miami University Regionals
- Sinclair Community College
- Southern State Community College
- Union Institute \& University
- United Theological Seminary
- University of Cincinnati
- University of Dayton
- Urbana University
- Wilberforce University
- Wilmington College
- Wittenberg University
- Wright State University


## Statement of Purpose

Approved by the Board of Trustees, May 14, 1969.
The University of Dayton, by tradition, by legal charter and by resolute intent, is a church-related institution of higher learning. As such, it seeks, in an environment of academic freedom, to foster principles and values consonant with Catholicism and with the living traditions of the Society of Mary. Operating in a pluralistic environment, it deliberately chooses the Christian world-view as its distinctive orientation in carrying out what it regards as four essential tasks: teaching, research, serving as a critic of society and rendering public service.

The University of Dayton has as its primary task to teach-that is, to transmit the heritage of the past, to direct attention to the achievements of the present and to alert students to the changes and challenges of the future. It regards teaching, however, as more than the mere imparting of knowledge; it attempts to develop in its students the ability to integrate knowledge gained from a variety of disciplines into a meaningful and viable synthesis.

The University of Dayton holds that there is harmony and unity between rationally discovered and divinely revealed truths. Accordingly, it commits its entire academic community to the pursuit of such truths. It provides a milieu favorable to scholarly research in all academic disciplines, while giving priority to studies which deal with problems of a fundamentally human and Christian concern. It upholds the principle of responsible freedom of inquiry, offers appropriate assistance to its scholars and endeavors to provide the proper media for the dissemination of their discoveries.

The University of Dayton exercises its role as critic of society by creating an environment in which faculty and students are free to evaluate, in a scholarly manner, the strengths and weaknesses found in human institutions. While, as an organization, it remains politically neutral objective and dispassionate, it encourages its members to judge for themselves how these institutions are performing their proper tasks; to expose deficiencies in their structure and operation; to propose and actively promote improvements when these are deemed necessary.

The University of Dayton recognizes its responsibility to support, with means appropriate to its purposes, the legitimate goals and aspirations of the civic community and to cooperate with other agencies in striving to attain them. It assists in promoting the intellectual and cultural enrichment of the community; it makes available not only the resources of knowledge that it possesses, but also the skills and techniques used in the accumulation and dissemination of knowledge; and, above all, it strives to inspire persons with a sense of community and to encourage men and women of vision who can and will participate effectively in the quest for a more perfect human society.

## COMMON ACADEMIC PROGRAM

The Common Academic Program (CAP) is the portion of the curriculum shared by all undergraduate students, starting with the entering class in 2013. It embodies seven UD learning goals: scholarship, faith traditions, diversity, community, practical wisdom, critical evaluation of our times and vocation. The courses challenge students and faculty to link aspects of their own lives, majors and careers to a broader world. Students' unique learning experiences promote knowledge, skills and dispositions through engaging, developmental and integrated courses, and experiences that are necessary for 21 st century graduates.

## Learning Outcomes

1. Scholarship: All undergraduates will develop and demonstrate advanced habits of academic inquiry and creativity through the production of a body of artistic, scholarly or community-based work intended for public presentation and defense.
2. Faith traditions: All undergraduates will develop and demonstrate ability to engage in intellectually informed, appreciative and critical inquiry regarding major faith traditions. Students will be familiar with the basic theological understandings and central texts that shape Catholic beliefs and teachings, practices and spiritualities. Students' abilities should be developed sufficiently to allow them to examine deeply their own faith commitments and also to participate intelligently and respectfully in dialogue with other traditions.
3. Diversity: All undergraduates will develop and demonstrate intellectually informed, appreciative and critical understanding of the cultures, histories, times and places of multiple others, as marked by class, race, gender, ethnicity, religion, nationality, sexual orientation and other manifestations of difference. Students' understanding will reflect scholarly inquiry, experiential immersion and disciplined reflection.
4. Community: All undergraduates will develop and demonstrate understanding of and practice in the values and skills necessary for learning, living and working in communities of support and challenge. These values and skills include accepting difference, resolving conflicts peacefully and promoting reconciliation; they encompass productive, discerning, creative and respectful collaboration with persons from diverse backgrounds and perspectives for the common purpose of learning, service and leadership that aim at just social transformation. Students will demonstrate these values and skills on campus and in the Dayton region as part of their preparation for global citizenship.
5. Practical wisdom: All undergraduates will develop and demonstrate practical wisdom in addressing real human problems and deep human needs, drawing upon advanced knowledge, values and skills in their chosen profession or major course of study. Starting with a conception of human flourishing, students will be able to define and diagnose symptoms, relationships and problems clearly and intelligently, construct and evaluate possible solutions, thoughtfully select and implement solutions, and critically reflect on the process in light of actual consequences.
6. Critical evaluation of our times: Through multidisciplinary study, all undergraduates will develop and demonstrate habits of inquiry and reflection, informed by familiarity with Catholic Social Teaching, that equip them to evaluate critically and imaginatively the ethical, historical,
social, political, technological, economic and ecological challenges of their times in light of the past.
7. Vocation: Using appropriate scholarly and communal resources, all undergraduates will develop and demonstrate ability to articulate reflectively the purposes of their life and proposed work through the language of vocation. In collaboration with the university community, students' developing vocational plans will exhibit appreciation of the fullness of human life, including its intellectual, ethical, spiritual, aesthetic, social, emotional and bodily dimensions, and will examine both the interdependence of self and community and the responsibility to live in service of others.

## Requirements

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$


Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice
Major Capstone 0-3

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5

## CAP Components

## First-Year Humanities

The First-Year Humanities component will introduce the seven student learning outcomes and develop appropriate disciplinary objectives as part of the first-year courses in Religious Studies, Philosophy, History,
and English that create a foundation for student learning in the rest of the Common Academic Program and their majors. These courses will exhibit, at an introductory level, the value of humanistic inquiry and reflection as a means of advancing the seven learning outcomes. Particular emphasis will be placed on the diversity outcome. Collectively, these courses will introduce students to the concept that learning is a process of integrating knowledge within and across disciplines. To help students understand the relationship between disciplines and to begin to understand the importance of integrating knowledge across disciplines, the faculties of the departments offering these courses will develop other common elements, questions or themes to be considered in these courses. These courses challenge students to ask the question: "What does it mean to be human?" These courses will, when considered collectively, familiarize students with central concepts and texts of the Catholic intellectual tradition.

The CAP program will contain two writing courses, a first-year writing seminar and a second-year writing seminar. As part of the First-Year Humanities component of the CAP, students will enroll in either a first-year writing seminar or a first-year honors writing seminar. Many students will begin by taking the first-year writing seminar. This course focuses on personal and academic literacies, with an emphasis on expository writing and the development of college-level reading, writing, research and critical thinking skills as well as a process approach to writing. With its focus on personal and academic literacies, the firstyear writing seminar addresses directly the question, "What does it mean to be human?" as it explores the relationship between reading/ writing (or literacy) and being human. Based on placement criteria, some students will qualify to enroll in the first-year honors writing seminar. This course will also engage the question of what it means to be human in a manner fitting the context of a themed writing seminar (see description of Second-Year Writing Seminar below). Together, then, the first-year writing seminar and the first-year honors writing seminar will provide all incoming first-year students with a course in writing that supports multiple Habits of Inquiry and Reflection (HIR) outcomes and explores the question, "What does it mean to be human?" Students who complete the first-year honors writing seminar will not take the second-year writing seminar.

## Second-Year Writing

The Second-Year Writing Seminar, taken by students who completed the first-year writing seminar, is a variable theme composition course focused on academic discourse, research and argumentation. Students will further develop their reading, writing, research and critical thinking abilities as they come into contact with the ways that various disciplines (at least three) engage a particular theme. In addition, by studying scholarship across disciplines students will develop rhetorical awareness about the arguments, approaches and conventions of these disciplines. A focus throughout the course will be on enabling students to take a process approach to making effective arguments in a complex academic context.

## Oral Communication

To enhance students' ability to communicate effectively, all students will complete three hours in Oral Communication, normally in their first or second year of study. The Oral Communication foundational course will focus on the concepts of dialogue and debate, with the goals of: engaging in constructive mutual dialogue in conversations and meetings; developing the ability to articulate, analyze and defend a position in a public forum; understanding the differences between dialogue and
debate; and understanding relative advantages and disadvantages of each mode of communication. With its focus on dialogue and debate, the course will assist students in the development of the skills necessary for learning, living and working in communities. By developing the ability to engage in conversation that advances understanding, students will be better able to interact and collaborate with persons from diverse backgrounds and perspectives.

## Mathematics

To enhance quantitative reasoning skills, all students will complete three hours in Mathematics. The particular course will vary based on the students' major and background in mathematics. The mathematics courses are most closely related to the Habits of Inquiry and Reflection (HIR) outcomes related to scholarship, practical wisdom and critical evaluation of our times.

## Arts

To ensure that all students acquire a basic understanding of the arts as significant manifestations of diverse cultural, intellectual, aesthetic and personal experiences, all students will complete a three-hour component in the Arts. The Arts component may include courses from the Departments of Music, Art and Design, English or the Theatre program. Courses will assist students to develop skills and acquire experiences that enable them to understand, reflect upon and value the creative process within the context of the arts. The requirement may be satisfied by taking studio and performance courses as well as historical studies courses. Students may satisfy the three-hour requirement with one three-hour course or a combination of one- and two-hour courses. Given the diversity of the Arts, the specific learning outcomes addressed will vary across courses.

## Social Science

Essential to life in the $21^{\text {st }}$ century is an understanding of the relationship between individuals, groups and institutions. All students will complete three hours in the Social Sciences. The Social Science course will be a theme-based course that varies across sections but shares common learning outcomes. The course will use social science methods and social theory to critically examine a human issue or problem from at least three social science disciplinary perspectives (anthropology, economics, political science, psychology or sociology). The course will emphasize outcomes related to scholarship, critical evaluation of our times and the diversity of the human world.

## Natural Science

An understanding of many significant issues confronting our world today requires a basic understanding of science. Students must take two three-hour lecture courses in the physical or life sciences or computer science, at least one of which should be accompanied by a corresponding one-hour laboratory section. Lecture sections are either a prerequisite or corequisite to their correlative laboratory sections. Students will be exposed to at least two of the five disciplines: biology, chemistry, computer science, geology and physics. The Science component will actively challenge students to explore the scientific dimensions of complex, controversial or unresolved problems facing human society. It furthers the development of the outcomes related to scholarship, practical wisdom and critical evaluation of our times by challenging students to achieve an enriched understanding of the scientific method by applying it to issues of broad public interest. The community outcome
will also be enhanced through the team-based learning that occurs in the laboratory setting.

## Crossing Boundaries

The Crossing Boundaries component includes four courses (Faith Traditions, Practical Ethical Action, Inquiry and Integrative) that challenge students and faculty to link aspects of their own lives, majors and careers to a broader world within and outside academia. As a Catholic, Marianist comprehensive university, the University of Dayton is particularly wellsuited to develop curricular programs that forge these links and to offer extracurricular experiences to help students reflect on and understand these links. These courses focus on Faith Traditions, Practical Ethical Action, Inquiry and Integration. Collectively, these courses will strengthen the Catholic intellectual tradition in significant ways. This tradition in Catholic and Marianist higher education emphasizes the centrality of theology and philosophy, the importance of linking faith and reason, the integration of knowledge and the application of that knowledge to personal and social situations in the world today. Collectively, these courses will build on our strengths as a comprehensive Marianist university by engaging students and faculty across disciplinary lines and across academic units in order to see the relationship between the practical and the theoretical and to understand issues in a more integrative and holistic perspective. The student learning outcomes related to faith traditions, diversity, practical wisdom, critical evaluation of our times and vocation are particularly important for this set of courses.

Faith Traditions: The course on Faith Traditions is designed to encourage students to better understand, reflect on and place their own religious beliefs and experiences in a broader historical or cultural context. Courses satisfying the Faith Traditions component may be offered by any department provided that the courses incorporate some of the ideas from the introductory religious studies course and that they develop students' ability to examine their own faith commitments and to participate in dialogue with other faith traditions. The courses will: place religious traditions within their historical context; examine their philosophical foundations or the internal logic of religious thought, language and practice; compare religious traditions by examining their philosophical foundations, historical origins, artistic expressions, canonical texts and/or storied practices; or examine a religious tradition with which students are unfamiliar (e.g., a non-Christian tradition).

Practical Ethical Action: The Practical Ethical Action course is designed to cross the boundaries between the theoretical and the practical, and between the liberal arts and the applied fields. It offers the opportunity for faculty to cross the boundaries of their own disciplines to dialogue with faculty from other disciplines in ways that enrich their own understanding of important ethical issues and that enrich the courses they offer to students. Courses satisfying the practical ethical action component may be offered by any department provided that the courses engage students in thick description and analysis of ethical issues using concepts central to the study of ethics such as justice, rights, natural law, conscience or forgiveness, and that the courses provide sufficient normative content that allow students to reflect on value judgments and ethical reasoning and practical application. These courses will draw from relevant interdisciplinary knowledge as well as an understanding of the professions and social institutions.

Inquiry: The Inquiry component of the CAP requires that students select a course outside their own division to better understand the ways of knowing found in other academic disciplines. The Inquiry course provides an opportunity for all academic units, particularly the professional schools, to develop courses for the CAP. The Inquiry course will serve as an introduction to key methods of investigation, interpretation, exploration and ways of knowing. Taking a course outside one's major can broaden awareness of differing philosophies or analytic approaches, and it can offer new ways of conceiving of and resolving problems. The Inquiry course will provide students an opportunity to contrast inquiry in their own field with a different discipline's methods of inquiry. Some modes of inquiry engage experimentation and creative practice, other modes employ cognitive systems or analytical frameworks. Still other modes of inquiry investigate the complexity of systems, languages or cultures. Exposure to modes of inquiry not typically used in the students' major prepares them to think critically about ways of acquiring, evaluating and applying knowledge claims within their own discipline. For this reason, the Inquiry course will include a reflective and comparative component in which a student examines methods in his or her major field with those in the field of the Inquiry course.

Integration: The integration of knowledge has a long-standing position within the Catholic intellectual tradition and an increasingly important role in understanding contemporary social issues and problems. The Integrative course in the CAP requires that faculty develop, and students select, a course that transcends disciplinary boundaries and explicitly examines significant social issues or problems in a multidisciplinary or interdisciplinary framework. Collaborative, interdisciplinary efforts by faculty are encouraged but not required for this course. Courses offered by one faculty member that bring together different disciplinary perspectives to enhance students' understanding of significant issues may also be developed.

## Major Capstone

The ability of students to integrate the knowledge acquired in their undergraduate career, both within the major and in the Common Academic Program, is greatly enhanced by a capstone experience. All students will have a capstone course or experience in their major. The Capstone will provide students the opportunity to engage, integrate, practice and demonstrate the knowledge and skills they have developed in their major courses and which reflect learning outcomes associated with the Habits of Inquiry and Reflection (HIR). The Capstone will provide students the opportunity to engage in the scholarship, activity and/or practice of their major field and further the students' understanding of their chosen vocation, career or profession. Students will present their work in a forum appropriate to their major. This course or experience will be designed by faculty in each major. It may, or may not, be assigned credit hours.

## Advanced Religious Studies

As a Catholic and Marianist institution of higher education, the University regards religious studies and philosophy as having special roles in the undergraduate curriculum and in the attainment of University-wide learning outcomes. Students are expected to deepen their knowledge of the religious and philosophical traditions that inform the Catholic and Marianist education. Advanced study in these areas, especially when conducted through interdisciplinary courses, also assists students
in constructing integrated knowledge of the central human questions examined in a liberal education. The fields of philosophy and religious studies, together with historical study, are indispensable for students' education in the Catholic intellectual tradition. Students will take courses beyond the 100 level in these fields to further their understanding of the resources that the Catholic intellectual tradition offers for their own personal, professional and civic lives, and also for the just transformation of the social world. By requiring every student to take six hours of courses in the areas of religious studies or philosophy and three hours in history beyond the 100 level, the University expects students to engage in liberal learning that connects theory and practice, and to draw upon the resources of the Catholic intellectual tradition as they consider how to lead wise and ethical lives of leadership and service.

Students will have flexibility in fulfilling these requirements. First, these courses will frequently focus on issues related to, and satisfy the criteria for, the Faith Traditions, Practical Ethical Action, Inquiry and Integrative components of the CAP. Second, the criteria for these requirements are disciplinary-based in the fields of religious, philosophical and historical studies, and therefore not limited to specific departments. Courses offered outside the Departments of Philosophy, Religious Studies and History may count towards the Advanced Religious, Philosophical and Historical Studies requirements if the courses draw extensively from those disciplinary perspectives and address in significant ways aspects of the Catholic intellectual tradition. Courses satisfying the Advanced Religious Studies component might: examine the central beliefs, texts or practices of one or more religious traditions or movements; examine ethics as a central feature of a religious tradition including the use of Catholic social teaching as a resource; or examine cultural expressions of religious identity or tradition as the central focus of theological or religious studies. Courses satisfying the Advanced Philosophical Studies component might evaluate competing solutions to theoretical or ethical options in the present day, or draw on the philosophical resources of the Catholic intellectual tradition to address the challenges of their times. Courses satisfying the Advanced Historical Studies component might engage students in the study and analysis of primary materials to further develop students' historical sensibilities in a way that illuminates the historical dimensions of Habits of Inquiry and Reflection (HIR) learning outcomes. The course could examine a historical topic drawing on the work of historians to show how interpretations of the past may change over time.

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## Diversity and Social Justice

As a Marianist university, the University has a special concern for the poor and marginalized and a responsibility to promote the dignity, rights and responsibilities of all persons and peoples. The University curriculum is responsible for contributing to this effort and does so throughout the Common Academic Program, but in a more focused way through a Diversity and Social Justice component. Every student will investigate human diversity issues within a sustained academic context by taking at least three credit hours of course work that have a central focus on one or more dimensions of diversity that are relevant to social justice. The course must have a central focus on one or more dimensions of human diversity on the basis of which systems, institutions or practices that obstruct social justice have functioned. The dimensions may include, but are not limited to, race, gender, socioeconomic class and sexual orientation. Courses may address diversity within the United States, in a global context, or both. Since the course uses a social justice framework, it will consider constructive responses to such injustice.

Courses approved to satisfy the Diversity and Social Justice component will build on earlier CAP courses addressing diversity including the FirstYear Humanities courses, the Second-Year Writing Seminar, and the Social Science, Arts, Natural Science and Oral Communication courses. The Diversity and Social Justice component may not double count with these courses, but may double count with courses taken to satisfy other CAP components or courses taken in the student's major.

## Approved Courses

Use the links below or scroll down to view all CAP approved courses. This catalog listing is accurate as of August 1, 2015. DegreeWorks should be consulted for the most up-to-date information since courses that satisfy CAP requirements can vary by year of admission or according to a student's major. DegreeWorks can be accessed through Porches (https:// porches.udayton.edu/cp/home/displaylogin).

- First-Year Humanities (p. 95)
- Second-Year Writing Seminar (p. 95)
- Oral Communication (p. 95)
- Mathematics (p. 95)
- Social Science (p. 95)
- Arts (p. 95)
- Natural Sciences (p. 96)
- Crossing Boundaries - Faith Traditions (p. 96)
- Crossing Boundaries - Practical Ethical Action (p. 97)
- Crossing Boundaries - Inquiry (p. 97)
- Crossing Boundaries - Integrative (p. 98)
- Advanced Religious Studies (p. 99)
- Advanced Philosophical Studies (p. 99)
- Advanced Historical Studies (p. 100)
- Diversity and Social Justice (p. 100)
- Major Capstone Course or Experience (p. 102)


## First-Year Humanities

| ASI 110 | The Roots and Development of Western Culture in <br> a Global Context | 7 |
| :--- | :--- | :--- |
| ASI 120 | The Development of Western Culture in a Global <br> Context | 8 |
| ENG 100 | Writing Seminar I | 3 |
| ENG 100A | Writing Seminar 1A | 2 |
| ENG 100B | Writing Seminar 1B | 2 |
| ENG 200H | Writing Seminar II | 3 |
| HST 103 | The West \& the World | 3 |
| PHL 103 | Introduction to Philosophy | 3 |
| REL 103 | Introduction to Religious and Theological Studies | 3 |

Second-Year Writing Seminar
ENG 200 Writing Seminar II 3

Oral Communication
CMM 100 Principles of Oral Communication 3

## Mathematics

| MTH 114 | Contemporary Mathematics | 3 |
| :--- | :--- | :--- |
| MTH 129 | Calculus for Business | 3 |
| MTH 137 | Calculus I with Review | 4 |
| MTH 148 | Introductory Calculus I | 3 |
| MTH 168 | Analytic Geometry \& Calculus I | 4 |
| MTH 205 | Mathematical Concepts II | 3 |
| MTH 207 | Introduction to Statistics | 3 |

Social Sciences
SSC 200 Social Science Integrated 3

Arts

| EDT 417 | Theatre in Education | 3 |
| :--- | :--- | :--- |
| EGR 308 | Engineering for the Performing Arts | 3 |
| ENG 280 | Introduction to Creative Writing | 3 |
| ENG 302 | Survey of Later British Literature | 3 |
| ENG 331 | Studies in Film | 3 |
| MUS 191 | Voice Class | 2 |


| MUS 195 | Beginning Guitar Class I | 1 |
| :---: | :---: | :---: |
| MUS 196 | Group Piano I | 1 |
| MUS 205 | Music, Technology and Culture | 3 |
| MUS 223 | Introduction to Music Technology | 3 |
| MUS 232 | Integrating Music into the Curriculum | 3 |
| MUS 295 | Beginning Guitar Class II | 1 |
| MUS 303 | Introduction to Musics of the World | 3 |
| MUS 309 | Opera as Philosophy, Music, Drama, and Film | 3 |
| MUS 323 | Experiments in Digital Sound and Media | 3 |
| MUS 327 | Music in Film | 3 |
| MUS 362 | Music and Buddhism in Southeast Asia | 3 |
| MUS 363 | Music and Faith on Stage | 3 |
| MUS 365 | Music In Society | 3 |
| MUS 390 | Ensembles | 0.5-1 |
| MUS 491 | University Orchestra | 1 |
| MUS 492 | Symphonic Wind Ensemble | 1 |
| MUS 493 | University Chorale | 1 |
| MUS 494 | Dayton Jazz Ensemble | 1 |
| THR 105 | Theatre Appreciation | 3 |
| THR 300 | Performance Practicum | 1-3 |
| THR 302 | Stage Makeup | 2 |
| THR 303 | Scenic Painting | 3 |
| THR 304 | Movement for Everyone | 3 |
| THR 308 | Engineering for the Performing Arts | 3 |
| THR 310 | Acting for Everyone | 3 |
| THR 311 | Design Concepts | 3 |
| THR 314 | Costumes \& Textiles | 3 |
| THR 320 | Voice \& Movement | 3 |
| THR 323 | Ensemble Acting | 3 |
| THR 341 | Modern Dance | 2 |
| THR 344 | Musical \& Opera Workshop | 1 |
| THR 345 | Devising Performance | 3 |
| THR 352 | Applied Theatre | 3 |
| THR 354 | Kinetic Forms | 3 |
| THR 361 | Jazz Dance | 1 |
| THR 371 | Ballet | 2 |
| THR 372 | Dance \& Physical Theatre Styles | 1-3 |
| THR 417 | Theatre in Education | 3 |
| VAE 232 | Integrating Visual Culture | 3 |
| VAF 104 | Foundation Drawing | 3 |
| VAF 203 | Drawing Through the Process | 3 |
| VAF 225 | Painting for Non-Majors | 3 |
| VAF 240 | Ceramics I | 3 |
| VAF 242 | Ceramics II: Wheel Throwing | 3 |
| VAH 101 | Introduction to the Visual Arts | 3 |
| VAH 129 | Foundations in Art History | 3 |
| VAH 201 | Survey of Art I | 3 |
| VAH 202 | Survey of Art II | 3 |
| VAH 203 | Survey of Art III | 3 |
| VAP 100 | Darkroom Photography for Non-Majors | 3 |
| VAP 101 | Foundation Photography | 3 |
| VAP 200 | Digital Photography for Non-Majors | 3 |


| VAR 303 | Scenic Painting | 3 |
| :--- | :--- | :--- |
| VAR 314 | Costumes \& Textiles | 3 |

## Natural Sciences

| BIO 101 | Life, Environment, and Society | 3 |
| :--- | :--- | :--- |
| BIO 101L | Life, Environment, and Society Laboratory | 1 |
| BIO 151 | Concepts of Biology I: Cellular \& Molecular Biology | 3 |
| BIO 151L |  <br> Molecular Biology | 1 |
| BIO 152 | Concepts of Biology II: Evolution \& Ecology | 3 |
| BIO 152L | Concepts of Biology Laboratory II: Evolution \& | 1 |


| BIO 152L | Concepts of Biology Laboratory II: Evolution \& $\quad 1$ |
| :--- | :--- |
|  | Ecology |

BIO 395 Global Environmental Biology 3
CHM 123 General Chemistry 3
CHM 123L General Chemistry Laboratory 1
CHM 200 Chemistry \& Society 3
CPS 149 Creative Media Applications 3
GEO 103 Principles of Geography 3
GEO 109 Earth, Environment, and Society 3
GEO 109L Earth, Environment, and Society Lab 1
GEO 115 Physical Geology 3
GEO 115L Physical Geology Laboratory 1
GEO 116 Geological History of the Earth 3
GEO 116L Geological History of the Earth Laboratory 1
GEO 204 Geology for Teachers 4
GEO 208 Environmental Geology 3
GEO 208L Environmental Geology Laboratory 1
GEO 218 Geological Site Investigation for Engineers 3
PHY 108 Physical Science of Light \& Color 3
PHY 201 College Physics I 3
PHY 201L College Physics Laboratory I 1
PHY 206 General Physics I-Mechanics 3
PHY 210L General Physics Laboratory I 1
SCI 190 The Physical Universe 3
SCI 190L The Physical Universe Laboratory 1
SCI 210 The Dynamic Earth 3
SCI 210L The Dynamic Earth Laboratory 1
Crossing Boundaries - Faith Traditions
CHI 345 Chinese Civilization and Culture 3
CMM 357 Religious Rhetoric in American Culture 3
CMM 381 Faith and Free Expression 3
HST 260 History of Pre-Modern East Asia 3
HST 305 Early Medieval Europe 3
HST 306 High and Late Medieval Europe 3
HST 307 Renaissance \& Reformation 3
HST 310 History of Spain 3
HST 315 Postwar Europe 1945-1990 3
HST 331 India: Traditions and Encounters 3
MUS 301 Music History \& Literature I 3
MUS 352 Understanding Sacred Music \& Worship in the 3
Local Church

| MUS 354 | Gospel Music: Instrument of Social Change | 3 |
| :--- | :--- | :--- |
| MUS 362 | Music and Buddhism in Southeast Asia | 3 |
| MUS 363 | Music and Faith on Stage | 3 |
| PHL 311 | Philosophy of Religion | 3 |
| PHL 347 | Japanese Philosophy | 3 |
| PHL 351 | Jewish, Christian, and Islamic Philosophy | 3 |
| PHL 352 | Modern Philosophy | 3 |
| PHL 355 | Asian Philosophy | 3 |
| PHL 356 | Christian Philosophy | 3 |
| PHL 360 | Existentialism | 3 |
| PHL 365 | Islamic Philosophy \& Culture | 3 |
| REL 207 | Faith Traditions: Judaism | 3 |
| REL 208 | Faith Traditions: Islamic Religious Traditions | 3 |
| REL 213 | The New Testament and Related Ancient Literature | 3 |
| REL 214 | Magic, Medicine, or Miracles: Disability in the | 3 |
| REL 227 | Ancient World, the Bible, and Today |  |
| REL 228 | Faith Traditions: Beliefs in Dialogue | 3 |
| REL 244 | Faith Traditions: Historical Encounters | 3 |
| REL 256 | Faith Traditions: Celebrating and Living the | 3 |
| REL 261 | Eucharist | Faith Traditions: Prayer |
| REL 266 | Faith Traditions: Human Rights | 3 |
| REL 270 | Faith Traditions: Moral Reasoning | 3 |
| REL 277 | Popular Culture, American Religions | 3 |
| REL 352 | Faith Traditions: Women and Gender | 3 |
| VAH 450 | Understanding Sacred Music \& Worship in the <br> Local Church | 3 |
|  | Italian Renaissance Art | 3 |

## Crossing Boundaries - Practical Ethical Action

| ANT 340 | Place, Culture, and Social Justice | 3 |
| :--- | :--- | :--- |
| CJS 303 | Theory and Practice of Corrections | 3 |
| CJS 336 | Comparative Criminal Justice Systems | 3 |
| CMM 337 | Journalism Ethics and Values | 3 |
| CMM 354 | Political Campaign Communication | 3 |
| CMM 372 | Communication for Health Professionals | 3 |
| CMM 385 | Dialogue, Power, and Diversity | 3 |
| CMM 420 | Communication \& Conflict Management | 3 |
| EDT 305 | Philosophy and History of American Education | 3 |
| ENG 342 | Literature and the Environment | 3 |
| HRS 200 | Introduction to Human Rights | 3 |
| MUS 304 | The Practice of American Music | 3 |
| PHL 312 | Ethics | 3 |
| PHL 313 | Business Ethics | 3 |
| PHL 314 | Philosophy of Law | 3 |
| PHL 315 | Medical Ethics | 3 |
| PHL 316 | Engineering Ethics | 3 |
| PHL 317 | Ethics of War | 3 |
| PHL 319 | Information Ethics | 3 |
| PHL 321 | Environmental Ethics | 3 |
| PHL 374 | Philosophy and the City | 3 |
| PHL 377 | Philosophy and Mass Media | 3 |


| PHL 381 | Sexual Ethics | 3 |
| :--- | :--- | :--- |
| PHL 383 | Ethics of Scientific Research | 3 |
| POL 341 | Power, Gender \& Performance | 3 |
| POL 354 | Political Campaign Communication | 3 |
| POL 371 | Environmental Policy | 3 |
| REL 357 | Peacebuilding | 3 |
| REL 363 | Faith \& Justice | 3 |
| REL 367 | Christian Ethics \& Health Care Issues | 3 |
| REL 368 | Christian Ethics \& the Business World | 3 |
| REL 369 | Christian Ethics and Engineering | 3 |
| SEE 402 | Sustainability Research II | 3 |
| SOC 331 | Marriages \& Families | 3 |
| SOC 333 | Sociology of Sexualities | 3 |
| SOC 350 | Art and Social Practice | 3 |
| SOC 352 | Community | 3 |
| SWK 331 | Death, Dying and Suicide | 3 |
| THR 352 | Applied Theatre | 3 |
| THR 380 | Power, Gender \& Performance | 3 |
| VAR 350 | Art and Social Practice | 3 |

## Crossing Boundaries - Inquiry

| ACC 200 | Introduction to Accounting | 3 |
| :--- | :--- | :--- |
| ANT 150 | Cultural Anthropology | 3 |
| ANT 306 | Culture \& Power | 3 |
| ANT 315 | Language \& Culture | 3 |
| ANT 449 | Anthropological Field Work | 3 |
| CMM 356 | Argumentation and Advocacy | 3 |
| CMM 417 | Introduction to Audience Research | 3 |
| EDT 322 | Perspectives on Education and Social Justice | 3 |
| ENG 318 | Detective Fiction | 3 |
| ENG 336 | Gender and Fiction | 3 |
| ENG 359 | Discourse Analysis | 3 |
| ENG 372 | Business and Professional Writing | 3 |
| ENG 373 | Writing in the Health Professions | 3 |
| ENG 375 | Writing for the Web | 3 |
| GEO 103 | Principles of Geography | 3 |
| GEO 204 | Geology for Teachers | 4 |
| GEO 208 | Environmental Geology | 3 |
| GEO 218 | Geological Site Investigation for Engineers | 3 |
| GEO 450 | Applied Geographic Information Systems | 4 |
| HSS 206 | Fundamentals of Human Anatomy and Physiology | 3 |
| HSS 384 | Food Justice | 3 |
| HST 220 | Survey of Ancient History | 3 |
| HST 251 | American History to 1865 | 3 |
| HST 252 | American History Since 1865 | 3 |
| HST 299 | Historical Background to Contemporary Issues | 3 |
| HST 304 | Ancient History \& Modern Ideology | 3 |
| HST 328 | Tolstoy's Russia | 3 |
| HST 332 | History of Modern East Asia | 3 |
| HST 346 | History of American Aviation | 3 |
| HST 357 | Modern Latin America | 3 |
| HST 358 | Social \& Cultural History of Latin America | 3 |
|  |  | 3 |


| HST 363 | The Wealth of Nations: A History of Economic Thought | 3 |
| :---: | :---: | :---: |
| HST 365 | American Films as History | 3 |
| HST 368 | The Soviet Experiment: From Lenin to Putin | 3 |
| HST 375 | History of US Foreign Relations Since 1750 | 3 |
| HST 376 | Social \& Cultural History of the United States | 3 |
| HST 383 | History of the Caribbean | 3 |
| MGT 229 | Introduction to Entrepreneurship | 3 |
| MIS 302 | Systems Thinking in Organizations | 3 |
| MKT 300 | Survey of Marketing | 3 |
| MTH 207 | Introduction to Statistics | 3 |
| MUS 232 | Integrating Music into the Curriculum | 3 |
| MUS 327 | Music in Film | 3 |
| PHL 301 | Practical Logic | 3 |
| PHL 302 | Symbolic Logic | 3 |
| PHL 304 | Philosophy of Human Nature | 3 |
| PHL 335 | Philosophy of Sustainability | 3 |
| PHL 361 | Philosophies of Change in U.S. History | 3 |
| PHL 378 | The Self Concept: Reality or Social Construct? | 3 |
| PHY 232 | The Physics of Waves | 3 |
| REL 310 | The Pentateuch | 3 |
| REL 311 | The Prophets | 3 |
| REL 315 | The Gospels | 3 |
| REL 318 | Studies in Paul | 3 |
| REL 358 | Liberation Theologies | 3 |
| REL 374 | Visual and Material Cultures of Religion | 3 |
| REL 375 | Religion \& Science | 3 |
| REL 378 | Religion, Society and Global Cinema | 3 |
| SOC 310 | Perspectives on Education and Social Justice | 3 |
| SOC 384 | Food Justice | 3 |
| THR 105 | Theatre Appreciation | 3 |
| THR 304 | Movement for Everyone | 3 |
| THR 310 | Acting for Everyone | 3 |
| VAE 232 | Integrating Visual Culture | 3 |
| VAF 230 | Anatomy Drawing for Non-Majors | 3 |
| VAP 101 | Foundation Photography | 3 |

## Crossing Boundaries - Integrative

| ANT 336 | Topics in Medical Anthropology | 3 |
| :--- | :--- | :--- |
| ANT 350 | Anthropology of Tourism | 3 |
| ANT 352 | Cultures of Latin America | 3 |
| ANT 360 | Making of Modern South Asia | 3 |
| ASI 320 | Cities \& Energy | 3 |
| ASI 495 | Integrative Capstone Project, India Program | 3 |
| CMM 345 | Classic American Film | 3 |
| CMM 352 | Persuasion | 3 |
| CMM 355 | Rhetoric of Social Movements | 3 |
| CMM 359 | The Road to Hell: The Apocalypse in Classical and | 3 |
|  | Contemporary Forms |  |
| CMM 410 | Family Communication | 3 |
| CMM 411 | Health Communication | 3 |
| CMM 441 | Media Processes \& Effects | 3 |


| CMM 447 | Children and Mass Media | 3 |
| :---: | :---: | :---: |
| CMM 471 | Communication and Digital Literacy | 3 |
| CMS 316 | Intercultural Communication | 3 |
| CPS 450 | Design and Analysis of Algorithms | 3 |
| EDT 303 | School, Self and Society | 3 |
| EDT 340 | Educating Diverse Student Populations in Inclusive Settings | 3 |
| EDT 417 | Theatre in Education | 3 |
| EDT 466 | TESOL Methods for Teaching English Language Learners | 3 |
| EGR 308 | Engineering for the Performing Arts | 3 |
| ENG 307 | Varieties of English | 3 |
| ENG 313 | Social Justice \& Dramatic Literature | 3 |
| ENG 321 | Reading Popular Music | 3 |
| ENG 340 | US Prison Literature and Culture | 3 |
| ENG 349 | Children's Literature and Culture | 3 |
| ENG 360 | US Latina/Latino Literature | 3 |
| ENG 366 | Health Literacy and Social Justice | 3 |
| ENG 392 | Writing for Grants and Non-Profits | 3 |
| ENG 466 | TESOL Methods for Teaching English Language Learners | 3 |
| HSS 275 | History of Physical Education \& Sport | 3 |
| HSS 295 | Nutrition \& Health | 3 |
| HSS 360 | Sport and Bodies | 3 |
| HST 210 | Making of Modern South Asia | 3 |
| HST 337 | History of Africa - 19th Century to the Present | 3 |
| HST 342 | Environmental History | 3 |
| HST 343 | History of Civil Engineering | 3 |
| HST 355 | American Urban History | 3 |
| HST 371 | Labor and Working Class History | 3 |
| HST 397 | History of Black Women | 3 |
| HST 398 | African American History before 1877 | 3 |
| INS 336 | United Nations System: Theory and Practice | 3 |
| MGT 490 | Managing the Enterprise | 3 |
| MKT 361 | Christian Ethics and Meaningful Marketing | 3 |
| MUS 205 | Music, Technology and Culture | 3 |
| MUS 302 | Music History \& Literature II | 3 |
| MUS 309 | Opera as Philosophy, Music, Drama, and Film | 3 |
| MUS 315 | Music and Gender | 3 |
| MUS 323 | Experiments in Digital Sound and Media | 3 |
| PHL 320 | Philosophy of Art | 3 |
| PHL 322 | Philosophy and Theatre/Dance: Performing Human Identity | 3 |
| PHL 324 | Philosophy \& Film | 3 |
| PHL 325 | Philosophy of Music | 3 |
| POL 336 | United Nations System: Theory and Practice | 3 |
| POL 340 | Gender, Women's Rights and Global Politics | 3 |
| POL 381 | Film \& Politics | 3 |
| PSY 363 | Abnormal Psychology | 3 |
| REL 322 | Latino/Latina Religious Experiences | 3 |
| REL 323 | History of Early Christianity | 3 |
| REL 343 | Theology of Humanity, Sexuality, and Marriage | 3 |


| REL 359 | The Road to Hell: The Apocalypse in Classical and Contemporary Forms | 3 |
| :---: | :---: | :---: |
| REL 361 | Christian Ethics and Meaningful Marketing | 3 |
| REL 376 | Theology \& the Social Sciences | 3 |
| REL 379 | Sustaining Art and Faith | 3 |
| REL 440 | The Church | 3 |
| REL 443 | The Sacraments | 3 |
| REL 457 | Living as Marianist Student Communities | 3 |
| REL 475 | Theology of Inculturation | 3 |
| SEE 250 | Introduction to Sustainability, Energy \& the Environment | 3 |
| SEE 320 | Cities \& Energy | 3 |
| SEE 390 | Special Topics in Sustainability, Energy and the Environment | 1-3 |
| SEE 401 | Sustainability Research I | 3 |
| SEE 490 | Experiential Study in Sustainability, Energy and the Environment | -3 |
| SOC 328 | Racial \& Ethnic Relations | 3 |
| SOC 330 | Perspectives on Aging | 3 |
| SOC 332 | Gender and Society | 3 |
| SOC 339 | Social Inequality | 3 |
| SOC 353 | Internet Community | 3 |
| SOC 360 | Sport and Bodies | 3 |
| SOC 371 | Sociology of Human Rights | 3 |
| SOC 394 | Popular Culture | 3 |
| SWK 307 | Mental Health Services | 3 |
| SWK 330 | Perspectives on Aging | 3 |
| THR 250 | Diversity in Creative \& Performing Arts | 3 |
| THR 308 | Engineering for the Performing Arts | 3 |
| THR 313 | Social Justice \& Dramatic Literature | 3 |
| THR 322 | Philosophy and Theatre/Dance: Performing Human Identity | 3 |
| THR 417 | Theatre in Education | 3 |
| VAH 310 | History of Art and Activism | 3 |
| VAH 320 | Latin American Art | 3 |
| VAH 330 | Arts of Asia | 3 |
| VAH 483 | PostColonial and Global Art Histories | 3 |
| VAR 250 | Diversity in Creative \& Performing Arts | 3 |
| VAR 330 | Comparative Visual Culture in Film | 3 |
| VAR 379 | Sustaining Art and Faith | 3 |
| WGS 250 | Introduction to Women's and Gender Studies | 3 |

## Advanced Religious Studies

| CMM 357 | Religious Rhetoric in American Culture | 3 |
| :--- | :--- | :---: |
| CMM 359 | The Road to Hell: The Apocalypse in Classical and <br> Contemporary Forms | 3 |
| MUS 301 | Music History \& Literature I | 3 |
| MUS 352 | Understanding Sacred Music \& Worship in the <br> Local Church | 3 |
| MUS 363 | Music and Faith on Stage | 3 |
| REL 310 | The Pentateuch | 3 |
| REL 311 | The Prophets | 3 |
| REL 315 | The Gospels | 3 |


| REL 318 | Studies in Paul | 3 |
| :---: | :---: | :---: |
| REL 322 | Latino/Latina Religious Experiences | 3 |
| REL 323 | History of Early Christianity | 3 |
| REL 328 | United States Catholic Experience | 3 |
| REL 329 | African-American Religion | 3 |
| REL 343 | Theology of Humanity, Sexuality, and Marriage | 3 |
| REL 352 | Understanding Sacred Music \& Worship in the Local Church | 3 |
| REL 357 | Peacebuilding | 3 |
| REL 358 | Liberation Theologies | 3 |
| REL 359 | The Road to Hell: The Apocalypse in Classical and Contemporary Forms | 3 |
| REL 363 | Faith \& Justice | 3 |
| REL 367 | Christian Ethics \& Health Care Issues | 3 |
| REL 368 | Christian Ethics \& the Business World | 3 |
| REL 369 | Christian Ethics and Engineering | 3 |
| REL 374 | Visual and Material Cultures of Religion | 3 |
| REL 375 | Religion \& Science | 3 |
| REL 376 | Theology \& the Social Sciences | 3 |
| REL 378 | Religion, Society and Global Cinema | 3 |
| REL 379 | Sustaining Art and Faith | 3 |
| REL 408 | Islam in the Modern World | 3 |
| REL 440 | The Church | 3 |
| REL 441 | Theology of Mary | 3 |
| REL 443 | The Sacraments | 3 |
| REL 457 | Living as Marianist Student Communities | 3 |
| REL 475 | Theology of Inculturation | 3 |
| VAH 450 | Italian Renaissance Art | 3 |
| VAR 379 | Sustaining Art and Faith | 3 |

## Advanced Philosophical Studies

CMM 337 Journalism Ethics and Values 3
EDT 305 Philosophy and History of American Education 3
PHL 301 Practical Logic 3
PHL 304 Philosophy of Human Nature 3
PHL 307 Philosophy and Feminist Thought 3
PHL 310 Social Philosophy 3
PHL 311 Philosophy of Religion 3
PHL 312 Ethics 3
PHL 313 Business Ethics 3
PHL 314 Philosophy of Law 3
PHL 315 Medical Ethics 3
PHL 316 Engineering Ethics 3
PHL 317 Ethics of War 3
PHL 319 Information Ethics 3
PHL $320 \quad$ Philosophy of Art 3
PHL 321 Environmental Ethics 3

PHL 322 Philosophy and Theatre/Dance: Performing 3 Human Identity
PHL $324 \quad$ Philosophy \& Film 3
PHL $325 \quad$ Philosophy of Music 3

| PHL 341 | Hip Hop and Philosophy | 3 |
| :--- | :--- | :--- |
| PHL 347 | Japanese Philosophy | 3 |
| PHL 350 | Classical Greek Philosophy | 3 |
| PHL 351 | Jewish, Christian, and Islamic Philosophy | 3 |
| PHL 352 | Modern Philosophy | 3 |
| PHL 355 | Asian Philosophy | 3 |
| PHL 356 | Christian Philosophy | 3 |
| PHL 358 | Marxist Philosophy | 3 |
| PHL 360 | Existentialism | 3 |
| PHL 361 | Philosophies of Change in U.S. History | 3 |
| PHL 363 | African Philosophy | 3 |
| PHL 364 | Race, Gender and Philosophy | 3 |
| PHL 365 | Islamic Philosophy \& Culture | 3 |
| PHL 370 | Political Philosophy | 3 |
| PHL 371 | Philosophy \& Human Rights | 3 |
| PHL 374 | Philosophy and the City | 3 |
| PHL 377 | Philosophy and Mass Media | 3 |
| PHL 378 | The Self Concept: Reality or Social Construct? | 3 |
| PHL 379 | Latin American Philosophy | 3 |
| PHL 381 | Sexual Ethics | 3 |
| PHL 382 | Culture, Modernization, and Multiple Modernities | 3 |
| PHL 383 | Ethics of Scientific Research | 3 |
| SEE 401 | Sustainability Research I | 3 |
| SEE 402 | Sustainability Research II | 3 |
| THR 322 | Philosophy and Theatre/Dance: Performing | 3 |
|  | Human Identity |  |

## Advanced Historical Studies

| ANT 360 | Making of Modern South Asia | 3 |
| :---: | :---: | :---: |
| ASI 120 | The Development of Western Culture in a Global Context | 8 |
| CMM 350 | History and Analysis of Propaganda | 3 |
| HSS 275 | History of Physical Education \& Sport | 3 |
| HST 210 | Making of Modern South Asia | 3 |
| HST 220 | Survey of Ancient History | 3 |
| HST 251 | American History to 1865 | 3 |
| HST 252 | American History Since 1865 | 3 |
| HST 260 | History of Pre-Modern East Asia | 3 |
| HST 280 | Making of the Modern Middle East | 3 |
| HST 299 | Historical Background to Contemporary Issues | 3 |
| HST 302 | Identity in Ancient Greece | 3 |
| HST 303 | Roman Imperial Rule | 3 |
| HST 304 | Ancient History \& Modern Ideology | 3 |
| HST 305 | Early Medieval Europe | 3 |
| HST 306 | High and Late Medieval Europe | 3 |
| HST 307 | Renaissance \& Reformation | 3 |
| HST 310 | History of Spain | 3 |
| HST 312 | Age of Democratic Revolutions | 3 |
| HST 314 | Modern Europe in Decline 1900-1945 | 3 |
| HST 315 | Postwar Europe 1945-1990 | 3 |
| HST 319 | The British Empire | 3 |
| HST 321 | Modern France | 3 |


| HST 328 | Tolstoy's Russia | 3 |
| :---: | :---: | :---: |
| HST 331 | India: Traditions and Encounters | 3 |
| HST 332 | History of Modern East Asia | 3 |
| HST 334 | History of the Palestinian-Israeli Conflict | 3 |
| HST 336 | History of Africa I: Pre-history to the 19th Century | 3 |
| HST 337 | History of Africa - 19th Century to the Present | 3 |
| HST 339 | Gandhi's India | 3 |
| HST 342 | Environmental History | 3 |
| HST 343 | History of Civil Engineering | 3 |
| HST 346 | History of American Aviation | 3 |
| HST 351 | American Gender \& Women's History | 3 |
| HST 355 | American Urban History | 3 |
| HST 357 | Modern Latin America | 3 |
| HST 358 | Social \& Cultural History of Latin America | 3 |
| HST 359 | History of American City Planning | 3 |
| HST 363 | The Wealth of Nations: A History of Economic Thought | 3 |
| HST 365 | American Films as History | 3 |
| HST 368 | The Soviet Experiment: From Lenin to Putin | 3 |
| HST 371 | Labor and Working Class History | 3 |
| HST 375 | History of US Foreign Relations Since 1750 | 3 |
| HST 376 | Social \& Cultural History of the United States | 3 |
| HST 378 | Immigration History | 3 |
| HST 379 | The History of Food | 3 |
| HST 382 | History of Mexico | 3 |
| HST 383 | History of the Caribbean | 3 |
| HST 386 | China in Revolution | 3 |
| HST 397 | History of Black Women | 3 |
| HST 398 | African American History before 1877 | 3 |
| MUS 302 | Music History \& Literature II | 3 |
| THR 425 | Theatre Theory \& History | 3 |
| VAH 320 | Latin American Art | 3 |
| VAH 483 | PostColonial and Global Art Histories | 3 |

## Diversity and Social Justice

| ANT 150 | Cultural Anthropology | 3 |
| :--- | :--- | :--- |
| ANT 306 | Culture \& Power | 3 |
| ANT 315 | Language \& Culture | 3 |
| ANT 336 | Topics in Medical Anthropology | 3 |
| ANT 340 | Place, Culture, and Social Justice | 3 |
| ANT 350 | Anthropology of Tourism | 3 |
| ANT 352 | Cultures of Latin America | 3 |
| ANT 360 | Making of Modern South Asia | 3 |
| ARA 315 | Modern Arabic Culture | 3 |
| ASI 320 | Cities \& Energy | 3 |
| CHI 345 | Chinese Civilization and Culture | 3 |
| CJS 303 | Theory and Practice of Corrections | 3 |
| CJS 336 | Comparative Criminal Justice Systems | 3 |
| CMM 355 | Rhetoric of Social Movements | 3 |
| CMM 385 | Dialogue, Power, and Diversity | 3 |
| CMM 464 | International Public Relations | 3 |
| CMS 316 | Intercultural Communication | 3 |


| CMS 415 | Gender and Communication | 3 |
| :---: | :---: | :---: |
| EDT 222 | Middle Childhood to Young Adult Development in a Diverse Society | 3 |
| EDT 322 | Perspectives on Education and Social Justice | 3 |
| EDT 340 | Educating Diverse Student Populations in Inclusive Settings | 3 |
| EDT 466 | TESOL Methods for Teaching English Language Learners | 3 |
| ENG 307 | Varieties of English | 3 |
| ENG 313 | Social Justice \& Dramatic Literature | 3 |
| ENG 333 | Images of Women in Literature | 3 |
| ENG 336 | Gender and Fiction | 3 |
| ENG 340 | US Prison Literature and Culture | 3 |
| ENG 342 | Literature and the Environment | 3 |
| ENG 360 | US Latina/Latino Literature | 3 |
| ENG 366 | Health Literacy and Social Justice | 3 |
| ENG 466 | TESOL Methods for Teaching English Language Learners | 3 |
| HRS 200 | Introduction to Human Rights | 3 |
| HSS 275 | History of Physical Education \& Sport | 3 |
| HSS 302 | Community Nutrition | 3 |
| HSS 360 | Sport and Bodies | 3 |
| HSS 384 | Food Justice | 3 |
| HST 210 | Making of Modern South Asia | 3 |
| HST 280 | Making of the Modern Middle East | 3 |
| HST 302 | Identity in Ancient Greece | 3 |
| HST 303 | Roman Imperial Rule | 3 |
| HST 334 | History of the Palestinian-Israeli Conflict | 3 |
| HST 336 | History of Africa I: Pre-history to the 19th Century | 3 |
| HST 337 | History of Africa - 19th Century to the Present | 3 |
| HST 351 | American Gender \& Women's History | 3 |
| HST 355 | American Urban History | 3 |
| HST 359 | History of American City Planning | 3 |
| HST 363 | The Wealth of Nations: A History of Economic Thought | 3 |
| HST 371 | Labor and Working Class History | 3 |
| HST 378 | Immigration History | 3 |
| HST 382 | History of Mexico | 3 |
| HST 386 | China in Revolution | 3 |
| HST 397 | History of Black Women | 3 |
| HST 398 | African American History before 1877 | 3 |
| MKT 361 | Christian Ethics and Meaningful Marketing | 3 |
| MUS 300 | Understanding World Musics | 3 |
| MUS 304 | The Practice of American Music | 3 |
| MUS 315 | Music and Gender | 3 |
| MUS 340 | Music Education for Diverse Student Populations in Inclusive Settings | 3 |
| MUS 354 | Gospel Music: Instrument of Social Change | 3 |
| PHL 307 | Philosophy and Feminist Thought | 3 |
| PHL 310 | Social Philosophy | 3 |
| PHL 341 | Hip Hop and Philosophy | 3 |
| PHL 358 | Marxist Philosophy | 3 |
| PHL 361 | Philosophies of Change in U.S. History | 3 |


| PHL 363 | African Philosophy | 3 |
| :---: | :---: | :---: |
| PHL 364 | Race, Gender and Philosophy | 3 |
| PHL 370 | Political Philosophy | 3 |
| PHL 371 | Philosophy \& Human Rights | 3 |
| PHL 374 | Philosophy and the City | 3 |
| PHL 379 | Latin American Philosophy | 3 |
| PHL 382 | Culture, Modernization, and Multiple Modernities | 3 |
| POL 340 | Gender, Women's Rights and Global Politics | 3 |
| POL 341 | Power, Gender \& Performance | 3 |
| PSY 341 | Social Psychology | 3 |
| PSY 363 | Abnormal Psychology | 3 |
| PSY 390 | Forensic Psychology | 3 |
| PSY 443 | Women, Gender, and Psychology | 3 |
| REL 207 | Faith Traditions: Judaism | 3 |
| REL 208 | Faith Traditions: Islamic Religious Traditions | 3 |
| REL 214 | Magic, Medicine, or Miracles: Disability in the Ancient World, the Bible, and Today | 3 |
| REL 227 | Faith Traditions: Beliefs in Dialogue | 3 |
| REL 228 | Faith Traditions: Historical Encounters | 3 |
| REL 256 | Faith Traditions: Prayer | 3 |
| REL 261 | Faith Traditions: Human Rights | 3 |
| REL 266 | Faith Traditions: Moral Reasoning | 3 |
| REL 270 | Popular Culture, American Religions | 3 |
| REL 277 | Faith Traditions: Women and Gender | 3 |
| REL 322 | Latino/Latina Religious Experiences | 3 |
| REL 328 | United States Catholic Experience | 3 |
| REL 329 | African-American Religion | 3 |
| REL 358 | Liberation Theologies | 3 |
| REL 361 | Christian Ethics and Meaningful Marketing | 3 |
| REL 369 | Christian Ethics and Engineering | 3 |
| REL 408 | Islam in the Modern World | 3 |
| SEE 320 | Cities \& Energy | 3 |
| SOC 310 | Perspectives on Education and Social Justice | 3 |
| SOC 328 | Racial \& Ethnic Relations | 3 |
| SOC 330 | Perspectives on Aging | 3 |
| SOC 331 | Marriages \& Families | 3 |
| SOC 332 | Gender and Society | 3 |
| SOC 333 | Sociology of Sexualities | 3 |
| SOC 339 | Social Inequality | 3 |
| SOC 350 | Art and Social Practice | 3 |
| SOC 352 | Community | 3 |
| SOC 360 | Sport and Bodies | 3 |
| SOC 371 | Sociology of Human Rights | 3 |
| SOC 384 | Food Justice | 3 |
| SOC 394 | Popular Culture | 3 |
| SWK 307 | Mental Health Services | 3 |
| SWK 330 | Perspectives on Aging | 3 |
| THR 250 | Diversity in Creative \& Performing Arts | 3 |
| THR 313 | Social Justice \& Dramatic Literature | 3 |
| THR 380 | Power, Gender \& Performance | 3 |
| VAH 310 | History of Art and Activism | 3 |
| VAH 320 | Latin American Art | 3 |


| VAR 250 | Diversity in Creative \& Performing Arts | 3 |
| :--- | :--- | :--- |
| VAR 330 | Comparative Visual Culture in Film | 3 |
| VAR 350 | Art and Social Practice | 3 |
| WGS 250 | Introduction to Women's and Gender Studies | 3 |


| Major Capstone or Course Experience |
| :--- |
| ACC $408 \quad$ Advanced Financial Accounting |
| AMS 480 |


| AMS 480 | American Studies Capstone | 0 |
| :--- | :--- | :--- |
| BIO 420 | Biology Capstone Seminar | 1 |

CEE $450 \quad$ Civil Engineering Design 3
CHM 490 Seminar IV 1
CJS 409 Senior Capstone 3
$\begin{array}{lll}\text { CME 466L } & \text { Chemical Engineering Unit Operations Laboratory } & 2 \\ \text { CMM 399 } & \text { Communication Practicum } & 1\end{array}$

| CMM 425 | Professional Seminar in Communication <br> Management in Organizations | 3 |
| :--- | :--- | :--- |

CMM 438 Multi-Media Journalism 3
CMM 461 Public Relations Campaigns 3
CPS 490 Capstone I 3

| CPS 491 | Capstone II | 3 |
| :--- | :--- | :--- |
| ECE 432L | Multidisciplinary Design II | 3 |


| ECO 490 | Senior Seminar in Applied Economics | 3 |
| :--- | :--- | :--- |
| ECT 490 | Senior Project | 3 |

EDT 416 Early Childhood Capstone Seminar 3

| EDT 423 | Middle Childhood Capstone Seminar | 3 |
| :--- | :--- | :--- |
| EDT 436 | Adolescent to Young Adult Capstone Seminar | 3 |


| EDT 484 | Intervention Specialist Capstone Seminar | $0-3$ |
| :--- | :--- | ---: |
| ENG 498 | Capstone I-Project | 3 |

ENG 499 Capstone II-Seminar 0
FIN $401 \quad$ Finance Capstone: Advanced Financial Analysis 3

| FIN 460 |  |
| :--- | :--- | :--- |
|  | Security Analysis |


| GEO 303 | Field Geology | 6 |
| :--- | :--- | ---: |
| GEO 498 | Geological Research and Thesis | 4 |
| GNS 480 | Senior Capstone | $0-3$ |
| HRS 497 | Capstone Seminar in Human Rights Studies | 3 |
| HSS 428 | Research in Sport and Health Sciences | 3 |
| HST 498 | History Capstone Seminar | 3 |
| IET 490 | Senior Project | 3 |
| INB 450 | International Business Management Capstone | 3 |
| INS 499 | Senior Capstone Seminar | 3 |
| LNG 495 | The Language Major in Professional Careers | 1 |
| MCT 490 | Senior Project | 3 |
| MED 480 | Pre-Medicine Capstone | 1 |
| MEE 432L | Multidisciplinary Design II | 3 |
| MFG 490 | Senior Project | 3 |
| MGT 430 | Senior Seminar in Entrepreneurship | 3 |
| MIS 475 | MIS Project II-Design \& Implementation in Teams | 3 |
| MKT 455 | Marketing Analytics and Strategy | 3 |
| MTH 480 | Mathematics Capstone | 1 |
| MUS 450 | Degree Recital | 0 |
| MUS 481 | Capstone Project \& Presentation | 1 |


| OPS 495 | Capstone Operations \& Supply Management <br> Project II | 5 |
| :--- | :--- | :--- |
| PHL 480 | Senior Capstone | 0 |
| PHY 480 | Physics Capstone | 1 |
| POL 498 | Political Science and Vocation | 0 |
| POL 499 | Political Science Capstone | 3 |
| PSY 471 | History of Psychology | 3 |
| PSY 480 | Senior Seminar in Psychology | 3 |
| PSY 496 | Capstone Special Topics in Psychology | 3 |
| PSY 499 | Independent Research Capstone | 3 |
| REL 490 | Capstone Seminar | 3 |
| SOC 409 | Senior Project Capstone | 3 |
| THR 499 | Creating New Works | 3 |
| VAD 497 | Portfolio and Paper - Graphic Design | 1 |
| VAD 499 | Portfolio and Paper - Graphic Design | 3 |
| VAE 498 | Senior Research and Portfolio | 3 |
| VAF 499 | Senior Thesis | 1 |
| VAH 485 | Art History Seminar | 3 |
| VAP 499 | Senior Seminar II | 1 |
| VAR 496 | Senior Project, Presentation and Paper | 3 |
| WGS 490 | Senior Seminar in Women's \& Gender Studies | 3 |

## COLLEGE OF ARTS AND SCIENCES

Jason L. Pierce, Dean

Jonathan A. Hess, Associate Dean
Donald L. Pair, Associate Dean
Danielle M. Poe, Associate Dean
Cynthia T. Shafer, Assistant Dean
Kimberly A. Trick, Assistant Dean
Versalle F. Washington, Assistant Dean
Aaron E. Witherspoon, Assistant Dean

The College of Arts and Sciences is a distinctive learning community that forms the vital center of the University of Dayton. In the finest tradition of liberal education, the College is committed to excellence in the discovery, integration, dissemination and application of knowledge. Academic programs provide instruction in critical thinking and expression, social and cultural criticism, computation, scientific reasoning, the creative and performing arts, historical analysis, and religious and moral awareness. The College of Arts and Sciences takes as its mission the Marianist principle of educating the whole person and enabling all members of our learning community to fulfill their potential.

The faculty of the College of Arts and Sciences demonstrate connected learning and scholarship by integrating teaching, research and service. They engage students from across the University in this process through traditional and innovative approaches to learning. The faculty understand that the principles of liberal education emerge not only from the classroom, studio and laboratory, but also from the many resources the students have within their reach: advisement; mentoring; campus ministry; social and professional clubs and societies; campus media and publications; fine arts events; and membership on departmental and campus-wide committees where students gain experience in working with others and contribute to the wider University community. Taken together, these dimensions of liberal education form the basis for lifelong intellectual, professional and personal growth.

The College of Arts and Sciences affirms its commitment to the Catholic and Marianist tradition. In humanities and social science programs, in the physical and life sciences, and in the creative and performing arts, the College strives to ensure that its graduates are distinguished by their discernment and intellectual rigor, their broad base of learning, and their sense of moral responsibility. And through their participation in a vital learning community, the College ensures the graduates will be distinguished by their appreciation and respect for diversity, their commitment to service, and their ability to affect positively individual lives and the common good.

## Academic Programs

For detailed information on specific majors and minors, please visit the links below.

The major is defined as a block of courses totaling at least 24 semester hours of upper-level work in a single discipline. Transfer students are required to take a minimum of 12 upper-level semester hours in the major at the University of Dayton. Some academic programs may have additional requirements for transfer students. These additional requirements are defined specifically in the program listings.

Single-discipline and interdisciplinary minors are defined in the department and program listings. Transfer students must take a minimum of six upper-level semester hours in the minor at the University of Dayton. Some programs may have additional requirements for transfer students. These additional requirements are defined specifically in the program listings.

## The Bachelor of Arts is offered in:

- Art History (p. 114)
- Chemistry (p. 138)
- Communication (p. 148)
- Criminal Justice Studies (p. 160)
- Economics (p. 164)
- English (p. 168)
- French (p. 185)
- German (p. 186)
- History (p. 197)
- Human Rights Studies (p. 253)
- International Studies (p. 204)
- Languages (p. 185)
- Mathematics (p. 209)
- Music (p. 219)
- Philosophy* (p. 241)
- Political Science (p. 253)
- Psychology (p. 266)
- Religious Studies (p. 271)
- Sociology* (p. 279)
- Spanish (p. 187)
- Theatre, Dance and Performance Technology (p. 287)
- Visual Arts (p. 115)
- Women's and Gender Studies (p. 291)
* Major programs offered in India in conjunction with the Marianists.


## The Bachelor of Science is offered in:

- Applied Mathematical Economics (p. 211)
- Biochemistry (p. 140)
- Biology (p. 130)
- Chemistry (p. 139)
- Computer Information Systems (p. 154)
- Computer Science (p. 155)
- Environmental Biology (p. 132)
- Environmental Geology (p. 180)
- Geology (p. 181)
- Mathematics (p. 209)
- Medicinal-Pharmaceutical Chemistry (p. 142)
- Physical Science (p. 246)
- Physics (p. 247)
- Physics-Computer Science (p. 248)
- Predentistry (p. 261)
- Premedicine (p. 263)
- Psychology (p. 267)


## Other programs leading to the bachelor's degree:

- Art Education (B.F.A.) (p. 112)
- Fine Arts (B.F.A.) (p. 112)
- General Studies (B.G.S.) (p. 178)
- Graphic Design (B.F.A.) (p. 115)
- Music Composition (B.M.) (p. 223)
- Music Education (B.M.) (p. 219)
- Music Performance (B.M.) (p. 226)
- Music Therapy (B.M.) (p. 227)
- Photography (B.F.A.) (p. 112)


## Established Interdisciplinary Majors

Criminal Justice Studies (p. 160), International Studies (p. 204), Premedicine (p. 263), Predentistry (p. 261) and Women's and Gender Studies (p. 291) are present examples of established interdisciplinary majors. Such programs are established by interdisciplinary committees and administered by the program directors.

## Individually Designed Interdisciplinary Majors

Students demonstrating extraordinary interest, special skills or needs, and sound academic status may initiate individually designed majors. Students carry the responsibility to find a faculty mentor or advisor for such majors. All University and College requirements for the Bachelor of Arts or Bachelor of Science degree must be fulfilled. The degree received will be a Bachelor of Arts or Science in Interdisciplinary Studies. Candidacy for the Bachelor of Arts or Science in Interdisciplinary Studies must be declared no later than the last semester of the junior year. Long-range plans for such majors must be submitted to the appropriate chairpersons and the dean for final approval. Plans may be altered with appropriate supporting rationale and the approval of the chairperson and dean.

## Degree Requirements

1. To be awarded the bachelor's degree by the College of Arts and Sciences, it is necessary to complete all the requirements listed for one of the academic programs offered by the College.
2. A maximum of four semester hours of general activities courses, a maximum of two semester hours of physical education activities courses, a maximum of ten semester hours of MIL courses, and a maximum of six hours of applied courses may be counted in the semester hours required for the degree. In addition, a maximum of one semester hour from ASI 150 , ASI 160, VAR 100, or an equivalent course may be counted in the semester hours required for the degree.
3. The final 30 semester hours must be earned at the University of Dayton. Furthermore, a minimum of 12 semester hours of course work at the 300 and 400 level in the major must be completed at the University.
4. The standard grade point average of at least 2.0 must be achieved in the major field, in the minor field, and in the total program. In the Bachelor of Fine Arts and Bachelor of Music Programs, a 2.0 cumulative grade point average is required in the nonprofessional courses as well as in the professional courses.
5. The College of Arts and Sciences' Competencies of Composition, Oral Communication, and Mathematics, are required for all bachelor degrees within the College.

## Composition Competencies

The College of Arts and Sciences' composition competency requirement is satisfied by completing ENG 100 (or ENG 100Aand ENG 100B) and ENG 200, or ENG 200 H , or ASI 120 with a grade of C- or higher. Students admitted to the University Honors program and students with sufficiently
high verbal scores on the SAT and ACT are placed in ENG 200H. ENG 200 H is a one-semester course which satisfies the University's Common Academic Program requirement in composition. Students who are placed in ENG 200H do not receive credit for ENG 100 but are free to take elective course work in place of the waived First-Year Humanities Commons composition.

All incoming first-year students are placed in ENG 100 unless:

- they are designated as Honors - placed in ENG 200 H
- they are placed in ENG 200 H (receive EM credit for ENG 100). For a score of 5 they receive EM credit for ENG 100 and ENG 200.
- they have an SAT (VB) score of 750 or above, or ACT (EN) of 35 or above - exempt from taking English composition
- they have an SAT (VB) score below 450, or ACT (EN) below 17 - placed in ENG 100A and ENG 100B
- they are in the CORE program (ASI 120 counts as ENG 200H)


## Oral Communication Competencies

The College of Arts and Sciences' oral communication competency requirements are satisfied by completing the University's Common Academic Program requirement of CMM 100 Principles of Oral Communication, and with a grade of C - or higher.

## Mathematics Competencies

In order to graduate, students are required to satisfy the Common Academic Program Mathematics requirement. The College of Arts and Sciences requires a grade of C- or better, or earn EM credit based on AP examinations for MTH 168 Anly Geom \& Calc or MTH 207 Intro to Statistics, or earn appropriate transfer credit, for any one of the Common Academic Program mathematics courses. (MTH 205 does satisfies the Common Academic Program Mathematics requirement, but is not applicable to the College of Arts and Sciences degree requirements.)

| MTH 114 | Contemporary Mathematics | 3 |
| :--- | :--- | :--- |
| MTH 129 | Calculus for Business | 3 |
| MTH 137 | Calculus I with Review | 4 |
| MTH 138 | Calculus I with Review | 4 |
| MTH 148 | Introductory Calculus I | 3 |
| MTH 149 | Introductory Calculus II | 3 |
| MTH 168 | Analytic Geometry \& Calculus I | 4 |
| MTH 169 | Analytic Geometry \& Calculus II | 4 |
| MTH 207 | Introduction to Statistics | 3 |
| MTH 218 | Analytic Geometry \& Calculus III | 4 |

6. It is the responsibility of the student to complete his or her Graduation Application form.

## General Requirements for all Bachelor of Arts Programs

A minimum of 124 semester hours of approved coursework must be presented for the B.A. At least 48 semester hours must be completed at the 300-400 level. For limitations on credit and restrictions on courses, consult the chairperson or the dean. No more than 45 hours of the minimum 124 hours may be completed in a student's major discipline.

## Introduction to the University

In the first semester, students take a course that introduces them to the University and to their major field of study. Discovering students take specific sections of this course.

## Major Concentration

Most major programs require between 30 and 45 semester hours. For department or program requirements, consult program schedules or the department chairperson or program director.

## Liberal Studies Curriculum

Every student will complete the Liberal Studies Curriculum. This Curriculum provides students with a breadth of study and experiences in the humanities, the creative and performing arts, the social sciences, and the natural sciences. It complements specialized study in a major and presupposes, builds upon and enhances the University's Common Academic Program (CAP). Where appropriate, credits in the Liberal Studies Curriculum may apply to other requirements but no more than six hours may be in the departmental major concentration. The Liberal Studies Curriculum includes:

## Philosophy and Religious Studies

Students complete 12 semester hours including a course in philosophy and a course in religious studies as part of the CAP First-Year Humanities Commons requirement, and two additional CAP Advanced Studies approved courses in philosophy and/or religious studies.

## History

Students complete 6 semester hours including a course as part of the CAP First-Year Humanities Commons and one additional CAP Advanced Studies approved course in historical study.

## Literature

Students complete 3 semester hours in literature selected from a list of approved courses. ${ }^{1}$ Courses approved for CAP may satisfy this component where applicable.

## Creative and Performing Arts

Students complete 3 semester hours in theory, appreciation or history of art and design, music or theater selected from a list of approved courses; or complete 3 semester hours in production and performance selected from a list of approved courses. ${ }^{2}$ Courses approved for CAP may satisfy this component where applicable.

## L2 Proficiency:

(Proficiency in a language other than English) Students demonstrate basic practical communication in a language other than English in one of three ways:

1. Students may choose to demonstrate proficiency equivalent to the completion of the 201 level by examination (zero semester hours). or
2. Students may choose to demonstrate proficiency equivalent to the completion of the 141 level by examination, and one of the following four sub-options matching the language course at the 141 level (zero to three semester hours):
a. 201 level language course
b. Approved study abroad/intercultural experience
c. Approved service learning experience
d. Approved Contextual Course taught in English. ${ }^{3}$ or
3. Students may choose to demonstrate proficiency by completion of a language course at the 141 level and any necessary prerequisites,
and one of the following four sub-options matching the language course at the 141 level (four to eleven semester hours):
a. 201 level language course
b. Approved study abroad/intercultural experience
c. Approved service learning experience
d. Approved Contextual Course Course taught in English. ${ }^{3}$

No credit is awarded through the proficiency examination. The range of semester hours to complete the L2 requirement in Arabic, Chinese and Hindi is zero to twelve.

## Social Sciences

Students complete 12 semester hours including one course at the introductory level:

| ANT 150 | Cultural Anthropology | 3 |
| :--- | :--- | :--- |
| ECO 203 | Principles of Microeconomics | 3 |
| POL 201 | The American Political System | 3 |
| or POL 202 | Introduction to Comparative Politics |  |
| or POL 214 | Introduction to International Politics |  |
| PSY 101 | Introductory Psychology | 3 |
| SOC 101 | Principles of Sociology | 3 |

One course at the 300-400 level in one of the disciplines in which an introductory course was taken, one additional course from any of the traditional disciplines or from the list of courses approved for social science, and SSC 200 Social Science Integrated. (Students pursuing a dual-degree in teacher education may apply two approved EDT courses from the School of Education and Health Sciences.).

## Mathematics

Students complete 3 semester hours selected from courses in the Department of Mathematics (MTH 205 excluded). CAP mathematics completes the requirement.

## Natural Sciences

Students complete a sequence of 3 lecture courses with 2 accompanying laboratories in the Integrated Natural Science Sequence for a total of 11 semester hours. Students who wish to do more advanced study in science may complete 9 semester hours in science courses approved for majors in the departments of biology, chemistry, geology, and physics and 2 semester hours of accompanying laboratories in lieu of the Integrated Natural Science Sequence. CAP natural science may be included in the 11 semester hours.
${ }^{1}$ Courses for Literature are as follows:

| CLA 350 | Classical Literature in Translation | 3 |
| :--- | :--- | ---: |
| ENG 151 | Introduction to Literature | 3 |
| ENG 203 | Major British Writers | 3 |
| ENG 204 | Major American Writers | 3 |
| ENG 205 | Major World Writers | 3 |
| ENG 210 | Poetry | 3 |
| ENG 230 | Topics in Literature | $1-6$ |
| ENG 301 | Survey of Early English Literature | 3 |
| ENG 302 | Survey of Later British Literature | 3 |
| ENG 305 | Survey of American Literature | 3 |
| ENG 306 | Survey of Continental Literature | 3 |
| ENG 317 | Contemporary Poetry | 3 |


| ENG 319 | Contemporary Fiction | 3 |
| :---: | :---: | :---: |
| ENG 320 | Contemporary Drama | 3 |
| ENG 321 | Reading Popular Music | 3 |
| ENG 322 | Masterpieces of World Literature | 3 |
| ENG 323 | Literature of the Christian Tradition | 3 |
| ENG 324 | The Novel | 3 |
| ENG 325 | Science Fiction | 3 |
| ENG 326 | Sport \& Literature | 3 |
| ENG 327 | Studies in Popular Fiction | 3 |
| ENG 328 | American Nobel Authors | 3 |
| ENG 329 | Short Story | 3 |
| ENG 330 | Development of Drama | 3 |
| ENG 331 | Studies in Film | 3 |
| ENG 332 | Studies in Literature \& Film | 3 |
| ENG 333 | Images of Women in Literature | 3 |
| ENG 334 | Modern Men - Images | 3 |
| ENG 335 | African American Literature | 3 |
| ENG 336 | Gender and Fiction | 3 |
| ENG 337 | Studies in Folklore | 3 |
| ENG 338 | Images of Business | 3 |
| ENG 339 | American Indian Literature | 3 |
| ENG 340 | US Prison Literature and Culture | 3 |
| ENG 343 | Literature of the Fifties | 3 |
| ENG 344 | Literature of the Sixties | 3 |
| ENG 345 | Colonial \& Postcolonial Literature | 3 |
| ENG 348 | Modern Irish Literature | 3 |
| ENG 350 | European Literature of Antiquity | 3 |
| ENG 351 | European Literature of Middle Ages | 3 |
| ENG 353 | Literature of the Renaissance | 3 |
| ENG 354 | Literature of the Enlightenment | 3 |
| ENG 355 | Literature of the Romantic Age | 3 |
| ENG 356 | European Literature of the 19th Century | 3 |
| ENG 357 | European Literature of the Early 20th Century | 3 |
| ENG 358 | Contemporary Literature of Europe | 3 |
| ENG 360 | US Latina/Latino Literature | 3 |
| ENG 362 | Shakespeare | 3 |
| ENG 363 | Shakespeare's Worlds | 3 |
| ENG 380 | Studies in Literature | 1-6 |
| ENG 383 | Tragic Dilemma | 3 |
| ENG 384 | Christianity \& Modern Poetry | 3 |
| ENG 385 | Religion \& Literature | 3 |
| ENG 405 | Chaucer | 3 |
| ENG 407 | Medieval English Literature | 3 |
| ENG 410 | Early Renaissance Literature | 3 |
| ENG 414 | Later Renaissance Literature | 3 |
| ENG 431 | Milton | 3 |
| ENG 433 | Studies in Neo-Classical Literature | 3 |
| ENG 438 | English Romanticism | 3 |
| ENG 444 | Studies in 19th Century English Literature | 3 |
| ENG 448 | 20th Century British Literature | 3 |
| ENG 451 | American Romanticism | 3 |
| ENG 453 | American Realism \& Naturalism | 3 |


| ENG 455 | 20th Century American Literature | 3 |
| :---: | :---: | :---: |
| ENG 482 | Modern Poetry | 3 |
| FRN 350 | French Literature in Translation | 3 |
| FRN 352 | Old World Meets New (ENG) | 3 |
| FRN 360 | Explication De Textes | 3 |
| FRN 361 | Survey of French Literature I | 3 |
| FRN 362 | Survey of French Literature II | 3 |
| FRN 381 | History of French Cinema | 3 |
| FRN 450 | French Literature | 3 |
| FRN 452 | Old World Meets New (FRN) | 3 |
| GER 350 | German Literature \& Civilization | 3 |
| GER 361 | Survey of German Literature I | 3 |
| GER 362 | Survey of German Literature II | 3 |
| GER 450 | German Literature | 3 |
| ITA 361 | Survey of Italian Literature I | 3 |
| ITA 362 | Survey of Italian Literature II | 3 |
| SPN 350 | Hispanic Literature in Translation | 3 |
| SPN 361 | Survey of Spanish Literature I | 3 |
| SPN 362 | Survey of Spanish Literature II | 3 |
| SPN 363 | Survey of Spanish-American Literature I | 3 |
| SPN 364 | Survey of Spanish-American Literature II | 3 |
| SPN 450 | Topics in Pre-20th Century Spanish Literature | 3 |
| SPN 451 | Topics in Pre-20th Century Spanish-American Literature | 3 |
| SPN 471 | Topics from 20th and 21 st Century Spanish Literature | 3 |
| SPN 472 | Topics in Contemporary Spanish-American Literature and Film | 3 |
| ${ }^{2}$ Courses for Creative and Performing Arts are as follows: |  |  |
| ASI 214 | Dramatic Kinesics in a Foreign Language | 1 |
| ASI 341 | Special Topics in Arts Study | 1-3 |
| CMM 311 | Studies in Oral Performance | 3 |
| CMM 331 | Feature Writing | 3 |
| CMM 332 | Publication Design | 3 |
| CMM 333 | Free Lance Writing | 3 |
| CMM 341 | Audio Production | 3 |
| CMM 342 | Fundamentals of Video Production | 3 |
| CMM 343 | Writing for Electronic and Digital Media | 3 |
| CMM 344 | Multimedia Design \& Production I | 3 |
| CMM 351 | Public Speaking | 3 |
| CMM 442 | Advanced Television Production | 3 |
| CMM 444 | Multimedia Design \& Production II | 3 |
| CMM 449 | Topics in Electronic Media | 3 |
| ENG 282 | Introduction to Writing Poetry | 3 |
| ENG 284 | Intro-Writng Fiction | 3 |
| ENG 286 | Introduction to Writing Drama | 3 |
| ENG 308 | Intermediate Poetry Workshop | 3 |
| ENG 310 | Intermediate Fiction Workshop | 3 |
| ENG 312 | Advanced Writing of Drama | 3 |
| ENG 331 | Studies in Film | 3 |
| ENG 382 | Mozart's Operas | 3 |
| MUS 110 | Fundamentals of Music | 2 |


| MUS 111 | Theory of Music I | 2 |
| :---: | :---: | :---: |
| MUS 112 | Theory of Music II | 2 |
| MUS 113 | Aural Skills I | 2 |
| MUS 114 | Aural Skills II | 2 |
| MUS 115 | Music in Theory \& Practice I | 3 |
| MUS 116 | Music in Theory \& Practice | 3 |
| MUS 191 | Voice Class | 2 |
| MUS 195 | Beginning Guitar Class I | 1 |
| MUS 196 | Group Piano I | 1 |
| MUS 205 | Music, Technology and Culture | 3 |
| MUS 295 | Beginning Guitar Class II | 1 |
| MUS 301 | Music History \& Literature I | 3 |
| MUS 302 | Music History \& Literature II | 3 |
| MUS 303 | Introduction to Musics of the World | 3 |
| MUS 304 | The Practice of American Music | 3 |
| MUS 305 | African-American Sacred Music | 3 |
| MUS 306 | History of American Jazz | 3 |
| MUS 307 | Development of American Popular Song | 3 |
| MUS 309 | Opera as Philosophy, Music, Drama, and Film | 3 |
| MUS 328 | History of the American Musical | 3 |
| MUS 399 | Performance Studies | 1-2 |
| MUS 491 | University Orchestra | 1 |
| MUS 492 | Symphonic Wind Ensemble | 1 |
| MUS 493 | University Chorale | 1 |
| MUS 494 | Dayton Jazz Ensemble | 1 |
| MUS 499 | Performance Studies | 4 |
| THR 105 | Theatre Appreciation | 3 |
| THR 251 | Beginning Tap Dance | 2 |
| THR 261 | Beginning Jazz Dance | 2-3 |
| THR 271 | Beginning Ballet | 2-3 |
| THR 300 | Performance Practicum | 1-3 |
| THR 303 | Scenic Painting | 3 |
| THR 307 | Light Design | 3 |
| THR 310 | Acting for Everyone | 3 |
| THR 312 | Acting for the Camera | 3 |
| THR 320 | Voice \& Movement | 3 |
| THR 323 | Ensemble Acting | 3 |
| THR 330 | Set Design | 3 |
| THR 344 | Musical \& Opera Workshop | 1 |
| THR 351 | Intermediate Tap Dance | 2 |
| THR 361 | Jazz Dance | 1 |
| THR 371 | Ballet | 2 |
| VAD 211 | Fundamentals of Visual Communication Design | 3 |
| VAE 232 | Integrating Visual Culture | 3 |
| VAF 104 | Foundation Drawing | 3 |
| VAF 112 | Foundation 2-D Design | 3 |
| VAF 117 | Foundation 3-D Design | 3 |
| VAF 203 | Drawing Through the Process | 3 |
| VAF 225 | Painting for Non-Majors | 3 |
| VAF 226 | Painting I | 3 |
| VAF 228 | Watercolor I | 3 |
| VAF 232 | Sculpture I | 3 |


| VAF 240 | Ceramics I | 3 |
| :---: | :---: | :---: |
| VAF 242 | Ceramics II: Wheel Throwing | 3 |
| VAF 253 | Printmaking I | 3 |
| VAF 325 | Figure Painting | 3 |
| VAH 101 | Introduction to the Visual Arts | 3 |
| VAH 129 | Foundations in Art History | 3 |
| VAH 201 | Survey of Art I | 3 |
| VAH 202 | Survey of Art II | 3 |
| VAH 203 | Survey of Art III | 3 |
| VAH 310 | History of Art and Activism | 3 |
| VAH 320 | Latin American Art | 3 |
| VAH 330 | Arts of Asia | 3 |
| VAH 350 | Western Architecture | 3 |
| VAH 360 | Art History \& Feminism | 3 |
| VAH 370 | American Art | 3 |
| VAH 382 | History of Photography I | 3 |
| VAH 383 | History of Graphic Desing | 3 |
| VAH 483 | PostColonial and Global Art Histories | 3 |
| VAP 100 | Darkroom Photography for Non-Majors | 3 |
| VAP 101 | Foundation Photography | 3 |
| VAP 200 | Digital Photography for Non-Majors | 3 |
| VAR 210 | Visual Journal | 3 |
| VAR 220 | Visual Resources | 3 |
| ${ }^{3}$ Contextual courses are as follows for each of the matching languages: |  |  |
| Arabic (ARA) |  |  |
| ANT 315 | Language \& Culture | 3 |
| CMS 316 | Intercultural Communication | 3 |
| CMS 414 | Global Communication | 3 |
| HST 334 | History of the Palestinian-Israeli Conflict | 3 |
| HST 354 | History of Women \& Gender in the Middle East | 3 |
| HST 356 | Comparative History of Women in the Third World | 3 |
| HST 493 | Seminar in Middle Eastern History | 3 |
| PHL 351 | Jewish, Christian, and Islamic Philosophy | 3 |
| Chinese (CHI) |  |  |
| ANT 315 | Language \& Culture | 3 |
| CMS 316 | Intercultural Communication | 3 |
| CMS 414 | Global Communication | 3 |
| ENG 341 | Asian-American Literature | 3 |
| HST 330 | History of East Asia to 1800 | 3 |
| HST 332 | History of Modern East Asia | 3 |
| PHL 355 | Asian Philosophy | 3 |
| French (FRN) |  |  |
| ANT 315 | Language \& Culture | 3 |
| CMS 316 | Intercultural Communication | 3 |
| CMS 414 | Global Communication | 3 |
| ENG 353 | Literature of the Renaissance | 3 |
| ENG 407 | Medieval English Literature | 3 |
| HST 383 | History of the Caribbean | 3 |
| POL 320 | Comparative Politics: Western Europe | 3 |
| THR 425 | Theatre Theory \& History | 3 |
| German (GER) |  |  |


| ANT 315 | Language \& Culture | 3 |
| :---: | :---: | :---: |
| CMS 316 | Intercultural Communication | 3 |
| CMS 414 | Global Communication | 3 |
| POL 320 | Comparative Politics: Western Europe | 3 |
| THR 425 | Theatre Theory \& History | 3 |
| Hindi (HND) |  |  |
| ANT 315 | Language \& Culture | 3 |
| CMS 316 | Intercultural Communication | 3 |
| CMS 414 | Global Communication | 3 |
| HST 356 | Comparative History of Women in the Third World | 3 |
| THR 425 | Theatre Theory \& History | 3 |
| Italian (ITA) |  |  |
| ANT 315 | Language \& Culture | 3 |
| CMS 316 | Intercultural Communication | 3 |
| CMS 414 | Global Communication | 3 |
| ENG 353 | Literature of the Renaissance | 3 |
| THR 425 | Theatre Theory \& History | 3 |
| VAH 450 | Italian Renaissance Art | 3 |
| Latin (LAT) |  |  |
| HST 220 | Survey of Ancient History | 3 |
| HST 303 | Roman Imperial Rule | 3 |
| PHL 351 | Jewish, Christian, and Islamic Philosophy | 3 |
| THR 425 | Theatre Theory \& History | 3 |
| Russian (RUS) |  |  |
| ANT 315 | Language \& Culture | 3 |
| CMS 316 | Intercultural Communication | 3 |
| CMS 414 | Global Communication | 3 |
| HST 326 | Russia, The Soviet Union \& Beyond 1860-Present | 3 |
| POL 321 | Comparative Politics: Russia \& the New States | 3 |
| THR 425 | Theatre Theory \& History | 3 |
| Spanish (SPN) |  |  |
| ANT 315 | Language \& Culture | 3 |
| ANT 352 | Cultures of Latin America | 3 |
| ANT 368 | Immigration \& Immigrants | 3 |
| CMS 316 | Intercultural Communication | 3 |
| CMS 414 | Global Communication | 3 |
| ENG 360 | US Latina/Latino Literature | 3 |
| HST 357 | Modern Latin America | 3 |
| HST 358 | Social \& Cultural History of Latin America | 3 |
| HST 382 | History of Mexico | 3 |
| HST 383 | History of the Caribbean | 3 |
| HST 384 | Economic History of Latin America | 3 |
| PHL 379 | Latin American Philosophy | 3 |
| SOC 368 | Immigration \& Immigrants | 3 |
| THR 425 | Theatre Theory \& History | 3 |
| VAH 320 | Latin American Art | 3 |

## General Requirements for all Bachelor of Science Programs

A minimum of 120 semester hours of approved coursework must be presented for the B.S. For limitations on credit and restrictions on courses, consult the chairperson or the dean. For departmental or
program requirements, consult program schedules or the department chairperson or program director.

| Major Concentration (with at least 24 semester hours at 300-400 | $30-60$ |
| :--- | ---: |
| level). <br> Breadth Requirement (See Distribution Table below.) | $44-50$ |
| Program Requirements and General Electives: Electives should be <br> approved by the chairperson or dean since some restrictions exist. | $10-40$ |
| Common Academic Program (CAP): These courses may also be <br> counted for other requirements where applicable including Major <br> Concentration, Breadth Requirement, Program Requirements and <br> General Electives | $43-61$ |

## General Electives

## Distribution Table for Breadth Requirements

Courses taken to fulfill the breadth requirement should be external to the major concentration. Students electing courses in any department should be aware that some introductory or background knowledge may be expected of them even when no specific prerequisite course is listed.

Natural Sciences: Selected from Biology, Chemistry, Geology, and
Physics courses with accompanying laboratories. (Includes 7 hours CAP Natural Science.)
Mathematics, Computer Science: At least 3 semester hours must be in Mathematics, the course(s) to be determined by placement and major program. (Includes 3 hours of CAP Mathematics and College of Arts and Sciences Mathematics Competency.)
Social and Behavioral Sciences: Anthropology, Economics, Political 6
Science, Psychology, Sociology. Up to 3 of the 6 semester hours of social and behavioral sciences may, with the approval of the chairperson of the major department or the director of the program, be taken in applied social and professional studies: Criminal Justice Studies, Education, Management, Marketing, Military Science, Social Work, and appropriate courses in ASI, AMS, and CMS. (Includes 3 hours CAP Social Science.)
Humanities: American Studies, Communication, English, History, 9 Humanities Studies, Languages, Music, Philosophy, Religious Studies, Visual Arts, and, with the approval of the chairperson of the major department or director of the program, appropriate courses in ASI. (The CAP First-Year Humanities Commons, Second-Year Writing, and Oral Communication courses do not fulfill this requirement.) Philosophy and Religious Studies
College of Arts and Sciences' Composition and Oral Communication 3-9
Competencies: Each student should demonstrate competence in composition, and oral communication. This competence may be demonstrated through coursework, or advanced standing. Please refer to the Catalog section: College of Arts and Sciences - Degree Requirements.

## Internship Program

The Internship Program is an educational work experience with an outside agency, in which a full-time student registers for on-the-job work performed without direct supervision by academic personnel. Such work can be performed in a variety of areas; however, the general purpose of all internships is to serve as transition between the world of study and the world of work.

Normally, a department or program internship director, or another designated faculty member will make all contacts with prospective agencies for placing students as interns. While students themselves may
initiate contacts at possible sites, all sites must be ruled acceptable by the director before an internship may begin.

In order to accomplish the general purpose of an internship, the student must adhere to the following requirements:

- To be eligible for an internship, a student must be in good standing at the University of Dayton and have successfully completed course work in areas appropriate to the internship sought.
- An intern may receive no more than six semester hours of credit in any semester for internship.
- No more than twelve semester hours of work experience credit in any kind of internship or work experience program can be accepted toward a baccalaureate degree.
- The student intern will submit a daily log and a written report to the internship director at the conclusion of the internship.

Other procedures and requirements in addition to those mandated by the College may be imposed by departments for individual programs to meet the specific nature of a given internship.

Interested students should see the internship directors in their respective departments for further details.

## L2 Entrance Requirement

Any student admitted to the College of Arts and Sciences must have had two years of high school study of a language other than English (L2) or make up the deficit at the University. The deficit may be made up by successful completion of one of the following courses or the equivalent:

| ARA 141 | Basic Proficiency in Arabic II | 4 |
| :--- | :--- | :--- |
| CHI 141 | Basic Proficiency in Mandarin Chinese II | 4 |
| FRN 141 | Basic Proficiency in French II | 4 |
| GER 141 | Basic Proficiency in German II | 4 |
| ITA 141 | Basic Proficiency in Italian | 4 |
| LAT 141 | Basic Proficiency in Latin II | 4 |
| RUS 141 | Basic Proficiency in Russian II | 4 |
| SPN 141 | Basic Proficiency in Spanish II | 4 |

## Proficiency in L2

The College of Arts and Sciences strongly encourages its students to acquire the highest level of L2 proficiency. Students may show proficiency by demonstration of basic practical communicative competence in a language other than English. Proficiency for modern languages includes the following four skills:

- Speaking: Ability to handle successfully a limited number of interactive, task-oriented, and social situations. Can ask and answer questions, initiate and respond to simple statements, and maintain face-to-face conversation, although with hesitancy and linguistic inaccuracies. Speech is generally understood by native speakers used to interacting with language learners.
- Writing: Ability to write simple messages and descriptions on familiar topics, to provide biographical information, and to express interests and preferences by recombining learned vocabulary and structures. Some effort may be required from native speakers to understand the written messages.
- Listening: Comprehension of main idea and some supporting detail in passages of up to 250 words of everyday speech on familiar topics in a context that provides significant support for the message.
- Reading: Comprehension of main idea and supporting detail in contextualized written passages of up to 600 words in which a generally familiar, everyday topic is discussed.

Students entering the University have the opportunity to demonstrate the defined levels of proficiency by passing a University placement/ proficiency examination. Any student who has not achieved proficiency as determined by this examination upon entry can choose from the following options to reach proficiency:

- course work at the University of Dayton
- course work elsewhere
- an individual study program
- study abroad
- an immersion experience

The Department of Global Languages and Cultures offers the following possible sequences of language courses:

- Basic Proficiency

For students who have never studied the language previously or who demonstrate no functional ability: 101-141 (8 sem. hrs.) in Arabic, Chinese, French, German, Italian, Latin, Russian and Spanish.

- Accelerated sequence

For students with previous language study or experience who demonstrate some functional ability on the placement/proficiency examination: 131-141 (6 sem. hrs.) available in French, German, Latin and Spanish.

- Capstone course (201)

For students with significant language study or experience: (4 sem. hrs.) available in all languages.

Students choosing to complete the Liberal Studies Curriculum using Latin as their language will be required to demonstrate proficiency in reading and translation only.

Students whose first language is not English demonstrate L2 proficiency by satisfying the University Common Academic Program requirements in composition and oral communication. Students whose first language is not English are not permitted to complete courses in their primary language except by permission of the Chair of the Department of Global Languages and Cultures.

## Summary of Requirements for the B.A.

| Major | $30-45$ |
| :--- | ---: |
| Liberal Studies Curriculum $^{1}$ | 12 |
| Philosophy and Religious Studies $^{\text {History }}$ | 6 |
| Literature $_{\text {Creative and Performing Arts }}$ | 3 |
| L2 Proficiency (Proficiency in a language other than English) $_{\text {Social Sciences }}^{\text {Mathematics }}$ | 3 |
| Natural Sciences | 12 |
| English Composition and Oral Communication | 3 |
| Introduction to the University | 11 |

Electives to total 124 hours
1 For specifics of the requirement, please refer to the Catalog section: College of Arts and Sciences - General Requirements for all Bachelor of Arts Programs.

## Teacher Licensure for Students in Bachelor of Arts and Bachelor of Science

B.A. or B.S. and B.S.E.

Students earning a Bachelor of Arts or Bachelor of Science Degree in the College of Arts and Sciences who also wish to complete the requirements for a teaching license in the state of Ohio may do this by also completing the requirements for the Bachelor of Science in Education and Health Sciences Degree. The dual degree option requires students to complete all course and academic requirements, including specific minimum grade point average requirements, in both academic units. Some overlap of degree requirements may exist and students are encouraged to meet with an advisor to obtain a clear understanding of the total academic work needed for the dual degree option. For a full description of the requirements for the teacher licensure programs in the Department of Teacher Education section.

## Programs of Study

To learn more about the available programs in the College of Arts and Sciences,
explore these departments and programs:

- Africana Studies (p. 110)
- Air Force Aerospace Studies ROTC (p. 111)
- Art and Design (p. 112)
- Asian Studies (p. 129)
- Biology (p. 129)
- Chemistry (p. 138)
- Communication (p. 148)
- Computer Science (p. 154)
- Criminal Justice Studies (p. 160)
- Economics (p. 164)
- English (p. 168)
- Family Development (p. 177)
- Film Studies (p. 177)
- General Studies (p. 178)
- Geology (p. 179)
- Global Languages and Cultures (p. 185)
- History (p. 197)
- International Studies (p. 204)
- Marianist Social Transformation (p. 208)
- Mathematics (p. 209)
- Military Science ROTC (p. 217)
- Music (p. 219)
- Philosophy (p. 241)
- Physics (p. 246)
- Political Science (p. 253)
- Prelaw (p. 260)
- Premedicine/ Predentistry (p. 261)
- Psychology (p. 266)
- Religious Studies (p. 271)
- Sociology, Anthropology, and Social Work (p. 279)
- Sustainability Studies Program (p. 285)
- Theatre, Dance and Performance Technology (p. 287)
- Women's and Gender Studies (p. 291)


## Africana Studies

The Africana studies minor offers an interdisciplinary approach to the study of the peoples of Africa and African descendants in the Americas, Africa, and throughout the diaspora. Through its courses, the minor encourages service at the local, national, and international level. The minor prepares distinctive graduates to develop and use analytical skills and approaches to understand historical and contemporary issues associated with the experience of Africans and African descendants. The minor is interdisciplinary and structured to incorporate teaching and research methodologies and materials from disciplines in the College of Arts and Sciences and other schools throughout the University.

The Africana studies minor requires 15 semester hours. It must include one approved "Special Topics" or "Independent Study" course from an appropriate discipline and 12 semester hours in upper division courses (300-level or above) from a minimum of three different disciplines.

## Africana Studies Committee

Julius A. Amin (History), Coordinator
Cox (Music), James (Philosophy)

## Minor in Africana Studies (AFS)

Africana Studies

| Select four course | es from at least three different disciplines: | 12 |
| :---: | :---: | :---: |
| EDT 340 | Educating Diverse Student Populations in Inclusive Settings |  |
| ENG 335 | African American Literature |  |
| HST 336 | History of Africa I: Pre-history to the 19th Century |  |
| HST 337 | History of Africa - 19th Century to the Present |  |
| HST 383 | History of the Caribbean |  |
| HST 385 | The Atlantic World, 1492-1800 |  |
| HST 398 | African American History before 1877 |  |
| HST 399 | History of Blacks in the United States Since 1900 |  |
| HST 488 | Seminar in African History |  |
| MUS 305 | African-American Sacred Music |  |
| MUS 306 | History of American Jazz |  |
| MUS 390 | Ensembles |  |
| PHL 363 | African Philosophy |  |
| PHL 364 | Race, Gender and Philosophy |  |
| REL 329 | African-American Religion |  |
| SOC 328 | Racial \& Ethnic Relations |  |
| Select one specia | I topics course from: | 3 |
| MUS 360 | Special Topics in Music |  |
| REL 492 | Special Topics |  |
| VAH 490 | Special Problems |  |

Special topics or independent studies course approved by committee

Total Hours

## Air Force Aerospace Studies, ROTC (AES)

As a University of Dayton (UD) student you have the opportunity to become an Air Force officer through a cooperative agreement with Wright State University's (WSU) Department of Aerospace Studies. WSU is the home of Detachment 643 and the host site for local colleges and universities to provide the AFROTC program. Although you'll register for ROTC through UD, all courses are taught at WSU. UD provides transportation.

The AFROTC program is designed to produce Air Force officers who will be successful leaders. All officers are placed in positions of responsibility, facing challenging and rewarding career opportunities while using the most advanced technology in the world.

The AFROTC program is organized in two portions: the General Military Course (GMC), typically taken during first- and sophomore years, and the Professional Officer Course (POC), usually taken during junior and senior years or during the last two years prior to graduation. A corresponding Leadership Laboratory for each year, where students apply leadership skills, demonstrate command and effective communication, develop physical fitness, and practice military customs and courtesies, is also required. For more information on ROTC course descriptions, please visit https://www.wright.edu/air-force-rotc/cadet-life/rotc-classes.

> - The GMC is a no-obligation introduction to the Air Force. The course covers the Foundations of the United States Air Force (USAF) and the Evolution of USAF and Space Power.
> - The POC curriculum covers communicative skills, Air Force Leadership Studies, National Security Affairs and Preparation for Active Duty.

All AFROTC students have the opportunity to apply for scholarships that pay partial or full tuition, books and charges, plus a monthly stipend.
These scholarships are available on a competitive basis to students who demonstrate academic and leadership potential. High school students should apply for a scholarship at https://www.afrotc.com/. In-college students will apply for scholarships through their AFROTC instructor. If you are a first-year or sophomore seeking a challenge and want to serve your country, sign up for the Aerospace Studies 121 course.

For further information about AFROTC at UD, students should contact:
The Department of Aerospace Studies
Wright State University
Dayton, Ohio 45435
Phone: 937-775-2730
Email: afrotc@wright.edu
Website: http://www.wright.edu/air-force-rotc

## or

The University of Dayton Admission Office
Phone: 937-229-1000
E-mail: info@udayton.edu

## Courses

AES 120. General Military Course (GMC), Leadership Laboratory. 0 Hours Applied Air Force Reserve Officer Training Corps (AFROTC) training. This lab provides an opportunity for students to apply Air Force procedures, techniques, and knowledge. Students will learn the Air Force organizational structure as well as customs and courtesies. GMC cadets will also develop their followership and teamwork skills in a cadet led, cadre supervised Lab environment. Requires participation in two weekly physical training sessions. Taken concurrently with 100-level AES courses. (Pass/Fail).
AES 121. Foundations of the United States Air Force I. 1 Hour This is a survey course designed to introduce students to the United States Air Force and provide an overview of the basic characteristics, missions, and organization of the Air Force. Corequisite(s): AES 120.

## AES 122. Foundations of the United States Air Force II. 1 Hour

 This is a continuation of AES 121. It is a survey course designed to introduce students to the United States Air Force and provide an overview of the basic characteristics, missions, and organization of the Air Force. Corequisite(s): AES 120.AES 130. General Military Course Leadership Lab. 0 Hours Applied Air Force Reserve Officer Training Corps (AFROTC) training. This lab provides an opportunity for students to apply Air Force procedures, techniques, and knowledge. Students will learn the Air Force organizational structure as well as customs and courtesies. GMC cadets will also develop their followership and teamwork skills in a cadet led, cadre supervised Lab environment. Requires participation in two weekly physical training sessions. Taken concurrently with 100-level AES courses. (Pass/Fail). Prerequisite(s): AES 120.

AES 220. Field Training Preparation (FTP) Leadership Laboratory. 0

## Hours

Applied Air Force Reserve Officer Training Corps (AFROTC) training. This lab further develops skills and concepts introduced in the General Military Course Leadership Laboratory. Students are prepared mentally and physically for the demanding requirements of upcoming Field Training summer program. Training is cadet led where students will display their ability to apply Air Force concepts and procedures. Requires participation in two weekly physical training sessions. Taken concurrently with 200level AES courses. (Pass/Fail).

## AES 221. Evolution of USAF Air and Space Power I. 1 Hour

 This course features topics on Air Force heritage and leaders; introduction to air and space power through examination of distinctive capabilities and functions; and continued application of communication skills. Its purpose is to instill an appreciation of the development and employment of air and space power and to motivate sophomore students to transition from AFROTC cadet to Air Force ROTC officer candidate. Corequisite(s): AES 220.
## AES 222. Evolution of USAF Air and Space Power II. 1 Hour

This course is a continuation of AES 221 and features topics on Air Force heritage and leaders; introduction to air and space power through examination of distinctive capabilities and functions; and continued application of communication skills. Its purpose is to instill an appreciation of the development and employment of air and space power and to motivate sophomore students to transition from AFROTC cadet to Air Force ROTC officer candidate. Corequisite(s): AES 220.

AES 230. Field Training Preparation (FTP) Leadership Lab. 0 Hours Applied Air Force Reserve Officer Training Corps (AFROTC) training. This lab further develops skills and concepts introduced in the General Military Course Leadership Laboratory. Students are prepared mentally and physically for the demanding requirements of upcoming Field Training summer program. Training is cadet led where students will display their ability to apply Air Force concepts and procedures. Requires participation in two weekly physical training sessions. Taken concurrently with 200level AES courses. (Pass/Fail). Prerequisite(s): AES 220

AES 270. Extended GMC Leadership Laboratory I. 0 Hours
Extended GMC Leadership Laboratory - For cadets who have met the requirements of GMC but have not yet completed Field Training.

AES 280. Extended GMC Leadership Lab II. 0 Hours
Extended GMC Leadership Laboratory - For cadets who have met the requirements of GMC but have not yet completed Field Training. Prerequisite(s): AES 270.

AES 322. Air Force Leadership Studies I. 3 Hours
Air Force Leadership Studies.
AES 330. Intermediate Cadet Leadership (ICL) Laboratory: Applied Air Force ROTC Training. 0 Hours
The ICL lab builds the foundation of leadership skills required as an Air Force Officer. Cadets apply leadership/management concepts learned in Field Training and previous aerospace studies classes and labs to assist in training the General Military Course cadets. Requires participation in two weekly physical training sessions. Taken concurrently with 300-level AES courses. (Pass/Fail).

AES 331. United States Air Force Leadership Studies I. 3 Hours This course teaches cadets advanced skills and knowledge in management and leadership. Special emphasis is placed on enhancing leadership skills. Cadets have an opportunity to try out these leadership and management techniques in a supervised environment as juniors and seniors. Prerequisite(s): AES 330

AES 332. United States Air Force Leadership Studies II. 3 Hours Air Force Leadership Studies.

AES 340. Intermediate Cadet Leadership (ICL) Leadership Lab. 0 Hours The ICL lab builds the foundation of leadership skills required as an Air Force Officer. Cadets apply leadership/management concepts learned in Field Training and previous aerospace studies classes and labs to assist in training the General Military Course cadets. Requires participation in two weekly physical training sessions. Taken concurrently with 300-level AES courses. (Pass/Fail). Prerequisite(s): AES 330

AES 430. Senior Cadet Leadership (SCL) Laboratory: Applied Air Force ROTC Training. 0 Hours
This lab prepares students for progression into active duty life. As in the Intermediate Cadet Leadership Lab, students take leadership roles in execution of leadership labs for the cadet wing. Students hone leadership fundamentals learned in previous courses and labs to a level commensurate to entry into the active duty Air Force. Requires participation in two weekly physical training sessions. Taken concurrently with 400-level AES courses. (Pass/Fail).

AES 431. National Security Affairs/Preparation for Active Duty I. 3 Hours This course is designed to give college seniors the foundation to understand their role as military officers in American society. It is an overview of the complex social and political issues facing the military profession and requires a measure of sophistication commensurate with the senior college level. Corequisite(s): AES 430.

AES 432. National Security Affairs/Preparation for Active Duty II. 3 Hours
This course is a continuation of AES 431 and is designed to give college seniors the foundation to understand their role as military officers in American society. It is an overview of the complex social and political issues facing the military profession and requires a measure of sophistication commensurate with the senior college level. Corequisite(s): AES 430.

AES 440. Senior Cadet Leadership (SCL) Applied Air Force Training. 0 Hours
Applied Air Force Training

## AES 470. Extended POC Leadership Laboratory I. 0 Hours

POC Leadership Laboratory - For cadets who have met all requirements for Air Force ROTC but have not yet completed their baccalaureate degree.

## AES 480. Extended POC Leadership Lab II. 0 Hours

POC Leadership Laboratory - For cadets who have met all requirements for Air Force ROTC but have not yet completed their baccalaureate degree.

## Art and Design

Majors:

$$
\begin{aligned}
& \text { - Bachelor of Arts, Art History (p. 114) } \\
& \text { - Bachelor of Arts, Visual Arts (p. 115) } \\
& \text { - Bachelor of Fine Arts, Art Education (p. 115) } \\
& \text { - Bachelor of Fine Arts, Fine Arts (p. 116) } \\
& \text { - Bachelor of Fine Arts, Graphic Design (p. 117) } \\
& \text { - Bachelor of Fine Arts, Photography (p. } 118 \text { ) }
\end{aligned}
$$

Minors:

- Art History (p. 118)
- Fine Arts (p. 118)
- Graphic Design (p. 118)
- Photography (p. 119)
- Visual Arts (p. 119)

The Department of Art and Design provides quality education in the areas of art education, art history, fine art studio, photography, visual arts, and graphic design. The Department cultivates high standards for creativity, craft, conceptual understanding, critical analysis, historical scholarship, and pedagogy. Central to these pursuits are the artistic practice and scholarly research of faculty, the dedication of support staff to the department's educational objectives, and engaged teaching, learning, and scholarship. The Department of Art and Design is a thriving learning community grounded in the Marianist tradition of educating the whole person. It is fully integrated with the College and the University and contributes significantly to our institutional commitment to excellence. The University of Dayton is accredited by the National Association of Schools of Art and Design (NASAD).

The department offers the following degrees:

## Bachelor of Arts Degree (B.A.)

The Bachelor of Arts (B.A.) is intended for those interested in a broad liberal arts education as an overarching part of their chosen major Art History, Visual Arts). Approximately 40 percent of the degree requirements are taken in the creation and study of visual arts particular to the chosen major. With this degree option it is possible for students to earn a minor, or even a second major, in another university offered
discipline. The B.A. degree combines the major specific curriculum with visual arts foundation courses, and the College of Arts and Sciences and University general education requirements referred to as the Common Academic Program (CAP).

## Bachelor of Fine Arts Degree (B.F.A)

The Bachelor of Fine Arts Degree (B.F.A.) is an intensive "professional" program of study specifically tailored to prepare students to enter the field of their chosen major (Art Education, Fine Arts, Photography, Graphic Design) or to continue their studies in graduate school. Approximately 65 percent of the degree requirements are in the creation and study of the visual arts particular to the chosen major. The B.F.A. degree combines the major specific curriculum with visual arts foundation courses, and the College of Arts and Sciences and University general education requirements referred to as the Common Academic Program (CAP).

## Majors include: <br> Bachelor of Arts (B.A.) with a Major in: <br> - Art History <br> - Visual Arts

## Bachelor of Fine Arts (B.F.A.) with Teacher Licensure:

- Art Education


## Bachelor of Fine Arts (B.F.A.) with a Major in:

- Fine Arts
- Graphic Design
- Photography


## Program Descriptions:

## Art History (HOA)

Art history is the study of art and architecture produced within specific cultural contexts as a manifestation of human creativity and as a valuable form of historical documentation. Students learn to appreciate the fundamental and varied roles that the visual arts have played and continue to play in the lives of people around the globe. Toward this end, students learn how images and objects, identified as art, embody, but also condition and control social, religious, cultural, economic, political, and gender dynamics. As an art history major, you will have the opportunity to intern at local museums and galleries, and work closely with art history faculty to develop and present research at undergraduate conferences. Art history majors at the University of Dayton often are encouraged to pursue minors in a variety of fields across the College of Arts and Sciences and the University as a whole.

## Visual Arts (VAR)

The Bachelor of Arts (B.A.) with a major in Visual Arts is a flexible program that emphasizes a broad liberal arts education with supportive studies in art, design, and art history. This degree offers students a breadth of exploration of all areas making up the Department of Visual Arts. Studio and art history requirements constitute 35 to 40 percent of the Visual Arts B.A. degree. To take advantage of the diverse academic environment that is the University of Dayton, students are encouraged to earn a minor or a second major within another discipline. Students may not obtain a dual-degree in Visual Arts and the following: Fine Arts (ART), Graphic Design (GDN), or Photography (PHO). It is permitted to double major in Visual Arts and Art History. In this case, the maximum of 12 semester hours of VAH courses allowed in the Visual Arts major may double count.

## Art Education (FAE)

The Bachelor of Fine Arts with Teacher Licensure, a B.F.A. (E11A) program, offers students expertise in studio practice, art history, aesthetics, and critical analysis of art. As part of your teacher education training, you will learn teaching methodology, safety procedures, organization of materials, and curriculum planning. You will also put your artistic talents to use as you participate in hands-on teaching experiences during all four years. By graduation, you will be prepared to teach art in various school settings, apply your art education skills to other careers, and understand the relationship between visual art and a pluralistic culture in a global society. Field experience in the Dayton area allows students to transform theoretical knowledge into classroom practice. Graduates are well prepared for teaching positions in public or private schools, prekindergarten through grade 12, as well as for master's degree programs.

## Fine Arts (ART)

The Bachelor of Fine Arts (B.F.A.) with a major in Fine Arts is a professional degree program that provides an intensive, in depth exploration of selected fine art media. Students choose an emphasis in ceramics, drawing, painting, printmaking, or sculpture. Divergent thinking and visual literacy are cultivated through critique, continual practice, and the development of formal, technical, and conceptual image-building skills. You will learn to create images and objects that contribute to the preservation and advancement of visual culture through rigorous studio practice. The Bachelor of Fine Arts (BFA) allows you to hone your formal, technical, and conceptual skills and to collaborate with faculty on independent special interest problems. Students graduate prepared to enter the field of fine arts and/or to continue fine art studies in graduate school.

## Graphic Design (GDN)

The Bachelor of Fine Arts (B.F.A.) with a major in Graphic Design is an intensive professional degree program designed to prepare students for careers in graphic and advertising design, electronic media, and related new technologies. Graphic Design at the University of Dayton explores visual communication through a broad range of media, combining art and design foundation courses and the graphic design curriculum within a broad liberal arts education. Preparation is geared for professional careers in a variety of areas within corporations, small businesses, institutions, and government agencies where skills in graphic design, web design, user experience, user interface, packaging, advertising, information design, and environmental design are employed.

## Photography (PHO)

The Bachelor of Fine Arts (B.F.A.) with a major in Photography is a professional degree that provides an intensive, in depth exploration of photographic media. The program provides the most current technologies to develop an informed, personal vision and practice. We offer courses on analogue, digital, alternative and historic darkroom practices and provide cutting-edge digital media and state-of-the-art darkroom facilities. Students can explore socially-engaged art through courses that highlight sustainability, social justice, and global learning in conjunction with community partners and study-abroad programs. Through course work, you will assemble a portfolio and exhibit professional bodies of work in both film and digital media. Your portfolio can be presented to potential employers, curators, and art professionals, or used towards application to graduate programs for advanced studies.

## Art and Design Minors

- A Minor in Art History consists of 18 semester hours. (For majors in Visual Arts, only six semester hours of the minor may double count.)
- A Minor in Visual Arts consists of 21 semester hours. (Not open to majors in Art Education, Fine Arts, Graphic Design or Photography.)
- A Minor in Fine Arts consists of 21 semester hours. (Not open to majors in Visual Arts.)
- A Minor in Graphic Design consists of 24 semester hours. (Not open to majors in Visual Arts.)
- A Minor in Photography consists of 21 semester hours. (Not open to majors in Visual Art.)

Transfer students seeking an Art and Design minor must complete at least nine of the required semester hours in the Department of Art and Design while in residency at the University of Dayton.

## Art and Design Foundations

Visual arts foundation courses introduce students to fundamental principles, practices, materials, and vocabulary common to all visual arts disciplines. These courses provide a common background of skill development along with an understanding of primary concepts in the visual arts and a basis for critical evaluation. All foundation courses share the objective of preparing students to face the challenges of their specific disciplines.

## Foundations Scholarship Review

During their second year, all Art and Design majors are reviewed by the Art and Design faculty. Participation in the Foundations Scholarship Review is mandatory for all Visual Arts majors. Students must receive a satisfactory review rating before graduating with a visual arts degree. Also included in the review are first and third year students who have been awarded Art and Design Scholarships. The review process is a valuable learning experience for the student and it helps the faculty to recommend ways in which students may build upon their assets and overcome their liabilities. Monetary awards applied toward future tuition are available to a limited number of students whose performance in the review is judged by the faculty to be outstanding.

## Senior Capstone Courses

These courses, required in all majors, bring together the skills, education, ideas, and goals of senior students. They stress an integrated approach to learning and working and they focus on preparing students for their futures beyond the University. They provide a logical continuity that begins with the Art and Design Foundations courses, the Foundations Scholarship Review, and work within the major.

## Faculty

Judith Huacuja, Chairperson
Professors Emeriti: Marcinowski, Niles, Wilkinson
Professors: Crum, Huacuja, Jones, Phelps, Whitaker
Associate Professors: Clarke, Holscher Almazan, Kwon, MatlackWhitaker, Wilbers
Assistant Professors: Bradshaw, Jennings, Sullivan Smith, Thomas-Trout Lecturers: Jones, Kargl, Tsen

## Bachelor of Arts, Art History (HOA) minimum 124 hours

Common Academic Program (CAP)


## Liberal Studies Curriculum

| L2 Proficiency (Proficiency in a language other than English) | $0-11$ |
| :--- | ---: |
| Literature (May include CAP Components) | 3 |
| Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) | 3 |
| Natural Sciences (Satisfies CAP Natural Science) | 11 |
| Social Sciences (Includes CAP Social Science) | 12 |

Major Requirements ..... 45

| VAH 129 | Foundations in Art History (Satisfies CAP Arts) | 3 |
| :--- | :--- | :--- |
| VAH 201 | Survey of Art I | 3 |
| VAH 202 | Survey of Art II | 3 |
| VAH 203 | Survey of Art III | 3 |
| VAH 483 | PostColonial and Global Art Histories | 3 |
| VAH 485 | Art History Seminar (Satisfies CAP Major | 3 |
| VAF 104 | Capstone) |  |
| VAR 299 | Foundation Drawing | 3 |
| Select one from: | Second Year Review | 0 |

VAF 112 Foundation 2-D Design
VAF 117 Foundation 3-D Design


## Bachelor of Arts, Visual Arts (VAR) minimum 124 hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1} 12$

| HST 103 | The West \& the World |  |
| :---: | :---: | :---: |
| REL 103 | Introduction to Religious and Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |

Mathematics 3
Social Science 3
SSC $200 \quad$ Social Science Integrated
Natural Sciences ${ }^{4} \quad 7$

Crossing Boundaries

| Faith Traditions |  |
| :--- | :--- |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative | variab |
| Advanced Study | credit |


| Philosophy and/or Religious Studies |  |
| :--- | ---: |
| Historical Studies ${ }^{5}$ |  |
| Diversity and Social Justice | 3 |
| Major Capstone | $0-3$ |

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

| L2 Proficiency (Proficiency in a language other than English) |  | 0-11 |
| :---: | :---: | :---: |
| Literature (May | clude CAP Components) | 3 |
| Mathematics, ex | cluding MTH 205 (Satisfies CAP Mathematics) | 3 |
| Natural Scienc | (Satisfies CAP Natural Science) | 1 |
| Social Sciences | (Includes CAP Social Science) | 12 |
| Major Requirements |  | 45 |
| VAD 220 | Design Processes I | 3 |
| VAF 104 | Foundation Drawing (Satisfies CAP Arts) | 3 |
| VAF 112 | Foundation 2-D Design | 3 |
| VAF 117 | Foundation 3-D Design | 3 |
| VAF 216 | Design \& Color | 3 |
| VAP 101 | Foundation Photography | 3 |
| VAP 201 | Photography II | 3 |
| or VAP 240 | Digital Processes I |  |
| VAR 299 | Second Year Review | 0 |
| VAR 495 | Senior Project Seminar | 1 |
| VAR 496 | Senior Project, Presentation and Paper (Satisfies CAP Major Capstone) | 3 |
| Select one course from: (Satisfies CAP Arts) |  | 3 |
| VAH 201 | Survey of Art I |  |
| VAH 202 | Survey of Art II |  |
| VAH 203 | Survey of Art III |  |
| Select one VAH course (300/400 level) |  | 3 |
| Select five Visual arts courses ${ }^{1}$ |  | 14 |
| Breadth |  |  |
| VAR 100 | Visual Arts Foundation | 1 |
| Total Hours to total at least |  | 124 |
| of the fourteen hours to be selected from at least two of the following <br> , VAF, VAP, and VAR. Nine of the fourteen hours must be at the |  |  |
| Bachelor of Fine Arts, Art Education (FAE) minimum 134 hours |  |  |
| Common Academic Program (CAP) |  |  |
| *credit hours will vary depending on courses selected |  |  |
| First-Year Humanities Commons ${ }^{1}$ |  | 12 |
| HST 103 | The West \& the World |  |
| ble REL 103 | Introduction to Religious and Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| SSC 200 | Social Science Integrated |  |
| Arts |  | 3 |
| Natural Science |  | 7 |

Literature (May include CAP Components) 3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) 3
Natural Sciences (Satisfies CAP Natural Science) 11
Social Sciences (Includes CAP Social Science) 12
Major Requirements 45
VAD 220 Design Processes I 3
VAF 104 Foundation Drawing (Satisfies CAP Arts) 3
VAF 112 Foundation 2-D Design 3
VAF 117 Foundation 3-D Design 3
VAF 216 Design \& Color 3
VAP 101 Foundation Photography 3
VAP 201 Photography II 3
or VAP 240 Digital Processes I
VAR 299 Second Year Review 0
VAR 495 Senior Project Seminar 1
Senior Project, Presentation and Paper (Satisfies 3 CAP Major Capstone)
Select one course from: (Satisfies CAP Arts) 3
VAH 201 Survey of Art I
VAH 202 Survey of Art II
VAH 203 Survey of Art III
Select one VAH course (300/400 level) 3
Select five Visual arts courses ${ }^{1} 14$

## Breadth

VAR $100 \quad$ Visual Arts Foundation 1
Total Hours to total at least 124
Nine of the fourteen hours to be selected from at least two of the following: VAD, VAF, VAP, and VAR. Nine of the fourteen hours must be at the 300-400 level.

## Bachelor of Fine Arts, Art Education (FAE)

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

ENG 200 Writing Seminar II
CMM 100 Principles of Oral Communication
Mathematics 3
Social Science 3

Arts 3
Natural Sciences ${ }^{4} 7$

## Liberal Studies Curriculum




| VAF 253 | Printmaking I |  |
| :---: | :---: | :---: |
| VAF 240 | Ceramics I |  |
| VAF 242 | Ceramics II: Wheel Throwing |  |
| VAF 232 | Sculpture I |  |
| VAF 370 | Illustration I |  |
| Select one VAH course (300/400 level) (May include CAP Advanced 3 Historical Studies) |  |  |
| Select one VAP course |  | 3 |
| Select Visual Arts courses (May include CAP Components) |  | 12 |
| Select two marketing or two communication courses |  | 6 |
| Breadth |  |  |
| VAR 100 | Visual Arts Foundation | 1 |
| Total Hours to total at least |  | 131 |
| Bachelor of Fine Arts, Photography (PHO) minimum 131 hours |  |  |

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |  |
| :---: | :---: | :---: |
| REL 103 | Introduction to Religious and Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |


| SSC 200 | Social Science Integrated |
| :--- | :--- |
| Arts | 3 |

Natural Sciences ${ }^{4} 7$

| Crossing Boundaries | variab |
| :--- | :--- |
|  | credit |

Faith Traditions
Practical Ethical Action
Inquiry
Integrative

Advanced Study

Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice 3
Major Capstone 0-3
Completed with ASI 110 and ASI 120.
Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.
Must include two different disciplines and accompanying lab.
U.S. History AP credit will not satisfy this requirement.

Major Requirements
variable

| VAF 104 | Foundation Drawing | 3 |
| :--- | :--- | :--- |
| VAF 112 | Foundation 2-D Design | 3 |
| VAF 117 | Foundation 3-D Design | 3 |
| VAF 204 | Drawing II | 3 |
| VAF 216 | Design \& Color | 3 |
| VAH 382 | History of Photography I | 3 |
| VAH 480 | Modernisms in Art | 3 |
| VAH 482 | History of Photography II | 3 |
| VAP 101 | Foundation Photography (Satisfies CAP Arts) | 3 |
| VAP 201 | Photography II | 3 |
| VAP 240 | Digital Processes I | 3 |
| VAP 302 | Color Photography I | 3 |
| VAP 410 | Advanced Photography | 3 |
| VAP 498 | Senior/Professional Seminar- Photography | 3 |
| VAP 499 | Senior Seminar II (Satisfies CAP Major Capstone) | 1 |
| VAR 299 | Second Year Review | 0 |
| Select two courses from: | 6 |  |


| VAP 320 | Studio Practice I |
| :--- | :--- |
| VAP 330 | Alternative Photography I |
| VAP 340 | Digital Processes II |

Select two courses from: 6
VAH 201 Survey of Art I
VAH 202 Survey of Art II
VAH 203 Survey of Art III
Select three VAP courses (300/400 level) 9
Select Visual Arts courses (May include CAP Components) 8

Breadth
VAR $100 \quad$ Visual Arts Foundation 1
Total Hours to total at least 131

## Minor in Art History (HOA)

Art History
Select two courses from: 6

| VAH 201 | Survey of Art I |  |
| :---: | :--- | :---: |
| VAH 202 | Survey of Art II |  |
| VAH 203 | Survey of Art III | 12 |
| Select four VAH courses (300/400 level) | 18 |  |
| Total Hours |  |  |

credit Minor in Fine Arts (ART)

| Fine Arts |  |  |
| :--- | :--- | ---: |
| VAF 104 | Foundation Drawing | 3 |
| VAF 112 | Foundation 2-D Design | 3 |
| VAH 201 | Survey of Art I | 3 |
| or VAH 202 | Survey of Art II |  |
| or VAH 203 | Survey of Art III | 12 |
| Select four VAF courses | 21 |  |

## Minor in Graphic Design (GDN)

| VAD 220 | Design Processes I | 3 |
| :--- | :--- | :--- |
| VAD 240 | Form \& Concept | 3 |
| VAD 245 | Typography I | 3 |
| VAD 320 | Design Processes II | 3 |
| VAF 112 | Foundation 2-D Design | 3 |
| VAF 216 | Design \& Color | 3 |
| VAH 383 | History of Graphic Design | 3 |
| Select one course from: | 3 |  |
| VAD 318 | Graphic Design for Three Dimensions |  |
| VAD 345 | Typography II |  |
| VAD 360 | Web Design |  |
| VAD 395 | Advertising Design |  |
| VAD 411 | Graphic Design I | 24 |
| Total Hours |  |  |

## Minor in Photography (PHO)

| Photography |  |  |
| :--- | :--- | ---: |
| VAH 382 | History of Photography I | 3 |
| VAP 101 | Foundation Photography | 3 |
| VAP 201 | Photography II | 3 |
| VAP 240 | Digital Processes I | 3 |
| Select three VAP courses (300/400 level) | 9 |  |
| Total Hours | 21 |  |

## Minor in Visual Arts (VAR)

| Visual Arts |  |  |
| :--- | :--- | ---: |
| VAD 220 | Design Processes I | 3 |
| VAF 104 | Foundation Drawing | 3 |
| VAF 112 | Foundation 2-D Design | 3 |
| VAH 201 | Survey of Art I | 3 |
| or VAH 202 | Survey of Art II |  |
| or VAH 203 | Survey of Art III | 3 |
| VAP 101 | Foundation Photography | 6 |
| Select two VAD, VAF, VAP and/or VAR courses | 21 |  |

- Bachelor of Arts, Art History (p. 119)
- Bachelor of Arts, Visual Arts (p. 119)
- Bachelor of Fine Arts, Art Education (p. 120)
- Bachelor of Fine Arts, Fine Arts (p. 120)
- Bachelor of Fine Arts, Graphic Design (p. 121)
- Bachelor of Fine Arts, Photography (p. 122)


## Bachelor of Arts, Art History

| First Year |  |  |
| :--- | :---: | ---: |
| Fall | Hours Spring | Hours |
| VAR 100 | 1 ASI 120 (CAP | 8 |
|  | Humanities |  |
|  | Commons) |  |
| ASI 110 (CAP Humanities Commons) | 7 VAH 201 | 3 |
| VAH 129 (CAP Arts) | 3 VAF 112, 117, | 3 |
|  | or VAP 101 |  |
| VAF 104 | 3 CMM 100 | 3 |
|  | (CAP |  |
|  | Communication) |  |



Total credit hours: 124

## Bachelor of Arts, Visual Arts

First Year

| Fall | Hours Spring | Hours |
| :--- | :---: | ---: |
| VAR 100 | 1 ENG 100 | 3,4 |
|  | (CAP |  |
|  | Humanities |  |
| VAF 104 (CAP Arts) | Commons) |  |
|  | 3 HST 103, PHL | 3 |
|  | 103, or REL |  |
|  | 103 (CAP |  |
| VAF 112 | Humanities |  |
|  | Commons) | 3 |


| HST 103, PHL 103, or REL 103 (CAP Humanities | 3 VAF 216 | 3 | VAF 104 (CAP Arts) | 3 EDT 110L | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Commons) |  |  | VAF 112 | 3 VAF 117 | 3 |
| HST 103, PHL 103, or REL 103 (CAP Humanities | 3 VAP 101 | 3 | VAP 101 | 3 VAF 216 | 3 |
| Commons) |  |  | HST 103, PHL 103, or REL 103 (CAP Humanities | 3 CMM 100 | 3 |
| CMM 100 (CAP Communication) | 3 |  | Commons) | (CAP |  |
|  | 16 | 15-16 |  | Communication) |  |
| Second Year |  |  | HST 103, PHL 103, or REL 103 (CAP Humanities | 3 ENG 100 | 3,4 |
| Fall | Hours Spring | Hours | Commons) | (CAP |  |
| ENG 200 (CAP Writing Seminar) | $\begin{aligned} & \text { 3-4 VAH 201, 202, } \\ & \text { or } 203 \end{aligned}$ | 3 |  | Humanities Commons) |  |
| VAD 220 | 3 VAP 201 or 240 | 3 |  | HST 103, PHL 103, or REL 103 (CAP | 3 |
| VAR 299 | 0 Literature <br> or general <br> elective | 3 |  | Humanities Commons) |  |
| Visual Arts elective |  | 3 | Second Year 16 |  | 18-19 |
|  | (CAP Social |  |  |  |  |
|  | Science) |  | Fall | Hours Spring | Hours |
| Literature or general elective | 3 Language 141 | 4 | VAF 204 | 3 VAF 226 | 3 |
|  |  |  | VAH 201, 202, or 203 | 3 VAF 253 | 3 |
| Language 101 | 4 |  | VAF 232 | 3 EDT 207 | 3 |
|  | 16-17 | 16 | VAE 231 | 2 EDT 207L | 0 |
| Third Year |  |  | VAR 299 | $\begin{aligned} & 0 \text { VAH } 201,202 \text {, } \\ & \text { or } 203 \end{aligned}$ | 3 |
| Fall | Hours Spring | Hours |  |  |  |
| VAH 300/400 level | 3 Visual Arts elective | 3 | ENG 200 (CAP Writing Seminar) | 3-4 CAP Natural Science | 3 |
| Visual Arts elective | 3 MTH (CAP <br> Mathematics) | 3 | SSC 200 (CAP Social Science) | 3 | 15 |
|  |  |  |  | 17-18 |  |
| Social Science - intro level | 3 Social Science 300/400 level | 3 | Third Year |  |  |
|  |  |  | Fall | Hours Spring | Hours |
|  |  |  | VAF 240 | 3 VAF 304 | 3 |
| INSS (CAP Natural Science w/lab) | 4 INSS (CAP <br> Natural Science w/ lab) | 4 | VAH 470 or 471 | 3 VAE 383 | 3 |
|  |  |  | EDT 305 (CAP Practical Ethical Action, Adv.Philosophy) | $\begin{aligned} & 3 \text { VAH } 470 \text { or } \\ & 471 \end{aligned}$ | 3 |
| Language 201 or contextual course | 3 CAP Adv <br> Historical <br> Studies/ <br> Integrative | 3 | MTH (CAP Mathematics) | 3 EDT 340 (CAP <br> Integrative, <br> Diversity <br> \& Social <br> Justice) | 3 |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  | 16 | 16 |  |  |  |
| Fourth Year |  |  | Visual Arts elective | 6 EDT 340L | 0 |
|  |  | Hours |  | CAP Natural Science w/ lab (CAP Inquiry) | 4 |
| Fall | Hours Spring |  |  |  |  |
| VAR 495 | 1 VAR 496 <br> (Satisfies <br> CAP Major Capstone) |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  | 16 |
|  |  |  | 18 |  |  |
| Visual Arts elective | 3 Visual Arts elective | 2 | Fall | Hours Spring | Hours |
| CAP Adv PHL/REL (Practical Ethical Action / Faith Traditions) |  | 3 | VAE 483 | 3 EDT 477 | 12 |
|  | 3 CAP Adv PHL/REL <br> (Practical Ethical Action / Faith Traditions) |  | VAE 498 (Satisfies CAP Major Capstone) | 3 Visual Arts elective | 3 |
|  |  |  |  |  |  |
|  |  |  | EDT 459 <br> VAH 320 or 483 (CAP Advanced Historical Studies) | 3 VAE 499 | 1 |
|  |  |  |  | 3 |  |
|  |  |  | CAP Faith Traditions, Adv PHL/REL | 3 |  |
| Social Science - elective | 3 CAP Diversity and Social Justice | 3 | Visual Arts electives | 3 | 16 |
|  |  |  |  | 18 |  |
| INSS Natural Science | 3 CAP Inquiry | 3 | Total credit hours: 134-136 |  |  |
| General elective | 2 |  | Bachelor of Fine Arts, Fine Arts |  |  |
|  | 15 | 14 |  |  |  |
| Total credit hours: 124-126 |  |  | First Year |  |  |
| Bachelor of Fine Arts, Art Education |  |  | Fall | Hours Spring | Hours |
|  |  |  | VAR 100 | 1 VAF 117 | 3 |
| First Year |  |  | VAF 104 (CAP Arts) | 3 VAF 204 | 3 |
| Fall | Hours Spring | Hours | VAF 112 | 3 VAF 216 | 3 |
| VAR 100 | 1 EDT 110 | 3 |  |  |  |


| VAP 101 | 3 ENG 100 | 3,4 | VAF 104 (CAP Arts) | 3 VAF 204 | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | (CAP |  | VAF 112 | 3 VAF 216 | 3 |
|  | Humanities Commons) |  | VAP 101 | $\begin{aligned} & 3 \text { ENG } 100 \\ & \text { (CAP } \end{aligned}$ | 3,4 |
| HST 103, PHL 103, or REL 103 (CAP Humanities | 3 HST 103, PHL | 3 |  | Humanities |  |
| Commons) | 103, or REL |  |  | Commons) |  |
|  | 103 (CAP |  | HST 103, PHL 103, or REL 103 (CAP Humanities | 3 HST 103, PHL | 3 |
|  | Humanities |  | Commons) | 103, or REL |  |
|  | Commons) |  |  | 103 (CAP |  |
| HST 103, PHL 103, or REL 103 (CAP Humanities | 3 |  |  | Humanities |  |
| Commons) |  |  |  | Commons) |  |
|  | 16 | 15-16 | HST 103, PHL 103, or REL 103 (CAP Humanities | 3 |  |
| Second Year |  |  | Commons) |  |  |
| Fall | Hours Spring | Hours |  | 16 | 15-16 |
| VAH 201, 202, or 203 | 3 VAF 226 or | 3 | Second Year |  |  |
|  | 232 |  | Fall | Hours Spring | Hours |
| VAF 203 | 3 VAF 253 | 3 | VAD 220 | 3 VAD 245 | 3 |
| VAF 226 or 232 | 3 VAF 326 | 3 | VAD 240 | 3 VAF 226, 253, | 3 |
| VAR 299 | $\begin{aligned} & 0 \text { VAH 201, 202, } \\ & \text { or } 203 \end{aligned}$ | 3 |  | $\begin{aligned} & 240,242,232, \\ & \text { or } 370 \end{aligned}$ |  |
| ENG 200 (CAP Writing Seminar) | $\begin{gathered} 3-4 \text { CMM } 100 \\ \text { (CAP } \end{gathered}$ | 3 | VAH 201, 202, or 203 | $\begin{aligned} & 3 \text { VAH 201, 202, } \\ & \text { or } 203 \end{aligned}$ | 3 |
|  | Communication) |  | VAP 201, 240, 302, or 330 | 3 CMM 100 | 3 |
| CAP Natural Science w/lab | 4 SSC 200 | 3 |  | (CAP |  |
|  | (CAP Social |  |  | Communication) |  |
|  | Science) |  | VAR 299 | $\begin{aligned} & 0 \text { SSC } 200 \\ & \text { (CAP Social } \\ & \text { Science) } \end{aligned}$ | 3 |
|  | 16-17 | 18 |  |  |  |
| Third Year |  |  |  |  |  |
| Fall | Hours Spring | Hours | ENG 200 (CAP Writing Seminar) | 3-4 MTH (CAP | 3 |
| VAF 332 or 353 | 3 VAF 332 or | 3 |  | Mathematics) |  |
|  | 353 |  |  | 15-16 | 18 |
| VAF 498 | 3 VAH 300/400 elective | 3 | Third Year |  |  |
|  |  |  | Fall | Hours Spring | Hours |
| VAF Emphasis |  | 3 | VAD 320 | 3 VAD 360 | 3 |
|  | Emphasis |  | VAD 345 | 3 VAD 411 | 3 |
| VAH 483 (CAP Integrative, Adv. Historical Studies) | 3 Visual Arts elective | 3 | VAH 383 | 3 VAH 300/400 | 3 |
|  |  |  | Visual Arts Elective | 3 MKT/CMM | 3 |
| MTH (CAP Mathematics) | 3 CAP Natural Science | 3 |  | Elective |  |
|  |  |  | CAP Natural Science w/lab | 4 Natural | 3 |
| CAP Faith Traditions | 3 |  |  | Science |  |
|  | 18 | 15 |  | (CAP Natural |  |
| Fourth Year |  |  |  | Science / |  |
| Fall | Hours Spring | Hours |  | Inquiry) |  |
| VAF 499 (Satisfies CAP Major Capstone) | $1 \text { VAF }$ | 3 |  | CAP | 3 |
|  |  |  |  | Advanced |  |
| VAF Emphasis | 3 Visual Arts <br> elective | 3 |  | Practical |  |
|  |  |  |  | Ethical Action |  |
| Visual Arts elective | 3 Visual Arts elective | 3 |  | 16 | 18 |
| CAP Advanced Philosophy/Religious Studies | 3 CAP | 3 | Fourth Year |  |  |
|  |  |  |  | Hours Spring | Hours |
|  | Advanced |  |  |  |  |
|  | Philosophy/ |  | VAD 412 | 3 VAD 499 | 3 |
|  | Religious |  |  | (Satisfies |  |
|  | Studies |  |  | CAP Major |  |
| CAP Inquiry | 3 CAP Diversity | 3 |  | Capstone) |  |
|  | and Social |  | VAD 498 | 3 VAD 415 | 3 |
|  | Justice |  | Visual Arts elective | 3 Visual Arts | 3 |
| CAP Practical Ethical Action | 3 General | 3 |  | elective |  |
|  | elective |  | MKT/CMM elective | 3 Visual Arts elective | 3 |
|  | 16 | 18 |  |  |  |
| Total credit hours: 132-134 |  |  | CAP Advanced Religious Studies/Faith Traditions | 3 CAP | 3 |
|  |  |  |  | Advanced |  |
| Bachelor of Fine Arts, Graphic Design |  |  |  | Historical |  |
|  |  |  |  | Studies/ |  |
|  |  |  |  | Integrative |  |
| First Year |  |  |  |  |  |
| Fall | Hours Spring | Hours |  |  |  |
| VAR 100 | 1 VAF 117 | 3 |  |  |  |


| CAP Diversity and Social Justice |
| :--- |
| Total credit hours: 131-133 |
| Bacherorof cine Ares, |

First Year
Fall
VAR 100
VAF 104 (CAP Arts)
VAF 112
VAP 101
HST 103, PHL 103, or REL 103 (CAP Humanities
Commons)

| HST 103, PHL 103, or REL 103 (CAP Humanities Commons) | 3 |  |
| :---: | :---: | :---: |
|  | 16 | 15-16 |
| Second Year |  |  |
| Fall | Hours Spring | Hours |
| VAH 201, 202, or 203 | 3 VAP 302 | 3 |
| VAP 240 | 3 VAH 382 | 3 |
| Visual Arts elective | $\begin{aligned} & 3 \text { VAP 320, 330, } \\ & \text { or } 340 \end{aligned}$ | 3 |
| VAR 299 | 0 CAP Natural Science | 3 |
| ENG 200 (CAP Writing Seminar) | $\text { 3-4 SSC } 200$ <br> (CAP Social Science) | 3 |
| CAP Natural Science w/lab | $\begin{aligned} & 4 \text { CMM } 100 \\ & \text { (CAP } \\ & \text { Communication) } \end{aligned}$ | 3 |
|  | 16-17 | 18 |
| Third Year |  |  |
| Fall | Hours Spring | Hours |
| VAH 201, 202, or 203 | 3 VAP 410 | 3 |
| VAP 320, 330, or 340 | 3 VAH 482 | 3 |
| Visual Arts elective | 5 VAP elective 300/400 level | 3 |
| MTH (CAP Mathematics) | 3 CAP Faith Traditions | 3 |
| CAP Integrative | 3 CAP Practical Ethical Action | 3 |
|  | 17 | 15 |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| VAP 498 | 3 VAP 499 <br> (Satisfies <br> CAP Major Capstone) | 1 |
| VAH 480 | 3 VAP elective 300/400 | 3 |
| VAP elective 300/400 | 3 Visual Arts elective | 3 |
| CAP Advanced Philosophy/Religious Studies | 3 CAP <br> Advanced Philosophy/ Religious Studies | 3 |
| CAP Inquiry | 3 CAP Diversity and Social Justice | 3 |


| CAP Advanced Historical Studies | 3 General <br> elective | 3 |
| :---: | :---: | :---: |
| 18 | 16 |  |

Total credit hours: 131-133

## Visual Arts-Art Education Courses

## VAE 101. Early Childhood Art Education. 2 Hours

Acquaints students, especially those seeking Early Childhood Licensure, with the principles and concepts of art and with the various materials and techniques used in artistic expression. Open to all students. Studio fee.

VAE 231. Introduction to Art Education. 2 Hours
An introduction to the pedagogical, philosophical, and psychological aspects of teaching the arts. Topics will include: technology, national and state standards, history, learners with special needs, reading in the arts, and professional associations. Prerequisite(s): EDT 110, EDT 110L. Corequisite(s): Field experience.

## VAE 232. Integrating Visual Culture. 3 Hours

Developing knowledge, skills, attitudes and pedagogical approaches to integrating visual culture theory and methodology into classrooms for early childhood, middle childhood and the adolescent learner.

VAE 383. Foundation of Art Education. 3 Hours
Introduction to the philosophy, history, and theory of teaching art to prekindergarten through grade eight students with varied needs and abilities. Art education majors only or permission. Prerequisite(s):
EDT 110, EDT 110L, EDT 207, EDT 207L; permission of instructor and department chairperson. Corequisite(s): Field experience.

## VAE 483. Teaching Visual Arts. 3 Hours

Study of curriculum, planning, theory, and practice for teaching visual arts to students grades seven through twelve. Art Education majors only. Prerequisite(s): EDT 110, EDT 110L, EDT 207, EDT 207L, EDT 208; VAE 231, VAE 383; permission of instructor and department chairperson. Corequisite(s): EDT 305, EDT 340, EDT 340L, EDT 459.

## VAE 483W. Elementary \& Secondary School Art. 3 Hours

Workshop to give the student of elementary and secondary education new approaches to teaching studio arts, art criticism, art history, and aesthetics.

## VAE 490. Special Problems. 1-6 Hours

Course for advanced individual work in art education. Approval based on academic standing and permission of instructor. Repeatable up to fifteen semester hours. .

VAE 498. Senior Research and Portfolio. 3 Hours
Capstone course to be taken in the first semester of the senior year and is a graduation requirement for the B.F.A. in art education majors. Students further their preparation for vocation in the field of art education by examining three areas within the discipline. Students engage in a selfselected directed research inquiry into contemporary theoretical and pedagogical issues facing the field of art education. Students prepare for licensure assessments and develop the artist component of their teaching portfolio. Prerequisite(s): VAE 383. Corequisite(s): VAE 483.

## VAE 499. Senior Presentation. 1 Hour

Individual research refinement, public presentation and defense of the work. Students engage in mock-interview and portfolio presentations in preparation for the job market. Course required for all BFA Art Education majors. Prerequistie(s): VAE 498. Co-requisite(s): EDT 477.

## Visual Arts-Art History Courses

VAH 101. Introduction to the Visual Arts. 3 Hours
Thematically-based, non-chronological introduction that covers the fundamental and varied roles that the visual arts have played and continue to play in the human experience. Open to all students.

## VAH 129. Foundations in Art History. 3 Hours

An introduction to the conceptual and evaluative practices undertaken in the study of art history, with an introduction to contemporary and global art histories. Students engage in a semester-long investigation of the question "What is art?" by researching diverse artistic practices from a variety of cultures and historical eras. Emphasis is placed on critical engagement with art and the development of a comparative approach to understanding the various roles art plays in society. This course is open to all majors, especially honors students, and is a required course for art history majors.

## VAH 201. Survey of Art I. 3 Hours

Survey of Western art from pre-history through the late medieval period. Open to all students.

## VAH 202. Survey of Art II. 3 Hours

Survey of Western art from the late medieval period through the Baroque period.

## VAH 203. Survey of Art III. 3 Hours

Survey of Western art from the mid-eighteenth to twenty-first centuries.

## VAH 310. History of Art and Activism. 3 Hours

This interdisciplinary art history course examines socially engaged art practices that create public dialogue and effect social, cultural and political change. Through lectures, readings, discussion, images, film and guest artists, students engage in dialogue about modern and contemporary art focused on topics related to social justice. The course presents art works that address racial, ethnic and cultural identity, geopolitical diversity, structures that create marginalization, and artistic practices that seek to support human rights and social justice. This course specifically addresses social commentary and civic responsibility as important components of contemporary visual arts.

## VAH 320. Latin American Art. 3 Hours

Survey of Latin American art history from the 19th century to the present. Prerequisite(s): HST 103.

## VAH 330. Arts of Asia. 3 Hours

Survey of Asian art history from circa 1500 BC to the present. Open to all students.

## VAH 350. Western Architecture. 3 Hours

Introduction to the history, theory, and practice of Western architecture from pre-history through the contemporary period. Open to all students.

## VAH 360. Art History \& Feminism. 3 Hours

Introduction to feminist approaches to art history and women artists from the medieval period to the present. Open to all students.

## VAH 370. American Art. 3 Hours

Introduction to American art and architecture from the colonial period to the present. Open to all students.

## VAH 382. History of Photography I. 3 Hours

History of the cultural, social, and aesthetic roles of photography from the camera obscura to 1945. Emphasis on the changing practice and perception of the medium. Open to all students.

## VAH 383. History of Graphic Desing. 3 Hours

Study of the significant developments, movements, and figures in the history of graphic design with an emphasis on the twentieth century. Open to all students.

## VAH 450. Italian Renaissance Art. 3 Hours

Introduction to the painting, sculpture, architecture, and material culture of Italy between c. 1300 and c. 1550, with a particular emphasis on the religious, political, and social dimensions of the production, purposes, and reception of art and material culture in the Renaissance.

## VAH 460. Baroque Art. 3 Hours

Study of the major painters, sculptors, and architects of the seventeenth century. Prerequisite(s): VAH 202 or permission of instructor and department chairperson.

## VAH 470. Nineteenth Century Art I. 3 Hours

Study of the major artists and movements in European art from NeoClassicism to the beginnings of Realism. Prerequisite(s): VAH 203 or permission of instructor and department chairperson.

## VAH 471. Nineteenth Century Art II. 3 Hours

Study of the major artists and movements in European art from Realism through Art Nouveau. Prerequisite(s): VAH 470 or permission of instructor and department chairperson.

## VAH 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topc may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## VAH 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## VAH 480. Twentieth Century Art I. 3 Hours

Study of the major movements and artists in the painting, sculpture, architecture, and other media from 1900 to 1945. Open to all students.
VAH 482. History of Photography II. 3 Hours
The history of photography from 1945 to the present. Examines the medium as a potent force in modern and contemporary culture and as a constantly evolving form of art and tool of communication. Open to all students.

## VAH 483. PostColonial and Global Art Histories. 3 Hours

Study of the aesthetic philosophies and visual cultures from different regions of the world 1960 to the present. The course draws together perspectives on global cultures and diverse art histories in order to analyze broad social issues and postmodern cultural movements. Open to all students. Prerequisite(s): HST 103.

## VAH 485. Art History Seminar. 3 Hours

Art History Senior Capstone course in which students develop an understanding of the history and methodologies of art history as a discipline. Students complete a senior research paper and give a public presentation of their research that is mentored and reviewed by faculty and peers. Additional emphasis is on the exploration of vocation and career directions arising from the study of art history as an undergraduate major. Specific to this purpose is the development by each student of a professional art historian's portfolio of writings, including a curriculum vitae, a statement of career goals, and a compilation of professional resources. Prerequisite(s): Permission of instructor.

## VAH 490. Special Problems. 1-5 Hours

Advanced, independent study with faculty direction in art history. Prerequisite(s): One art history course or permission of instructor and department chairperson.

## Visual Arts-Fine Arts Courses

## VAF 104. Foundation Drawing. 3 Hours

Introduction to the experience of two-dimensional visual form through the act of observational drawing. The focus is on learning fundamental drawing elements and principles and understanding these elements and principles through visible and consistent practice. Fundamental issues pertaining to the creation of images are understood through a process of selection and an arrangement of visual elements to create a drawing. Drawing materials include pencil, charcoal, conté crayon, and pen and ink.

## VAF 112. Foundation 2-D Design. 3 Hours

Study of the underlying elements and principles of design as they are used in two-dimensional composition and the creation of illusionistic three-dimensional space. .
VAF 117. Foundation 3-D Design. 3 Hours
Introduction to basic principles and practices of design in three dimensions. Emphasis on current theory and construction techniques using a variety of media and methods.

## VAF 203. Drawing Through the Process. 3 Hours

An investigation and examination of the drawing process, of mark making, and experimental practices. An emphasis will be placed on contemporary, conceptual, and creative directions in drawing. Students are exposed to and challenged by a series of studio and research-based problems that test the limitations and hidden opportunities within established drawing habits and conventional practices.

## VAF 204. Drawing II. 3 Hours

Emphasis on figure drawing with work from the nude model and the skeleton. Study of proportion, rendering volume, and developing expressive drawing skills in a variety of drawing media. Prerequisite(s): VAF 104.

## VAF 216. Design \& Color. 3 Hours

The study of color based on historical and contemporary color theories and the use of color in expressing and integrating design concepts. Prerequisite(s): VAF 112 or permission of department chairperson.

## VAF 225. Painting for Non-Majors. 3 Hours

Introduction to the history, fundamental principles, materials, tools, and methods of painting, emphasizing the spatial and expressive qualities of color, composition, and pictorial design. Not open to majors or minors in the Department of Visual Arts.

VAF 226. Painting I. 3 Hours
Introduction to the history, fundamental principles, materials, tools, and methods of painting. Prerequisite(s): VAF 104, VAF 112 or by permission.

VAF 228. Watercolor I. 3 Hours
Principles and techniques of transparent watercolor. Emphasis on technical mastery. Prerequisite(s): (VAF 104, VAF 112, VAF 216) or permission of department chairperson.

## VAF 230. Anatomy Drawing for Non-Majors. 3 Hours

Drawing course introduces non-art students to drawing the human figure and anatomy. Students will learn observational drawing skills and apply these skills to drawing the human body and anatomy from nude models, the skeleton, and muscle casts and renderings. Students will obtain a background in the art of anatomical drawing and practice.

## VAF 232. Sculpture I. 3 Hours

Consideration of forms as a means of developing an understanding of mass, shape, and control of medium. The use of various materials such as wood, plaster, and clay, with emphasis on integrating material with personal expression.

## VAF 240. Ceramics I. 3 Hours

Introduction to basic methods of working in clay using coil and slab techniques.

## VAF 242. Ceramics II: Wheel Throwing. 3 Hours

Introduction to basic methods of working clay using the wheel.
VAF 253. Printmaking I. 3 Hours
Introduction to the traditional printmaking methods of woodcut and intaglio. Instruction in edition-printing techniques and curating of prints. . Prerequisite(s): (VAF 104, VAF 112) or permission of department chairperson.

## VAF 304. Drawing III. 3 Hours

Continuation of work done in VAF 204 with an emphasis on the development of finished figure drawings. Study of anatomy and the rendering of convincing volumes in space. Prerequisite(s): VAF 204.

## VAF 325. Figure Painting. 3 Hours

Painting from the model with a variety of media. Traditional and contemporary approaches to the figure. Prerequisite(s): ((VAF 204 or VAF 304), VAF 226) or permission of department chairperson.

## VAF 326. Painting II. 3 Hours

Painting with oils or acrylics; continuing study of the principles and techniques of painting, with emphasis on personal expression and experimentation. Prerequisite(s): (VAF 226 or VAF 228) or permission of department chairperson.

## VAF 328. Watercolor II. 3 Hours

Continuing investigation of watercolor techniques, both traditional and experimental. Still life, figure, landscape, and abstraction. Prerequisite(s): VAF 228 or permission of department chairperson.

## VAF 332. Sculpture II. 3 Hours

Continued exploration of three-dimensional concepts and materials, concentrating on wood, stone, and metal. Prerequisite(s): VAF 232 or permission of department chairperson.

## VAF 333. Sculpture III. 3 Hours

Exploration of advanced sculptural skills, concepts, and processes. This course offers advanced investigation of sculpture as it relates to technical proficiency and the evolution of a personal aesthetic vision. Prerequisite(s): VAF 332 or permission of the Chair.

## VAF 342. Ceramics III. 3 Hours

Expanded exploration of skills, concepts, and processes introduced in VAF 240 hand building or VAF 242 wheel thrown ceramic forms, with emphasis on building techniques, materials, glazing, and firing processes. Prerequisite(s): (VAF 240 or 242 ) or permission of instructor.

## VAF 353. Printmaking II. 3 Hours

Advanced work in woodcut, monoprint and intaglio, including acrylic process and color etchings. Prerequisite(s): VAF 253.

## VAF 370. Illustration I. 3 Hours

Attention to conceptual, visual, and technical development. Exploration of media and techniques employed by the illustrator in creating images for printed communication. Prerequisite(s): VAF 104, VAF 204.

## VAF 380. Illustration II. 3 Hours

Interpretation and representation of concepts, products, or stories for magazines, books, newspapers, and advertising. Continued technical development with a variety of materials, media, and techniques. Prerequisite(s): VAF 370.
VAF 404. Advanced Investigations in Drawing. 3 Hours Advanced studio course - focus on contemporary drawing practices. Further investigation and development of students' interests and material choices in developing a cohesive body of work. Emphasis on growth in personalized imagery reinforced by continued growth of technical skills and conceptual development. Prerequisite(s): VAF 304 or permission of Chairperson.

## VAF 426. Painting III. 3 Hours

Directed advanced studio problems; contemporary issues in painting. Repeatable up to nine semester hours. Studio fee. Prerequisite(s): (VAF 325 or VAF 326) or permission of department chairperson.

## VAF 427. Advanced Investigations in Painting. 3 Hours

Advanced studio focuses on contemporary painting practices and allows students to further investigate and develop their own interests and choices of materials as they work toward a cohesive body of work. Emphasis on growth in personalized imagery reinforced by continued growth of technical skills and conceptual development. Prerequisite(s): VAF 426 or by permission.

## VAF 433. Advanced Investigations in Sculpture. 3 Hours

Advanced studio focuses on contemporary sculptural practices and allows students to further investigate and develop their own interests and choices of materials as they work toward a cohesive body of work. Emphasis on growth in personalized imagery reinforced by continued growth of technical skills and conceptual development. Prerequisite(s): VAF 432 or by permission.

## VAF 442. Advanced Investigations in Ceramics. 3 Hours

Advanced studio course. Focus on contemporary ceramic practices; allows students to further investigate and develop their own interests and choices of materials and develop a cohesive body of work. Emphasis on growth in personalized imagery reinforced by continued growth of technical skills and conceptual development. Prerequisite(s): VAF 342 or permission of Chairperson.

## VAF 453. Printmaking III. 3 Hours

Advanced work in printmaking processes with an emphasis on the production of multi-color editions. Prerequisite(s): VAF 353.
VAF 459. Advanced Investigations in Printmaking. 3 Hours
Advanced studio focuses on contemporary printmaking practices and allows students to further investigate and develop their own interests and choices of materials as they work toward a cohesive body of work. Emphasis on growth in personalized imagery reinforced by continued growth of technical skills and conceptual development. Prerequisite(s): VAF 253 , VAF 353 , VAF 453 or by permission of instructor.

## VAF 470. Illustration III. 3 Hours

Focus on developing an individual point of view and illustration style. Prerequisite(s): VAF 380.

## VAF 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the departmental chairpersons. Prerequisite(s): Approval of University Honors Program.

## VAF 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## VAF 490. Special Problems. 1-5 Hours

Course for advanced individual work in fine arts. Approval based on academic standing and permission of instructor. Repeatable up to fifteen semester hours.

## VAF 498. Senior/Professional Seminar- Fine Arts. 3 Hours

Capstone course required of all B.A. and B.F.A. fine arts and art education (E11) majors, to be taken in the first semester of the senior year. Examination of aesthetic, cultural, ethical, and pragmatic issues in preparation for post-graduate experience. Prerequisite(s): Junior standing.

## VAF 499. Senior Thesis. 1 Hour

Capstone course required for all BFA Fine Arts majors. Students examine the aesthetic, cultural, ethical, and pragmatic issues involved in and relating to their chosen discipline. Students complete a senior body of work for exhibition, a thesis paper, a public presentation, and a defense of the work. Prerequisite(s): VAF 498 or permission of department chairperson.

## Visual Arts-Visual Comm Desgn Courses

VAD 211. Fundamentals of Visual Communication Design. 3 Hours Course for non-majors in the basics of design for communication. Attention to page layout, typography, image, graphic style, and information delivery.

## VAD 220. Design Processes I. 3 Hours

Introduction to the processes of graphic design, specifically computer applications, equipment, and concepts as related to print and electronic based graphic design. Additionally, students engage in a survey of materials, assembly strategies, and various vehicles for the designed message. Prerequisite(s): VAF 112.

## VAD 240. Form \& Concept. 3 Hours

Exploration of visual form as means to convey content and meaning. Students enlist principles from art and design foundation courses within the context of graphic design. Design methodologies are introduced and explored, while process and hand skills are stressed. Prerequisite(s): VAF 112, VAF 216.

## VAD 245. Typography I. 3 Hours

Investigation of the history, tradition, discipline, and function of typography as related to visual and verbal communication. Technical, formal, and semantic aspects are explored. Structure, space, and sequence, critical to the typographic message, are stressed. Prerequisite(s): VAD 220, VAD 240.

## VAD 307. Drawing for Graphic Design. 2 Hours

Exploration of materials, procedures, and drawing techniques for design presentations. Prerequisite(s): VAF 104.
VAD 310. Computer Illustration. 3 Hours
Exploration of the use of the computer as tool and medium for the creation and production of image and illustration for print and electronic graphic design. Prerequisite(s): VAD 220, VAD 240.

## VAD 318. Graphic Design for Three Dimensions. 3 Hours

Application of graphic design principles to packaging, product, exhibition, and environmental design. Prerequisite(s): VAD 240, VAD 245; VAF 117.

## VAD 320. Design Processes II. 3 Hours

Advanced exploration into the use of computer technology as means and medium for the implementation, production, and presentation of graphic design. Print design and production, as well as commercial printing prepress are emphasized with additional attention given to production for electronic design vehicles. Prerequisite(s): VAD 220, VAD 240, VAD 245.

## VAD 345. Typography II. 3 Hours

The advanced study of typographic design. Attention to the aesthetic and informational qualities of type in print and electronic communication. Prerequisite(s): VAD 245.

## VAD 351. Motion Design. 3 Hours

Exploration of the generation and application of motion in visual communication. This course builds on graphic design form, methods, technique, and principles to generate dynamic messaging using type, sound, image, and animation. While the computer and appropriate applications are primary tools, hand generated methods for concept and storyboarding are stressed as well. Prerequisite(s): VAD 220, VAD 240, VAD 245, VAD 320.

## VAD 355. Interaction Design. 3 Hours

Investigation of the use of interactivity as applied to the digital and analog landscape. Focus on the design of richly interactive interfaces for current and emerging media (computers, mobile, touch etc.). While some emphasis is on the development and implementation of design vehicles, decided attention is paid to concept and visual effectiveness. Prerequisite(s): VAD 220, VAD 240, VAD 245, VAD 320.

## VAD 360. Web Design. 3 Hours

Investigation of the processes of web design, including concept, information architecture, navigation, interface, and standard languages and technologies for the delivery of content and information. Organization, aesthetics, and user experience are discussed and explored. Prerequisite(s): VAD 220, VAD 240, VAD 245, VAD 320.

## VAD 395. Advertising Design. 3 Hours

Emphasis on print advertising, its creation and presentation. Concept development and attention to advertising layouts that carry motivating images and messages to consumers about products, services, or ideas.

## VAD 411. Graphic Design I. 3 Hours

Development of methodologies utilized for the purpose of generating concepts and effective communication within the context of graphic design. Attention is given to pragmatic and semantic relationships between elements such as typography, image, space, and color. Prerequisite(s): VAD 220, VAD 240, VAD 245, VAD 320.

VAD 412. Graphic Design II. 3 Hours
Development of methodologies utilized for the purpose of generating concepts and effective communication within the context of graphic design. Attention is given to pragmatic and semantic relationships between elements such as typography, image, space, and color. Prerequisite(s): VAD 220, VAD 240, VAD 245, VAD 320, VAD 411.

## VAD 414. Trademark Design. 3 Hours

Advanced study of marks, logos, and symbols as communication and identification elements. Emphasis on conceiving design marks of identity for small businesses, corporations, institutions, products, and/or services. Prerequisite(s): VAD 411.

## VAD 415. Graphic Design III. 3 Hours

The study and design of identification and image systems for products, organizations, institutions, or corporations. Emphasis on continuity in the application of visual communication factors. Prerequisite(s): VAD 412 or permission of department chairperson.

## VAD 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consulatation with the department chairpersons.
Prerequisite(s): Approval of University Honors Program.

## VAD 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved VAD 477; approval of University Honors Program.

## VAD 480. Graphic Design Internship. 1-3 Hours

Opportunities for practical experience in professional working environments. Repeatable up to nine semester hours. Prerequisite(s): Permission of department chairperson.

## VAD 490. Special Problems. 1-3 Hours

A course for advanced individual work in design. Approval based on academic standing and permission of instructor. Repeatable up to fifteen semester hours.

## VAD 497. Portfolio and Paper - Graphic Design. 1 Hour

1 credit hour Capstone course required for BFA Graphic Design majors that is to be taken in the final semester of the senior year. Students complete an undergraduate portfolio and paper to be presented and reviewed by faculty, peers, and professionals in a public forum. Faculty approval of portfolio and paper is required for graduation. Prerequisite(s): VAD 498 or permission of department chairperson.

## VAD 498. Senior/Professional Seminar - Graphic Design. 3 Hours

Capstone course required of all B.F.A. graphic design majors, to be taken in the fall term of the senior year. Examination of aesthetic, cultural, ethical, and pragmatic issues in preparation for post-graduate experience. Prerequisite(s): Senior standing or permission of department chairperson.

## VAD 499. Portfolio and Paper - Graphic Design. 3 Hours

Capstone course required for all BFA Graphic Design majors that is to be taken in the final semester of the senior year. Students complete an undergraduate portfolio and paper, to be presented and reviewed by faculty, peers, and professionals in a public forum. Faculty approval of portfolio and paper is required for graduation. Prerequisite(s): VAD 498 or permission of department chairperson.

## Visual Arts-Photography Courses

VAP 100. Darkroom Photography for Non-Majors. 3 Hours
Emphasis on learning and exploring the visual language of lens-based photographic imagery through a series of technical and creative darkroom assignments. Black and white film and chemical processes will be utilized in the creation of photographs. Students gain an understanding of technical and creative control as well as conceptual practices associated with the medium. This course does not fulfill requirements within the Department of Visual Arts. Studio fee.

## VAP 101. Foundation Photography. 3 Hours

An experiential project-based course utilizing black and white film based photography designed to challenge the student technically, critically, conceptually, and in the aesthetic problems unique to the photographic medium. Emphasis is placed on the development of individual expression, critical, creative and technical growth through the photographic medium.

## VAP 200. Digital Photography for Non-Majors. 3 Hours

An emphasis on learning and exploring the visual language of lens-based digital photographic imagery through a series of technical and creative digital assignments. Using various types of digital capture devices, some examples are cell phones, consumer grade digital cameras and scanners. Macintosh computers, and Adobe Photoshop software will be utilized in the creation of photographs. Students gain an understanding of technical and creative control as well as conceptual practices associated with the digital photographic medium. Course does not fulfill Visual Arts degree requirements.

## VAP 201. Photography II. 3 Hours

Variety of challenging projects develop increased technical competence, greater visual awareness, personal expression, and sustained creative growth. Prerequisite(s): VAP 101 or equivalent.

## VAP 240. Digital Processes I. 3 Hours

Introduction to the practice, theory, aesthetics, and ethics of digital photography, including direct capture, scanning, enhancement, compositing, manipulation, and high-quality printing. Prerequisite(s): VAP 101 or permission of department chairperson.

## VAP 302. Color Photography I. 3 Hours

Introduction to techniques and aesthetics of color photography. Students utilize color sensitive films, papers, and digital technologies in the exploration of color photography. Prerequisite(s): (VAP 101, VAP 240) or permission of department chairperson.

## VAP 320. Studio Practice I. 3 Hours

Extensive use of large format camera, studio grip equipment, tungsten and electronic flash lighting techniques; still-life and portrait photography in a studio environment. Prerequisite(s): VAP 201.

## VAP 321. Studio Practice II. 3 Hours

Emphasis on the production of a professional-quality portfolio which will demonstrate advanced knowledge of the studio and image production. Prerequisite(s): VAP 320.

## VAP 330. Alternative Photography I. 3 Hours

Introduction to specialized image production utilizing silver and nonsilver photographic processes. Emphasis on technical and aesthetic aspects of alternative photographic practice. Prerequisite(s): VAP 101.

## VAP 331. Alternative Photography I. 3 Hours

Continuing work with alternative silver and non-silver processes.
Emphasis on completion of an artist book or installation which demonstrates advanced technical command and aesthetic understanding of the processes employed. Prerequisite(s): VAP 330.

VAP 340. Digital Processes II. 3 Hours
Expands on the practice and theory of digital photography and computer imaging. Emphasis is placed on the creation of a cohesive portfolio of digital artwork through the exploration of advanced digital methodologies and concepts. The course will also focus on the different modes of dissemination relevant to digital images. Prerequisite(s): VAP 240.

## VAP 350. View Camera. 3 Hours

Extensive experience with the view camera, examination of refined techniques, various applications, and concepts of large format photography. Prerequisite(s): VAP 201.

## VAP 402. Color Photography II. 3 Hours

Continuation of color printing from negatives; completion of individual projects which will demonstrate an advanced understanding of the techniques and aesthetics peculiar to color photography. Prerequisite(s): VAP 302.

## VAP 410. Advanced Photography. 3 Hours

Students with a substantial commitment to photography and with demonstrated technical skills work on individual projects and participate in group critiques and discussions. Prerequisite(s): VAH 382 or VAH 482; VAP 201, VAP 302.

## VAP 420. Photojournalism. 3 Hours

Variety of ways of using photography as documentation, narrative, and propaganda. Editing of work, layout, and image-text relationships. Personal photographic essay required. Prerequisite(s): VAP 201.
VAP 430. Professional Photographic Applications. 3 Hours
Problem-solving associated with professional photography; may include commercial, editorial, industrial, architectural, and illustrative photographic work both in the studio and on location. Prerequisite(s): VAP 320 or permission of department chairperson.

## VAP 450. Photography Internship. 1-3 Hours

Practical applications of photographic skills. Opportunities for advanced development and practical experience in professional working environments. Repeatable up to six semester hours for B.F.A. students. Prerequisite(s): Permission of department chairperson.

## VAP 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the Univeristy Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## VAP 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## VAP 490. Special Problems in Photography. 1-5 Hours

Series of assignments to guide independent study in photography, formulated to meet individual needs of the student. Prerequisite(s): VAP 201; permission of department chairperson.

## VAP 498. Senior/Professional Seminar- Photography. 3 Hours

Capstone course required of all B.A. and B.F.A. photography majors, to be taken in the first semester of the senior year. Examination of aesthetic, cultural, ethical, and pragmatic issues in preparation for post-graduate experience. Prerequisite(s): (VAP 410; senior standing) or permission of department chairperson.

## VAP 499. Senior Seminar II. 1 Hour

Capstone course required for all BFA Photography majors. Students examine the aesthetic, cultural, ethical, and pragmatic issues involved in and relating to photography. Students complete a senior project and paper, and give a public presentation of their research to be reviewed by faculty and peers. Prerequisite(s): VAP 498 or permission of department chairperson.

## Visual Arts Courses

## VAR 100. Visual Arts Foundation. 1 Hour

Defines and examines the process of beginning a program of education in the visual arts within the larger context of the College of Arts and Sciences and the University. Integrates pragmatic and conceptual issues critical to liberal learning for visual arts students.

## VAR 210. Visual Journal. 3 Hours

Students document and interpret their experience of a given site through the creation of unique journals. They create, collect, edit, and juxtapose visual materials in combination with written commentary and reflections.

## VAR 220. Visual Resources. 3 Hours

Students study a wide variety of visual elements, including many forms of visual communication as well as architecture, public spaces, and museums, in order to understand ways in which art and design play key roles in defining the unique cultural environment of a given site.

## VAR 250. Diversity in Creative \& Performing Arts. 3 Hours

This course serves to introduce students to the interdisciplinary fields of visual and performing arts through a critical multicultural and social justice lens that foregrounds the appreciation of diversity and enables the expansion of personal cultural competencies. This Integrative and Diversity and Social Justice CAP course will also engage students in creating performance and/or art in response to diversity and social justice issues.

## VAR 299. Second Year Review. 0 Hours

Requires successful completion of Visual Arts Second Year Review. Eligibility for the review is determined by the department and is based upon a student's progress within the major. Visual Arts Scholarship recipients complete this course during their second year in the major. The review is based upon prior Visual Arts coursework completed and in progress at the time of the review. Required for all Visual Arts majors.

## VAR 303. Scenic Painting. 3 Hours

Exploration through experiential learning of the tools, techniques and terminology used in the craft of scenic painting. The student will learn fundamental and advanced scenic painting techniques with additional emphasis on faux painting techniques and trompe'l oeil painting. Open to all university students.

## VAR 314. Costumes \& Textiles. 3 Hours

An experiential course where students rehearse and perform in a mainstage musical or opera production. Audition required. Open to all students. Fall only. Co-requisite(s): Additional rehearsals to prepare for production. MUS 390, Musical \& Opera Workshop is a co-requisite.

## VAR 330. Comparative Visual Culture in Film. 3 Hours

The course examines visual culture codes through a survey of global cinema. Students focus on the analysis and interpretation of visual culture through comparisons of western and non-western societies. Discussion topics may include race/ethnicity, gender/sexuality, age, disability and socioeconomic class issues. Students will examine the ways through which topics are depicted in film through visual language. The geographic regions and the main theme of cinema may vary each semester dependent upon the expertise each faculty member brings to class.

## VAR 345. Computer Modeling \& Animation I. 3 Hours

Introduction to history, theory, and practice of three-dimensional computer modeling and animation for video, computer, and print media. Visualization, Cartesian space, simple polygonal modeling, surface rendering, and animation techniques will be explored.

## VAR 350. Art and Social Practice. 3 Hours

Exploration of varying modes of collaborative art production, for both artists and non-art students, towards the end of understanding and organizing for effective social change and/or inquiry within studio and community settings. Students organize, produce and exhibit an interdisciplinary group project developed utilizing a sociological lens in an offcampus or social media space.

## VAR 379. Sustaining Art and Faith. 3 Hours

Exploration of the interrelated nature of faith traditions and the art connected to those traditions in terms of how they inform and sustain each other. Pre-requisite: a Crossing Boundaries: Faith Traditions course. Prerequisite(s): REL 103 or AS1 110.

## VAR 440. Computer Modeling \& Animation II. 3 Hours

Detailed study of spline-based modeling, surface rendering and mapping, editing complex animation sequences, motion control, and other topics. Prerequisite(s): VAR 345.

## VAR 445. Computer Modeling \& Animation III. 3 Hours

Individual projects in conceptualization and production of animated sequence from storyboard to final presentation. Prerequisite(s): VAR 440.

## VAR 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## VAR 478. Honors Thesis Project. 3 Hours

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## VAR 490. Special Problems. 1-5 Hours

Advanced, independent study with faculty direction in a visual arts subject or topic that is not covered in existing, discipline-specific courses. Permission.

## VAR 495. Senior Project Seminar. 1 Hour

The first in a sequence of two capstone courses. To be taken in the first semester of the senior year. Required for all Bachelor of Arts with a major in Visual Arts degrees. Students select a faculty mentor committee and work with that committee to establish a capstone project topic, goals, outcomes, and timeline associated with the project. Prerequisite(s): Senior standing. VAR majors only or permission of department chairperson.

## VAR 496. Senior Project, Presentation and Paper. 3 Hours

VAR496 is a 3 credit hour capstone course to be taken in the second semester of the senior year. Graduation requirement for B.A. visual arts majors. Students reflect upon their selected vocation in the visual arts by reviewing professional practices, standards and activities across several related disciplines. Students complete a senior project and paper, and give a public presentation of their research to be reviewed by faculty and peers. Faculty approval of project and paper is required for graduation. Prerequisite(s): VAR 495 or permission of department chairperson.

## Asian Studies

The Asian Studies Minor is designed for students interested in language, history, culture and philosophies of Asia. With a focus on the peoples of South and East Asia, students will be exposed to interdisciplinary methodologies and comparative perspectives. The Minor is designed to allow students to plan a structured series of courses that will contribute to an intellectual engagement and appreciation of the diversity of Asian societies. The Minor consists of 15 credits selected from the following disciplines: History, Global Languages, Philosophy, Religious Studies, Art and Design, and Business.

The Asian Studies minor requires 15 semester hours of courses selected from the following list. Courses must be from at least three disciplines.

## Asian Studies Committee

Christopher Agnew (History), Director
Bein (Philosophy), Dasgupta (Sociology), Lau (Marketing), MacLachlan (Music), Roy (History), Yang (Languages)

## Minor in Asian Studies (ANS)

## Asian Studies

| Select five courses from at least three different disciplines: ${ }^{1}$ |  |
| :--- | :--- |
| ANT 360 | Making of Modern South Asia |
| CHI 202 | Intermediate Mandarin Chinese II |
| CHI 345 | Chinese Civilization and Culture |
| CHI 391 | Directed Study |
| HND 202 | Intermediate Hindi II |
| HST 260 | History of Pre-Modern East Asia |
| HST 330 | History of East Asia to 1800 |
| HST 331 | India: Traditions and Encounters |
| HST 332 | History of Modern East Asia |
| HST 335 | Making of Modern South Asia |
| HST 338 | State \& Secession in South Asia |
| HST 339 | Gandhi's India |
| HST 386 | China in Revolution |
| HST 492 | Seminar in Asian History |
| INB 352 | Doing Business in Asia |
| PHL 346 | Chinese Philosophy |
| PHL 347 | Japanese Philosophy |


| PHL 348 | Comparative East-West Philosophy |
| :--- | :--- |
| PHL 355 | Asian Philosophy |
| REL 304 | Hinduism |
| REL 306 | Buddhism |
| VAH 330 | Arts of Asia |
| Total Hours |  | | Additional courses may be approved by the Program Director. |
| :--- |
| Individual sections of courses may be approved for credit if the |

## Biology

Majors:

- Bachelor of Science, Biology (p. 130)
- Bachelor of Science, Environmental Biology (p. 132)

Minor:

- Biology (p. 133)

The Bachelor of Science program in biology is designed to prepare a student for a career in the life sciences. Graduates of the program are competitive for entry into graduate programs in the biological sciences as well as professional schools, such as medical, dental, osteopathic, and veterinary science, as well as physician assistant (PA) and advanced nursing programs.

The department has two primary areas of focus:

1. Basic biomedical science
2. Environmental/ecological science

Biomedical science course offerings includes:

- Cell biology
- Developmental biology
- General and medical microbiology
- Genetics
- Immunology
- Mammalian physiology
- Molecular biology

Environmental/ecological science course offerings include:

- Community and restoration ecology
- Ecological physiology
- Ecology
- Entomology and analysis of biological data
- Environmental biology in the narrow sense
- Environmental microbiology
- Evolutionary biology
- Plant physiology
- Population biology

In addition, advanced undergraduates may enroll in graduate courses for undergraduate credit with the consent of the department chairperson. In line with the two areas of research interests, the department encourages students (in consultation with their advisors) to declare one of the two as an area of concentration of study no later than the end of their
sophomore year. For the student more interested in a broad approach to biology, the department recommends a third option, the general biology option (any combination of upper-level biology courses that fulfills the program requirements).

The department offers a research mentorship program for upper-level students majoring in biology. The program allows a student to work closely with both faculty and graduate students in laboratory and/or field research. Participation in the program is based on the recommendation of a member of the faculty. The mentorship program is designed to provide a significant advantage for those students who intend to enter a graduate program.

The department also offers a combined five-year Bachelor and Master of Science (5Y B.S.-M.S.) degree in Biology. This accelerated program is designed for students who display strong potential for research in biology. It provides a liberal arts education, a broad background in biology, the development of expertise in a biological subfield, and a thorough introduction to research instrumentation and techniques. Graduates from the program are prepared for either direct entry into the job market or continuation toward the Ph.D. A detailed description of the five-year B.S.-M.S. program may be obtained from the departmental office.

A minor in biology consists of 20 semester hours.

## Faculty

Mark Nielsen, Chairperson
Distinguished Service Professor: Noland
Professors Emeriti: Chantell, Geiger, Kearns, Ramsey
Professors: Burky, Krane, Nielsen, Robinson, P. Williams, S. Wright
Associate Professors: Friese, Hansen, Kango-Singh, McEwan, Singh, T.
Williams, D. Wright,
Assistant Professors: Pitychoutis, Sun
Lecturers: Carter, Dillon, Kavanaugh

## Bachelor of Science, Biology (BIO) minimum 120 hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1} 12$

| HST 103 | The West \& the World |  |
| :---: | :---: | :---: |
| REL 103 | Introduction to Religious and Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| SSC 200 | Social Science Integrated |  |
| Arts |  | 3 |
| Natural Sciences ${ }^{4}$ |  | 7 |
| Crossing Boundaries |  | vari |

## Faith Traditions <br> Practical Ethical Action

| Inquiry |  |
| :--- | :--- |
| Integrative | variable |
| Advanced Study | credit |

Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice 3
Major Capstone 0-3
Completed with ASI 110 and ASI 120.
Or ENG 100A and ENG 100B, or ENG 200H, by placement.
Completed with ENG 200 H or ASI 120.
Must include two different disciplines and accompanying lab.
U.S. History AP credit will not satisfy this requirement.

## Science Breadth Requirements

| (Satisfies CAP Mathematics and CAP Natural Science) |  |  |
| :--- | :--- | ---: |
| CHM 123 | General Chemistry <br> and General Chemistry Laboratory | 4 |
| \& 123L | General Chemistry | 4 |
| CHM 124 | and General Chemistry Laboratory |  |$\quad 4$

Major Requirements ${ }^{1,6} 44$

| BIO 151 | Concepts of Biology I: Cellular \& Molecular Biology <br>  | 4 |
| :--- | :--- | :--- |
| \& 151L | Molecular Biology | 4 |
| BIO 152 | Concepts of Biology II: Evolution \& Ecology <br>  | 4 |
| \& 152L | Ecology | 1 |
| BIO 299 | Biology Seminar | 3 |
| BIO 310 | Ecology | 3 |
| BIO 312 | General Genetics | 1 |
| BIO 420 | Biology Capstone Seminar (Satisfies Cap Major <br> Capstone) |  |

Select two environmental/ecological courses from: ${ }^{2,6} 7$
BIO 301 Evolution
BIO 309 Comparative Anatomy of the Vertebrates
\& 309L and Comparative Anatomy Laboratory
BIO 310L Ecology Laboratory
BIO 311 Introductory Entomology
BIO 312L Genetics Laboratory

| $\begin{aligned} & \text { BIO } 314 \\ & \& 314 L \end{aligned}$ | Plant Biology and Plant Biology Laboratory |
| :---: | :---: |
| $\begin{aligned} & \text { BIO } 320 \\ & \& 320 \mathrm{~L} \end{aligned}$ | Marine Biology and Marine Biology Laboratory |
| $\begin{aligned} & \text { BIO } 340 \\ & \& 340 \mathrm{~L} \end{aligned}$ | Culture, Biodiversity \& Resources Management and Culture, Biodiversity \& Resources Management Laboratory |
| BIO 359 | Sustainability \& the Biosphere |
| $\begin{aligned} & \text { BIO } 360 \\ & \& 360 \mathrm{~L} \end{aligned}$ | Island Environmental Biology and Island Environmental Biology Laboratory |
| BIO 370 | Conservation Biology |
| $\begin{aligned} & \text { BIO } 402 \\ & \& 402 \mathrm{~L} \end{aligned}$ | Vertebrate Zoology and Vertebrate Zoology Laboratory |
| $\begin{aligned} & \mathrm{BIO} 407 \\ & \& 407 \mathrm{~L} \end{aligned}$ | Plant Diversity \& Ecology and Plant Diversity \& Ecology Laboratory |
| $\begin{aligned} & \text { BIO } 409 \\ & \& 409 \mathrm{~L} \end{aligned}$ | Ecological Restoration and Ecological Restoration Laboratory |
| $\begin{aligned} & \mathrm{BIO} 411 \\ & \& 411 \mathrm{~L} \end{aligned}$ | General Microbiology and General Microbiology Laboratory |
| BIO 421 | Biological Problems ${ }^{4}$ |
| $\begin{aligned} & \text { BIO } 435 \\ & \& 435 \mathrm{~L} \end{aligned}$ | Microbial Ecology and Microbial Ecology Laboratory |
| BIO 439 | Analysis \& Interpretation of Biological Data |
| BIO 441 | Environmental Plant Biology |
| BIO 445 | Evolution \& Development |
| $\begin{aligned} & \mathrm{BIO} 450 \\ & \& 450 \mathrm{~L} \end{aligned}$ | Comparative Animal Physiology and Comparative Animal Physiology Laboratory |
| $\begin{aligned} & \text { BIO } 452 \\ & \& 452 \mathrm{~L} \end{aligned}$ | Biology of Rivers \& Lakes and Biology of Rivers \& Lakes Laboratory |
| $\begin{aligned} & \text { BIO } 459 \\ & \& 459 \mathrm{~L} \end{aligned}$ | Environmental Ecology and Environmental Ecology Laboratory |
| BIO 460 | Introduction to Bioinformatics |
| $\begin{aligned} & \text { BIO } 461 \\ & \& 461 \mathrm{~L} \end{aligned}$ | Invertebrate Zoology and Invertebrate Zoology Laboratory |
| BIO 465 | Disease Ecology |
| $\begin{aligned} & \mathrm{BIO} 480 \\ & \& 480 \mathrm{~L} \end{aligned}$ | Principles of Microscopy and Principles of Microscopy Laboratory |
| BIO 489 | Mycology |
| Select two basic biomedical courses from: ${ }^{\text {3,6 }}$ |  |
| BIO 301 | Evolution |
| $\begin{aligned} & \text { BIO } 309 \\ & \& 309 \text { L } \end{aligned}$ | Comparative Anatomy of the Vertebrates and Comparative Anatomy Laboratory |
| BIO 311 | Introductory Entomology |
| BIO 312L | Genetics Laboratory |
| $\begin{aligned} & \text { BIO } 403 \\ & \& 403 \mathrm{~L} \end{aligned}$ | Physiology I and Physiology Laboratory I |
| BIO 404 | Physiology II |
| $\begin{aligned} & \text { BIO } 411 \\ & \& 411 \mathrm{~L} \end{aligned}$ | General Microbiology and General Microbiology Laboratory |
| BIO 412 | Genetics Human Diseases |
| BIO 415 | Neurobiology |
| BIO 421 | Biological Problems ${ }^{4}$ |
| BIO 427 | Immunology |
| BIO 439 | Analysis \& Interpretation of Biological Data |

$\left.\begin{array}{|ll}\hline \text { BIO 440 } \\ \text { \& 440L }\end{array} \quad \begin{array}{l}\text { Cell Biology } \\ \text { and Cell Biology Laboratory } \\ \text { BIO 442 } \\ \text { \& 442L }\end{array} \quad \begin{array}{l}\text { Developmental Biology } \\ \text { and Developmental Biology Laboratory }\end{array}\right]$

## Breadth ${ }^{7}$

ASI 150 Introduction to the University Experience 1

Social \& Behavioral Sciences (includes CAP Social Science) 6
Total Hours to total at least 120

1 The Department of Biology supports national standards established by the National Institutes of Health for the responsible, humane treatment and housing of animals. The biology curriculum contains some laboratory courses in which dissection and vivisection are necessary and required in order to convey an understanding of certain biological concepts. All students are expected to participate in such laboratory exercises in the introductory biology sequence, BIO 151L and BIO 152L which involve dissection and/or vivisection. In other elective formal laboratory courses in which dissection and vivisection occur, it is expected that students will participate in all aspects of the laboratory. No alternatives to dissection or vivisection will be offered in these courses. It is ultimately the responsibility of students to make certain that they enroll in courses in which they are able to participate in all required exercises, and to obtain information from each instructor as to the specific laboratory course content and requirements. The Department of Biology maintains an updated list of laboratory courses in which dissection and/or vivisection is required in order to assist students in the selection of course work. as one of two courses.
4 By permission only. Qualifies as a laboratory elective for any category.
One of the following Non-BIO science courses may include:
CHM 201,CHM 302,CHM 303,CHM 420,MTH 367,CPS 107,CPS 111,CPS 132,GEO
Non-BIO science courses may be included with the approval of the chairperson.
6

7
One with accompanying laboratory. BIO 462 strongly recommended

A minimum grade of C - is required.
HST 340 , HST 341 or HST 342 are highly recommended.

## Bachelor of Science, Environmental Biology (EVB) minimum 120 hours

Environmental biology is a science specialization based upon the fundamentals of biology and ecology, applying interdisciplinary skills, knowledge, and principles to the environmental problems facing society today. Students entering this dynamic field could become directly involved in addressing some of the significant global problems related to human impact on the environment. In addition to the standard base of courses required of most biology majors, the curriculum also requires a challenging core of environmentally related science courses and course work drawn from a multidisciplinary elective pool that includes offerings in the humanities and social sciences.

Internship Program: Majors will participate in the EVB internship program (BIO 499, see course prerequisites), where they will have the unique opportunity to obtain valuable training and experience under the mentorship of established scientists and other environmental professionals.

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |

Second-Year Writing Seminar ${ }^{3} \quad$ 0-3
ENG $200 \quad$ Writing Seminar II
Oral Communication 3

| CMM $100 \quad$ Principles of Oral Communication |  |
| :---: | :---: |
| Mathematics | 3 |

Social Science 3

| SSC $200 \quad$ Social Science Integrated |  |
| :--- | :--- |
| Arts | 3 |

Natural Sciences ${ }^{4} \quad 7$
Crossing Boundaries $\quad$ variab

| Faith Traditions |  |
| :--- | :--- |
| Practical Ethical Action |  |
| Inquiry | variab |
| Integrative | cred |


| Philosophy and/or Religious Studies |  |
| :--- | ---: |
| Historical Studies ${ }^{5}$ |  |
| Diversity and Social Justice | 3 |
| Major Capstone | $0-3$ |

Completed with ASI 110 and ASI 120.
Or ENG 100A and ENG 100B, or ENG 200H, by placement.
Completed with ENG 200 H or ASI 120.
Must include two different disciplines and accompanying lab.
U.S. History AP credit will not satisfy this requirement.

| (Satisfies CAP Mathematics and CAP Natural Science) |  |  |
| :--- | :--- | :---: |
| CHM 123 | General Chemistry |  |
| $\& 123$ L | and General Chemistry Laboratory | 4 |
| CHM 124 | General Chemistry <br> \& 124L | 4 |
| CHM 313 | Organic Chemistry |  |
| \& 313L | and Organic Chemistry Laboratory | 4 |
| GEO 115 | Physical Geology | 4 |
| GEO 116 | Geological History of the Earth | 3 |
| GEO 450 | Applied Geographic Information Systems | 3 |
| PHY 201 | College Physics I | 4 |
| $\& 201$ L | and College Physics Laboratory I | 4 |

Select one sequence from: 6-7

| MTH 116 | Precalculus Math |
| :--- | :--- |
| \& MTH 148 | and Introductory Calculus I |
| MTH 148 | Introductory Calculus I |
| \& MTH 149 | and Introductory Calculus II |
| MTH 148 | Introductory Calculus I |
| \& MTH 207 | and Introduction to Statistics |

Major Requirements ${ }^{2} \quad 44$
\(\left.$$
\begin{array}{lll}\text { BIO 151 } & \begin{array}{l}\text { Concepts of Biology I: Cellular \& Molecular Biology } \\
\text { \& 151L }\end{array}
$$ \& 4 <br>
and Concepts of Biology Laboratory I: Cellular \& <br>

Molecular Biology\end{array}\right]\)| BIO 152 | Concepts of Biology II: Evolution \& Ecology |
| :--- | :--- |

\& 152L and Concepts of Biology Laboratory II: Evolution \&
Ecology

| BIO 299 | Biology Seminar | 1 |
| :--- | :--- | :--- |
| BIO 310 | Ecology | 4 |

\& 310L and Ecology Laboratory
BIO 312 General Genetics 3
BIO $420 \quad$ Biology Capstone Seminar (Satisfies CAP Major 1
Capstone)
BIO 479L Environmental Instrumentation Laboratory 2
BIO 499 Environmental Biology Internship ${ }^{3} 3$
Environmental and Ecological Courses: Select 5 lectures and 4 labs: 19
2, 4
BIO 301 Evolution
BIO 311 Introductory Entomology
BIO 312L Genetics Laboratory
BIO 314 Plant Biology
\& 314L and Plant Biology Laboratory
BIO 320 Marine Biology
\& 320L and Marine Biology Laboratory
BIO 330 Animal Behavior
\& 330L and Animal Behavior Laboratory
BIO 340 Culture, Biodiversity \& Resources Management
\& 340L and Culture, Biodiversity \& Resources
Management Laboratory
BIO 359 Sustainability \& the Biosphere
BIO $370 \quad$ Conservation Biology
BIO 402 Vertebrate Zoology
\& 402L and Vertebrate Zoology Laboratory
BIO 407 Plant Diversity \& Ecology
\& 407L and Plant Diversity \& Ecology Laboratory

| BIO 301 | Evolution |
| :--- | :--- |
| BIO 311 | Introductory Entomology |
| BIO 312L | Genetics Laboratory |
| BIO 314 | Plant Biology |
| \& 314L | and Plant Biology Laboratory |
| BIO 320 | Marine Biology |
| \& 320L | and Marine Biology Laboratory |
| BIO 330 | Animal Behavior |
| \& 330L | and Animal Behavior Laboratory |
| BIO 340 | Culture, Biodiversity \& Resources Management |
| \& 340L | and Culture, Biodiversity \& Resources |
| BIO 359 | Management Laboratory |
| BIO 370 | Constainability \& the Biosphere |
| BIO 402 | Vertebrate Zoology |
| \& 402L | and Vertebrate Zoology Laboratory |
| BIO 407 | Plant Diversity \& Ecology |
| \& 407L | and Plant Diversity \& Ecology Laboratory |

## Science Breadth Requirements




## BIO 151L. Concepts of Biology Laboratory I: Cellular \& Molecular Biology. 1 Hour

Laboratory-based introduction to the biological concepts surrounding cell and molecular biology. Utilizing a hands-on approach to the study of life, students will take part in experiential, inquiry-based activities as they observe the properties of cellular, micro-scale biology while concurrently defining proper laboratory procedures, operating modern scientific instrumentation, and practicing effective documentation of experiments. Topics include scientific practice, biological instrumentation, cellular composition and processes, genetics, and biotechnology. One threehour lab per week. Intended for science majors. Core biology course. Corequisite(s): BIO 151.

## BIO 152. Concepts of Biology II: Evolution \& Ecology. 3 Hours

Introduction to the biological concepts surrounding evolution and ecology. Topics include scientific practice, evolutionary basis of life, phylogeny and systematics, biodiversity, ecology and biosphere sustainability. Intended for science majors. Core biology course.
BIO 152L. Concepts of Biology Laboratory II: Evolution \& Ecology. 1 Hour Laboratory-based introduction to the biological concepts surrounding evolution, diversity and ecology. Utilizing a hands-on approach, students will take part in experiential, inquiry-based activities as they explore the concepts of evolution and macro-scale biology while concurrently developing proper laboratory procedures, operating modern scientific instrumentation, and practicing effective scientific presentation of research through the two most widely accepted formats: the scientific journal article and the research poster presentation. Topics include evolution and phylogeny, the diversity of life, ecology, and human impact on ecosystems. One three-hour laboratory per week. Intended for science majors. Core biology course. Corequisite(s): BIO 152.

## BIO 299. Biology Seminar. 1 Hour

Introduction to biological journals and abstracting materials. Practice in reviewing, abstracting, and presenting biological information, and career development. Core biology course. Biology and environmental biology majors only. Prerequisite(s): BIO 152.

## BIO 301. Evolution. 3 Hours

Theory and evidence of organic evolution, with emphasis on microevolutionary change and population genetics. Prerequisite(s): BIO 152.

## BIO 309. Comparative Anatomy of the Vertebrates. 3 Hours

Study of changes that have occurred in the vertebrate body with the passage of time, and analysis of their significance. Prerequisite(s): BIO 152.

## BIO 309L. Comparative Anatomy Laboratory. 1 Hour

Dissection and study of the anatomical structure of representative vertebrate animals. One three-hour laboratory per week. Corequisite(s): BIO 309.

## BIO 310. Ecology. 3 Hours

Interrelationship of plants, animals, and micro-organisms with the physical-chemical environment: nutrient cycles, energy flow, ecosystems, and factors affecting distribution and abundance of organisms. Core biology course. Prerequisite(s): BIO 152.
BIO 310L. Ecology Laboratory. 1 Hour
Measurement of population, community, and environmental variables in terrestrial and aquatic systems. The lab is field-based using local ecological resources. One three-hour laboratory per week and weekend field trips. Corequisite(s): BIO 310.

## BIO 311. Introductory Entomology. 3 Hours

Classification, physiology, ecology, and impact of insects on society. Prerequisite(s): BIO 152.

## BIO 312. General Genetics. 3 Hours

Study of the principles of variation and heredity covering both Mendelian and molecular genetics. Core biology course. Prerequisite(s): BIO 152.

## BIO 312L. Genetics Laboratory. 1 Hour

Exploration of heredity using molecular genetic methods. One three-hour laboratory per week. Corequisite(s): BIO 312.

## BIO 314. Plant Biology. 3 Hours

Consideration of structure, function, reproduction, and inheritance as applicable in the plant patterns of life. Emphasis on the vascular plants. Prerequisite(s): BIO 152.

## BIO 314L. Plant Biology Laboratory. 1 Hour

Emphasis on generalized structure and function of plants. One three-hour laboratory per week. Corequisite(s): BIO 314.
BIO 320. Marine Biology. 2 Hours
Introduction to the diversity of marine life including the physical-chemical environment. Prerequisite(s): Permission of instructor. . Corequisite(s): BIO 320L.

## BIO 320L. Marine Biology Laboratory. 2 Hours

Examination of marine organisms and processes. Laboratory work conducted on UD campus and at off-campus field sites in the southern United States or Hawaii. Prerequisite(s): Permission of instructor. Corequisite(s): BIO 320.

## BIO 330. Animal Behavior. 3 Hours

An evolutionary approach to the study of animal behavior, emphasizing both proximate mechanisms and functional explanations of the survival value of behavior. Prerequisite(s): BIO 152.

## BIO 330L. Animal Behavior Laboratory. 1 Hour

Analysis of animal behavior using various animal models. One three-hour laboratory per week and occasional Saturday field trips. Corequisite(s): BIO 330.
BIO 340. Culture, Biodiversity \& Resources Management. 3 Hours
Field lecture course addressing cultural impacts on biodiversity and conciliatory demands for resource management to preserve the integrity of unique global environments. An experiential study of culture, regional geological morphology and weather-patterns, economic development, the freshwater-marine continuum, resource utilization, environmental law and management on conservation of unique biological habitats and organisms. Prerequisite(s): Permission of instructor. Corequisite(s): BIO 340L.
BIO 340L. Culture, Biodiversity \& Resources Management Laboratory. 1 Hour
Lab field course on culture, biodiversity and balanced resource management to preserve integrity of unique global environments and compromises with economic development. Assessment of biodiversity in diverse biomes (e.g. elevational and rainforest-desert gradients, watersheds, coral reef systems) will be assessed with experimental design, data collection and analysis. May fulfill only one laboratory requirement for the Biology major. Prerequisite(s): Permission of instructor. Corequisite(s): BIO 340.

## BIO 350. Applied Microbiology. 3 Hours

Fundamentals of applied and environmental microbiology for environmental scientists and engineers. Introduction to microorganisms and their role in bioenvironmental engineering and industrial processes. No science credit for biology majors. Prerequisite(s): BIO 152; CHM 314.

## BIO 350L. Applied Microbiology Laboratory. 1 Hour

An introductory laboratory to acquaint students with basic microbiology laboratory techniques as applied to environmental pollution and industrial fermentations. One three-hour laboratory per week. Corequisite(s): BIO 350.

## BIO 359. Sustainability \& the Biosphere. 3 Hours

Study of the principles of sustainability. All areas of sustainability will be covered with emphasis on ecological facets of sustainability. Discussion of loss of habitat and biodiversity in the context of sustaining natural resources for future generations. Prerequisite(s): BIO 152 or SCI 230.

## BIO 360. Island Environmental Biology. 3 Hours

Field lecture course on environments of Pacific Islands. Study of volcanic geology, island morphology/weather-patterns, native culture, economic development, freshwater-marine continuum and water resource utilization on unique biological habitats. Prerequisite(s): Permission of instructor. Corequisite(s): BIO 360L.

## BIO 360L. Island Environmental Biology Laboratory. 1-2 Hours

Lab field course on Pacific Islands. Ecology of elevational and rainforestdesert gradients, volcanic mountain streams, watersheds, and coral systems with experimental design, data collection and analysis.
Prerequisite(s): Permission of instructor. Corequisite(s): BIO 360.

## BIO 370. Conservation Biology. 3 Hours

An ecosystem approach to the study of and threat to local, regional, and global biodiversity. Application of ecological principles of conservation of species and habitats. Prerequisite(s): BIO 152.

BIO 395. Global Environmental Biology. 3 Hours
Presentation of the biological and ecological principles needed for the critical discussion and evaluation of current global issues related to human impact on the environment. Ecological data on the current extinction crisis and sustainable solutions will be addressed. No credit toward a biology major or minor. Prerequisite(s): BIO 101, BIO 151 or SCI 230.

## BIO 402. Vertebrate Zoology. 3 Hours

The morphology, physiology, ecology, and distribution of representative vertebrate groups. Prerequisite(s): BIO 310 or BIO 312.

## BIO 402L. Vertebrate Zoology Laboratory. 1 Hour

Laboratory focused on the diversity, systematics and ecology of vertebrates. One three-hour laboratory per week. Corequisite(s): BIO 402.

## BIO 403. Physiology I. 3 Hours

Physical-chemical examination of the physiological events occurring in a living system with emphasis on physiology of the cell, excretion, nerves, muscles, bone, blood, heart, circulation, and respiration. Prerequisite(s): BIO 152; CHM 314.

## BIO 403L. Physiology Laboratory I. 1 Hour

Systematic approach to the acquisition and interpretation of information about the physiology of living systems. One three-hour laboratory per week. Corequisite(s): BIO 403 or HSS 307.

## BIO 404. Physiology II. 3 Hours

Integrated systems based examination of physiological processes in humans with a special emphasis on molecular mechanisms of pathophysiological conditions in humans and experimental animal systems. Prerequisite(s): BIO 403.

## BIO 407. Plant Diversity \& Ecology. 3 Hours

Lecture course addressing plant diversity and ecology. Course includes an overview of plant systematics and aspects of plant anatomy, population ecology, community ecology, ecosystem ecology, and global ecology. Prerequisite(s): BIO 310.

BIO 407L. Plant Diversity \& Ecology Laboratory. 1 Hour
Field laboratory course addressing plant diversity and ecology. Includes a series of field labs focused on plant identification, followed by labs focused on quantitatively assessing plants, plant communities, and ecosystems. Labs will take place in a variety of natural areas. Corequisite(s): BIO 407.

## BIO 409. Ecological Restoration. 3 Hours

Principles and practices of ecological restoration. The course presents the rationale and knowledge needed to understand, appreciate, plan and perform ecological restoration. Prerequisite(s): BIO 310.

## BIO 409L. Ecological Restoration Laboratory. 1 Hour

Practical applications of the principles of ecological restoration to a variety of ecosystems. One three-hour laboratory per week. Corequisite(s): BIO 409.

## BIO 411. General Microbiology. 3 Hours

Introductory course stressing the physiology, cultivation, and classification of microbial organisms; their role in medicine, agriculture, and industry. Prerequisite(s): BIO 152; CHM 313.

## BIO 411 L . General Microbiology Laboratory. 1 Hour

Lab exercises focusing on the basic techniques involved in the isolation and identification of bacteria, including assessment of biochemical activities, growth characteristics of bacteria, and the impact of the environment on microbial growth. One three-hour laboratory per week. Corequisite(s): BIO 411.

## BIO 412. Genetics Human Diseases. 3 Hours

Study of the molecular genetics of inherited human diseases using a systems approach. Survey of inherited diseases linked to major organs and organ systems. Prerequisite(s): BIO 312; CHM 313.

## BIO 415. Neurobiology. 3 Hours

Structure and function of the brain and nervous system. Emphasis on understanding cellular and molecular events within the nervous system using model organisms. Prerequisite(s): BIO 152; CHM 124.

## BIO 415L. Neurobiology Laboratory. 1 Hour

Laboratory research experience in neuroscience with emphasis on cellular, molecular and behavioral neurobiology and neurochemistry. Prerequisite(s): BIO 152, BIO 415 (may be taken as a co-req), CHM 124.

## BIO 420. Biology Capstone Seminar. 1 Hour

Seminar course designed to further develop students' ability to communicate and synthesize within their discipline and prepare them for their chosen career paths in the Biological and Environmental professions. All class activities, including presentations, relate to key issues facing society today in addition to continued career development skills. Biology core and capstone course. Prerequisite(s): BIO 299, BIO 310, BIO 312.

## BIO 421. Biological Problems. 1-2 Hours

Laboratory research problems. Topics arranged with faculty advisors.
Prerequisite(s): (BIO 310 or BIO 312); Permission of department chairperson.

## BIO 422. Biological Problems. 1-2 Hours

Library research problems. Topics arranged with faculty advisors.
Prerequisite(s): (BIO 310 or BIO 312); Permission of department
chairperson.

## BIO 425. Parasitology. 3 Hours

Introduction to the morphology, life history, and clinical significance of parasites and other symbionts. Prerequisite(s): BIO 310 or BIO 312.

## BIO 425L. Parasitology Laboratory. 1 Hour

Recognition of common human parasites. Study of both living and preserved forms. One three-hour laboratory per week. Corequisite(s): BIO 425.

## BIO 427. Immunology. 3 Hours

Discussions of antigens, antibodies, antigenicity, immunogenicity, and antigen-antibody reactions including hypersensitivity, immune tolerance, and transplants. Prerequisite(s): (BIO 403 or BIO 411 or BIO 440 or BIO 442) or CHM 420.

## BIO 435. Microbial Ecology. 3 Hours

Study of the diversity and activity of microorganisms and the interrelationships between microorganisms and their environments with emphasis on aquatic ecosystems. Prerequisite(s): BIO 411; CHM 314.

## BIO 435L. Microbial Ecology Laboratory. 1 Hour

Examination of the methods of isolation and enumeration of microorganisms and techniques for determining their activities in the field and laboratory. One three-hour laboratory per week. Corequisite(s): BIO 435.

BIO 439. Analysis \& Interpretation of Biological Data. 3 Hours Introducing the nature of some of the important types of data that are generated in biological research, the databases that warehouse such data, the principles involved in the analysis of such data, the use of appropriate software to analyze such data, and the biological interpretation of the results of analysis. Prerequisite(s): BIO 152.

## BIO 440. Cell Biology. 3 Hours

Study of the function, structure, composition, heredity, and growth of cells. Analysis of cell concepts in biochemical terms. Prerequisite(s): BIO 152; CHM 314.

## BIO 440L. Cell Biology Laboratory. 1 Hour

Experimental approaches to explore modern concepts in cell structure, function, and biology. One three-hour laboratory per week. Corequisite(s): BIO 440.

## BIO 441. Environmental Plant Biology. 3 Hours

Study of the physiological basis for environmental effects on plant metabolism, structure, growth and development, including plant responses to elevated carbon dioxide, acid deposition, and water stress. Prerequisite(s): BIO 310 or BIO 312.

## BIO 442. Developmental Biology. 3 Hours

Study of animal development, including morphological patterns of development, mechanisms of cellular differentiation, cell-cell interactions during development, and mechanisms of differential gene expression. Emphasis on understanding development at the cellular and molecular levels. Prerequisite(s): BIO 152; CHM 314.

## BIO 442L. Developmental Biology Laboratory. 1 Hour

Exploration of the development of key model organisms from the morphological and molecular perspectives with an emphasis on basic developmental laboratory techniques. One three-hour laboratory per week. Corequisite(s): BIO 442.

## BIO 444. Plant Diversity. 3 Hours

Broad survey of the major divisions of the plant kingdom; consideration of algae, fungi, bryophytes, vascular plant groups; includes generalized life histories, ecological and physiological characteristics, and evolutionary relationships. Prerequisite(s): BIO 310.
BIO 444L. Plant Diversity Laboratory. 1 Hour
Laboratory studies of the plant groups, including life cycles and evolutionary, physiological, and ecological adaptations. One three-hour laboratory per week. Corequisite(s): BIO 444.

## BIO 445. Evolution \& Development. 3 Hours

Molecular and population genetic examination of the evolution of animal form. Topics include comparative developmental biology, population genetics, and molecular evolution. Prerequisite(s): BIO 312.

## BIO 450. Comparative Animal Physiology. 3 Hours

Organized on a function-system basis, course dealing with environmentorganism interaction and with integrative systems of the principle phyla of animals. Prerequisite(s): (BIO 310 or BIO 312); CHM 124.
BIO 450L. Comparative Animal Physiology Laboratory. 1 Hour
Examination of physiological responses to the physical environment. Variations of the physical environment are examined in the field. Study of animals under controlled laboratory conditions with experimental design, data collection and analysis to assess physiological adaptations. One three-hour laboratory or field trip per week. Corequisite(s): BIO 450.

## BIO 452. Biology of Rivers \& Lakes. 3 Hours

The biological interrelationships of organisms in rivers, streams, lakes and ponds including biodiversity, ecological/evolutionary adaptations and structure of aquatic ecosystems. Prerequisite(s): BIO 310.

## BIO 452L. Biology of Rivers \& Lakes Laboratory. 1 Hour

Laboratory and field exercises emphasizing the biological, chemical and physical attributes of freshwater ecological systems. One three-hour laboratory or field trip per week. Corequisite(s): BIO 452.

## BIO 459. Environmental Ecology. 3 Hours

The application of current ecological knowledge and principles toward the study of human impact on the environment. Emphasis on ecosystem dynamics, applied ecology, disturbance ecology, and approaches to solving global environmental problems. Prerequisite(s): BIO 310.

## BIO 459L. Environmental Ecology Laboratory. 1 Hour

Analytical approach to studying applied ecology and human impact on the environment. Emphasis on laboratory and field approaches to solving environmental problems through the use of ecological principles. One three-hour laboratory per week. Corequisite(s): BIO 459.

## BIO 460. Introduction to Bioinformatics. 3 Hours

This course introduces the concepts involved in bioinformatics, using the appropriate material from the disciplines of biology, chemistry and computer science, among others. Prerequisite(s): BIO 152.

## BIO 461. Invertebrate Zoology. 3 Hours

Survey of the structure, activities, life histories, and relationships of the invertebrate animals, with some emphasis on their origin and development. Prerequisite(s): BIO 310 or BIO 312.

BIO 461L. Invertebrate Zoology Laboratory. 1 Hour
Examination of the structure and function of the major invertebrate phyla. Survey of representative animals with an emphasis on observational skills for analysis of the structural adaptations of live animals. One threehour laboratory per week. Corequisite(s): BIO 461.

## BIO 462. Molecular Biology. 3 Hours

Analysis of the nature of the gene and gene action. Particular attention to genetic regulation and to recent advances in molecular genetics. Prerequisite(s): BIO 312; CHM 314.

## BIO 465. Disease Ecology. 3 Hours

Examination of ecological factors affecting the emergence and dynamics of infectious diseases of humans and wildlife. History and overview of how diseases are often a product of populations, communities, ecosystems, and global systems. Includes an introduction to epidemiology and current molecular and geographic information system techniques used to study these integrated systems. Prerequisite(s): (BIO 310, BIO 411) or permission of department chairperson or instructor.

## BIO 466. Biology of Infectious Disease. 3 Hours

The nature of infectious diseases, host-parasite relationships in resistance and infection, defense mechanism (antigen-antibody response); survey of the bacteria causing disease in humans. Prerequisite(s): BIO 411.

## BIO 470. Cancer Biology. 3 Hours

Study of growth patterns and causes of cancer at the cellular and molecular levels. Discussion of the hereditary and environmental factors that contribute to the development of the disease in cancer patients. Description of the research being conducted to understand and cure the disease. Prerequisite(s): BIO 403 or BIO 440.

## BIO 475. Human Anatomy. 3 Hours

Study of the fundamental principles of human gross anatomy with emphasis on all organ systems. Prerequisite(s): BIO 152; CHM 314.

## BIO 475L. Human Anatomy Laboratory. 1 Hour

Study of human gross anatomy emphasizing all organs systems using computer-assisted dissection, anatomical human models and occasional dissection of nonhuman cadaver organs. One three-hour laboratory per week. Corequisite(s): BIO 475.

## BIO 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## BIO 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## BIO 479L. Environmental Instrumentation Laboratory. 2 Hours

The understanding and use of field- and laboratory-based equipment to study current environmental issues. Emphasis on team-centered approaches to investigating environmental problems. Same as GEO 479L. One five-hour laboratory or field trip per week. Prerequisite(s): BIO 310; GEO 116.

## BIO 480. Principles of Microscopy. 3 Hours

Focus on basic principles and theory of light and electron microscopy, and how these techniques address fundamental questions in science. Prerequisite(s): BIO 152.

## BIO 480L. Principles of Microscopy Laboratory. 1 Hour

Application and practice of light and electron microscopy. One three-hour laboratory per week. Corequisite(s): BIO 480.

## BIO 489. Mycology. 3 Hours

Introductory course stressing the interrelationship between fungi and the rest of the biological world. Emphasis on the basic biology and ecology of fungi, decomposition, species interactions, plant pathology and medical mycology. Prerequisite(s): BIO 152.

## BIO 496. Special Topics in Biology. 1-3 Hours

Lecture course addressing advanced topics in biology. Topics are variable depending on faculty teaching the course and the course aims. Students should consult the class schedule. May be repeated. Prerequisite(s): BIO 151, BIO 152.

## BIO 499. Environmental Biology Internship. 3 Hours

Majors will have the opportunity to obtain valuable training and experience under the mentorship of established scientists and professionals. Emphasis on approaches to solving environmental problems including such research areas as bioremediation, risk assessment, and ecological restoration. May be repeated up to six semester hours. No science credit for biology majors. Prerequisite(s): Permission of Environmental Biology Program Coordinator.

## Chemistry

Majors:

- Bachelor of Arts, Chemistry (p. 139)
- Bachelor of Science, Biochemistry (p. 140)
- Bachelor of Science, Chemistry (p. 141)
- Bachelor of Science, Medicinal-Pharmaceutical Chemistry (p. 142)

Minor:

- Chemistry (p. 143)

The B.S. in Chemistry (BS-CHM) program is approved by the American Chemical Society for the training of professional chemists, and provides students with the opportunity to perform an original research project under the direction of a faculty mentor. BS-CHM majors electing to perform research typically select their faculty mentor and project during the first term of their junior year. The research project may be conducted over the entire senior year, but is more commonly conducted over a tenweek period during the summer following the junior year. In either case, the project culminates in the senior year with enrollment in CHM 498, the submission of an acceptable thesis, and the presentation of a seminar in CHM 490 . Additional research work to a maximum total of six semester hours may be elected provided the work extends beyond two semesters.

The B.S. in Biochemistry (BCM) program prepares students for careers in the biochemical and life sciences. BCM majors may elect to conduct an original research project in biochemistry or a related chemical subdiscipline. In all other respects these biochemically-related research projects are identical to those detailed for the BS-CHM program above.

The B.S. in Medicinal-Pharmaceutical Chemistry (MCM) program is designed for students pursuing careers in medicine, pharmacy or forensic chemistry, and provides a focused preparation in the analysis and synthesis of compounds of pharmacological significance. MCM majors may elect to conduct an original research project, typically in synthetic or analytical chemistry. In all other respects these research projects are identical to those detailed for the BS-CHM program above.

The B.A. in Chemistry (BA-CHM) program prepares students for a wide range of interdisciplinary professions, and consists of a curriculum in which the traditional B.S. curriculum has been modified, most notably in mathematics, physics, and advanced chemistry. The BA-CHM program is accordingly somewhat flexible, and affords students a wide selection of courses in the humanities and social sciences. BA-CHM majors are free to choose courses which prepare them for careers in medicine, dentistry,
optometry, veterinary medicine, biochemistry, education, law, and other professions which require a science background.

A minor in chemistry consists of twenty semester hours. Typically these consist of 8 credit hours of general chemistry (CHM 123, 123L, 124, 124 L ), 8 credit hours of organic chemistry (CHM 313, 313L, 314, 314L), 3 credit hours of physical chemistry (CHM 302, 303 or 304), and one credit hour in basic molecular spectroscopy (CHM 317). Of these, the physical chemistry course is the only requirement.

## Faculty

David Johnson, Chairperson
Professors Emeriti: Fratini, Keil, Knachel, Morrow, Singer
Professor: S. Swavey
Associate Professors: Benin, Church, Crosson, Johnson, Lopper, Masthay Assistant Professors: Biffinger, Erb, Kovacs, Mammana Lecturers: Trick, Turner
Lab Instructors: DeBeer, Eckerle, Gunawan, Hils, Lee, Piepgrass, R. Swavey

## Bachelor of Arts, Chemistry (CHM) minimum 124 hours

| Common Academic Program (CAP) |  |
| :---: | :---: |
| *credit hours will vary depending on courses selected |  |
| First-Year Humanities Commons ${ }^{1}$ | 12 |
| HST 103 The West \& the World |  |
| REL 103 Introduction to Religious and Theological Studies |  |
| PHL 103 Introduction to Philosophy |  |
| ENG 100 Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ | 0-3 |
| ENG 200 Writing Seminar II |  |
| Oral Communication | 3 |
| CMM 100 Principles of Oral Communication |  |
| Mathematics | 3 |
| Social Science | 3 |
| SSC 200 Social Science Integrated |  |
| Arts | 3 |
| Natural Sciences ${ }^{4}$ | 7 |
| Crossing Boundaries | varia |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |
| Advanced Study | varia |
| Philosophy and/or Religious Studies |  |
| Historical Studies ${ }^{5}$ |  |
| Diversity and Social Justice | 3 |
| Major Capstone | 0-3 |

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.

5 U.S. History AP credit will not satisfy this requirement.

| Liberal Studies Curriculum |  |  |
| :---: | :---: | :---: |
| Creative and Performing Arts (May include CAP Arts) |  | 3 |
| L2 Proficiency (Proficiency in a language other than English) |  | 0-11 |
| Literature (May include CAP Components) |  | 3 |
| Mathematics (Satisfies CAP Mathematics) |  | 9 |
| MTH 148 <br> \& MTH 149 | Introductory Calculus I and Introductory Calculus II |  |
| MTH 367 | Statistical Methods I |  |
| Natural Sciences (Applies to CAP Natural Science) |  | 8 |
| $\begin{aligned} & \text { PHY } 201 \\ & \& 201 \mathrm{~L} \end{aligned}$ | College Physics I and College Physics Laboratory I |  |
| $\begin{aligned} & \text { PHY } 202 \\ & \& 202 L \end{aligned}$ | General Physics and General Physics Laboratory |  |
| Social Sciences (Includes CAP Social Science) |  | 12 |

Major Requirements ${ }^{1} 38$
$\left.\begin{array}{llc}\text { CHM 123 } & \begin{array}{l}\text { General Chemistry } \\ \text { and General Chemistry Laboratory }\end{array} & 4 \\ \text { \& 123L }\end{array} \quad \begin{array}{l}\text { General Chemistry } \\ \text { CHM 124 } \\ \text { \& 124L }\end{array} \quad \begin{array}{ll}\text { and General Chemistry Laboratory }\end{array}\right)$

CHM 317 Spectroscopic Identification of Organic Compounds
CHM 341 Environmental Chemistry
CHM 404 Special Topics in Physical Chemistry
CHM 412 Intermediate Organic Chemistry
CHM 415 Analytical Chemistry
CHM 415L Analytical Chemistry Laboratory
CHM 417 Inorganic Chemistry
CHM 418L Inorganic Chemistry Laboratory
CHM 420 Biochemistry
CHM 426 Biosynthetic Organic Chemistry
CHM 427 Medicinal Chemistry
CHM 451 General Biochemistry I
CHM 452 General Biochemistry II
CHM 462L Biochemistry Laboratory
CHM 477 Honors Thesis Project
\& CHM 478 and Honors Thesis Project
CHM 497 Research Seminar
\& CHM 498 and Research \& Thesis
CHM 499 Research \& Thesis
Breadth
ASI $150 \quad$ Introduction to the University Experience
Total Hours to total at least

| 1 |
| :--- |
| 2 |
| Advanced placement is permitted. |
| May substitute two upper level courses from other science |
| departments with permission of chairperson. |
| Bachelor of Science, Biochemistry (BCM) |
| minimum 120 hours |




| SSC $200 \quad$ Social Science Integrated |  |
| :--- | :---: |
| Arts | 3 |
| Natural Sciences ${ }^{4}$ | 7 |
| Crossing Boundaries | variab |
| credit |  |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |


| SSC 200 Social Science Integrated |  |
| :--- | :---: |
| Arts | 3 |
| Natural Sciences ${ }^{4}$ | 7 |
| Crossing Boundaries | variab <br> credit |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |


| SSC 200 Social Science Integrated |  |
| :--- | :---: |
| Arts | 3 |
| Natural Sciences ${ }^{4}$ | 7 |
| Crossing Boundaries | variab |
|  | credit |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |

Advanced placement is permitted.
May substitute two upper level courses from other science departments with permission of chairperson

## Bachelor of Science, Biochemistry (BCM) minimum 120 hours

| Advanced Study | variab |
| :--- | :--- |
| credit |  |

Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice

Completed with ASI 110 and ASI 120.
Or ENG 100A and ENG 100B, or ENG 200H, by placement.
Completed with ENG 200H or ASI 120.
Must include two different disciplines and accompanying lab.
U.S. History AP credit will not satisfy this requirement.

## Science Breadth Requirements

| CPS 132 | Computer Programming for Engineering \& Science | 3 |
| :--- | :--- | :--- |
| MTH 168 | Analytic Geometry \& Calculus I (Satisfies CAP <br> Mathematics) | 4 |
| MTH 169 | Analytic Geometry \& Calculus II | 4 |
| MTH 218 | Analytic Geometry \& Calculus III | 4 |
| PHY 206 | General Physics I - Mechanics | 3 |
| PHY 207 | General Physics II - Electricity \& Magnetism | 3 |

PHY 201L College Physics Laboratory I 1
Select courses from: 10

BIO 312 General Genetics
BIO 314 Plant Biology

BIO 403 Physiology I
BIO 404 Physiology II
BIO 411 General Microbiology

BIO 427 Immunology
BIO 440 Cell Biology
BIO 462 Molecular Biology
BIO 466 Biology of Infectious Disease

| CHM 404 | Special Topics in Physical Chemistry |
| :--- | :--- |
| CHM 412 | Intermediate Organic Chemistry |

CHM 415 Analytical Chemistry
\& 415L and Analytical Chemistry Laboratory
CHM 417 Inorganic Chemistry
CHM 418L Inorganic Chemistry Laboratory
CHM 426 Biosynthetic Organic Chemistry
CHM 427 Medicinal Chemistry
CHM 497 Research Seminar
\& CHM 498 and Research \& Thesis
CHM 499 Research \& Thesis
Major Requirements ${ }^{1} 47$
Satisfies CAP Natural Science
Year 1
BIO $151 \quad$ Concepts of Biology I: Cellular \& Molecular Biology 4 \& 151L and Concepts of Biology Laboratory I: Cellular \& Molecular Biology
BIO 152 Concepts of Biology II: Evolution \& Ecology 3
CHM 123 General Chemistry 4
\& 123L and General Chemistry Laboratory
CHM 124 General Chemistry
4
and General Chemistry Laboratory

| CHM 201 | Quantitative Analysis <br> $\& 201$ L | 4 |
| :--- | :--- | ---: |
| CHM 313 | and Quantitative Analysis Laboratory |  |
| $\& 313$ L | and Organic Chemistry | 4 |
| CHM 314 | Organic Chemistry <br> $\& 314$ L | and Organic Chemistry Laboratory |

BIO Elective and Laboratory 4
Year 3

| CHM 303 | Physical Chemistry | 4 |
| :--- | :--- | :--- |
| $\& 303 \mathrm{~L}$ | and Physical Chemistry Laboratory |  |
| CHM 304 | Physical Chemistry | 3 |
| CHM 451 | General Biochemistry I | 3 |
| CHM 452 | General Biochemistry II | 3 |
| CHM 462L | Biochemistry Laboratory | 1 |
| CHM 495 | Introduction to Research Seminar | 0 |
| Year 4 |  | 1 |
| CHM 480 | Professional Practices Seminar | 1 |
| CHM 490 | Seminar IV (Satisfies CAP Major Capstone) | 1 |

Breadth
ASI $150 \quad$ Introduction to the University Experience
Foreign Language
Social and Behavioral Sciences (Includes CAP Social Science)
Total Hours to total at least
1 Advanced placement is permitted.
Bachelor of Science, Chemistry (CHM)
minimum 120 hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |
| Second-Year Writing Seminar ${ }^{3}$ | $0-3$ |

ENG $200 \quad$ Writing Seminar II
$\begin{array}{ll}\text { Oral Communication } & 3 \\ \text { CMM } 100 \quad \text { Principles of Oral Communication }\end{array}$

| Mathematics | 3 |
| :--- | :--- |
| Social Science | 3 |

SSC $200 \quad$ Social Science Integrated
Arts
Natural Sciences ${ }^{4} \quad 7$
$\begin{array}{ll}\text { Crossing Boundaries } & \text { variable } \\ \text { credit }\end{array}$

| Faith Traditions |
| :--- |
| Practical Ethical Action |
| Inquiry |


| Integrative |  |
| :---: | :--- |
| Advanced Study | variab <br> credit |

Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice
Major Capstone 0-3

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.
${ }_{5}$ Must include two different disciplines and accompanying lab.
5
U.S. History AP credit will not satisfy this requirement.

## Science Breadth Requirements

| Mathematics, Computer Sciences ${ }^{1}$ | 15 |
| :--- | :--- |
| CPS 132 | Computer Programming for Engineering \& Science $^{\text {MTH 168 }}$ |
| Analytic Geometry \& Calculus I (Satisfies CAP <br> Mathematics) |  |
| MTH 169 | Analytic Geometry \& Calculus II |
| MTH 218 | Analytic Geometry \& Calculus III |


| PHY 206 | General Physics I-Mechanics (Applies to CAP Natural Science) | 3 |
| :---: | :---: | :---: |
| PHY 207 | General Physics II - Electricity \& Magnetism | 3 |
| PHY 208 | General Physics III- Thermodynamics, Waves, and Fluids | 3 |
| PHY 210L | General Physics Laboratory I | 1 |
| PHY 211L | General Physics Laboratory II | 1 |
| Major Requirements ${ }^{2}$ |  | 51 |
| Year 1 |  |  |
| CHM 123 <br> \& 123L | General Chemistry and General Chemistry Laboratory | 4 |
| CHM 124 <br> \& 124L | General Chemistry and General Chemistry Laboratory | 4 |
| Year 2 |  |  |
| CHM 201 <br> \& 201L | Quantitative Analysis and Quantitative Analysis Laboratory | 4 |
| CHM 313 <br> \& 313L | Organic Chemistry and Organic Chemistry Laboratory | 4 |
| CHM 314 <br> \& 314L | Organic Chemistry and Organic Chemistry Laboratory | 4 |
| Year 3 |  |  |
| CHM 303 <br> \& 303L | Physical Chemistry and Physical Chemistry Laboratory | 4 |
| CHM 304 <br> \& 304L | Physical Chemistry and Physical Chemistry Laboratory | 4 |
| CHM 317 | Spectroscopic Identification of Organic Compounds | 1 |
| blehm 417 | Inorganic Chemistry | 3 |
| CHM 418L | Inorganic Chemistry Laboratory | 1 |
| CHM 495 | Introduction to Research Seminar | 0 |
| Year 4 |  |  |
| CHM 415 <br> \& 415 L | Analytical Chemistry and Analytical Chemistry Laboratory | 4 |
| bl CHM 420 | Biochemistry | 3 |
|  | General Biochemistry I and General Biochemistry II |  |
| CHM 480 | Professional Practices Seminar | 1 |
| CHM 490 | Seminar IV (Satisfies CAP Major Capstone) | 1 |
| Select three courses from: ${ }^{3}$ |  | 9 |
| CHM 404 | Special Topics in Physical Chemistry |  |
| CHM 412 | Intermediate Organic Chemistry |  |
| CHM 426 | Biosynthetic Organic Chemistry |  |
| CHM 427 | Medicinal Chemistry |  |
| CHM 462L | Biochemistry Laboratory |  |
| CHM 477 <br> \& CHM 478 | Honors Thesis Project and Honors Thesis Project |  |
| CHM 497 <br> \& CHM 498 | Research Seminar and Research \& Thesis |  |
| CHM 499 | Research \& Thesis |  |
| Breadth |  |  |
| ASI 150 | Introduction to the University Experience | 1 |
| Foreign Language |  | 6-8 |
| Social and Beha | ioral Sciences (Includes CAP Social Science) | 6 |

Total Hours to total at least
1 Should be completed during the first two years.
2 Advanced placement is permitted.
3 May substitute one approved science course from another department.

## Bachelor of Science, MedicinalPharmaceutical Chemistry (MCM) minimum 120 hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |

Second-Year Writing Seminar ${ }^{3}$ 0-3
ENG $200 \quad$ Writing Seminar II
Oral Communication 3
CMM 100 Principles of Oral Communication

| Mathematics | 3 |
| :--- | :--- |
| Social Science | 3 |

SSC 200 Social Science Integrated

Arts
Natural Sciences ${ }^{4}$
Crossing Boundaries

| Faith Traditions |  |
| :--- | ---: |
| Practical Ethical Action |  |
| Inquiry | variab |
| Integrative | cred |
| Advanced Study |  |
| Philosophy and/or Religious Studies | 3 |
| Historical Studies 5 | $0-3$ |
| Diversity and Social Justice |  |
| Major Capstone |  |

Completed with ASI 110 and ASI 120.
Or ENG 100A and ENG 100B, or ENG 200H, by placement.
Completed with ENG 200H or ASI 120.
Must include two different disciplines and accompanying lab.
U.S. History AP credit will not satisfy this requirement.

## Science Breadth Requirements

Satisfies CAP Mathematics and CAP Natural Science

| $\begin{aligned} & \text { BIO } 151 \\ & \& 151 \mathrm{~L} \end{aligned}$ | Concepts of Biology I: Cellular \& Molecular Biology and Concepts of Biology Laboratory I: Cellular \& Molecular Biology | 4 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { BIO } 152 \\ & \& 152 \mathrm{~L} \end{aligned}$ | Concepts of Biology II: Evolution \& Ecology and Concepts of Biology Laboratory II: Evolution \& Ecology | 4 |

variab

120 MTH 148
\& MTH 149
MTH 367
PHY 201
\& 201L
PHY 202
\& 202L

Introductory Calculus I 6 and Introductory Calculus II
Statistical Methods I3
College Physics I ..... 4
and College Physics Laboratory I
General Physics 4 and General Physics Laboratory

Major Requirements ${ }^{2,3}$55

## Year 1

CHM 123 General Chemistry 4
\& 123L and General Chemistry Laboratory
CHM 124 General Chemistry
and General Chemistry Laboratory
Year 2
CHM 201 Quantitative Analysis 4
$\begin{array}{lll}\& 201 \mathrm{~L} & \text { and Quantitative Analysis Laboratory } & \\ \text { CHM 313 } & \text { Organic Chemistry } & 4\end{array}$
$\begin{array}{lll}\& 313 \mathrm{~L} & \text { and Organic Chemistry Laboratory } & \\ \text { CHM 314 } & \text { Organic Chemistry } & 4\end{array}$
\& 314L and Organic Chemistry Laboratory
Year 3
CHM 302 Physical Chemistry 4
\& 302L and Physical Chemistry Laboratory ${ }^{1}$
CHM 317 Spectroscopic Identification of Organic 1
Compounds
CHM $420 \quad$ Biochemistry ${ }^{4} \quad 3$
CHM 462L Biochemistry Laboratory 1
Introduction to Research Seminar 0 credit Year 4

CHM 319L Advanced Organic Synthesis Laboratory 1
CHM 426 Biosynthetic Organic Chemistry 3
CHM 427 Medicinal Chemistry 3
CHM 454 Rational Drug Design 3
Bioanalytical Chemistry Laboratory 1
Professional Practices Seminar 1
CHM $490 \quad$ Seminar IV (Satisfies CAP Major Capstone) 1

Science Requirements 13
Select six semester hours from: ${ }^{5}$
CHM 412 Intermediate Organic Chemistry
CHM 415 Analytical Chemistry
\& 415L and Analytical Chemistry Laboratory
CHM 417 Inorganic Chemistry
CHM 418L Inorganic Chemistry Laboratory
CHM 497 Research Seminar
\& CHM 498 and Research \& Thesis
Select two lecture courses and one laboratory from:
BIO 403 Physiology I
\& 403L and Physiology Laboratory I
BIO 411 General Microbiology
\& 411L and General Microbiology Laboratory
BIO $440 \quad$ Cell Biology
\& 440L and Cell Biology Laboratory
Breadth ${ }^{6}$




## CHM 234. Energy Resources. 3 Hours

The chemical and geological aspects of formation, production, and benefits/costs (including environmental impacts) of energy derived from fossil fuels (coal and hydrocarbons), biofuels (e.g., ethanol production), radioactive materials (nuclear power), and renewable sources (e.g., geothermal, hydro, wind, and solar power). Prerequisite(s): CHM 123, CHM 124. Corequisite(s): GEO 208.
CHM 290. Seminar II. 0 Hours
Overview of methods of scientific oral presentation and formal conversation within the molecular sciences professional community.
CHM 302. Physical Chemistry. 3 Hours
Essential elements of thermodynamics, chemical kinetics, equilibria, and electrochemistry for those with a primary interest in the life sciences. For B.A. chemistry majors and premedical, predental, and biology majors. Prerequisite(s): CHM 124.

CHM 302L. Physical Chemistry Laboratory. 1 Hour
Course to accompany CHM 302. One three-hour laboratory each week. Prerequisite(s): CHM 201, CHM 201L. Corequisite(s): CHM 302.

## CHM 303. Physical Chemistry. 3 Hours

Fundamentals of thermodynamics, chemical kinetics, electrochemistry, and spectroscopy with a mathematics format. For B.S. chemistry and biochemistry majors and chemical engineers. Prerequisite(s): CHM 201 or equivalent. Corequisite(s): MTH 218.
CHM 303L. Physical Chemistry Laboratory. 1 Hour
Course to accompany CHM 303. One three-hour laboratory each week. Prerequisite(s): MTH 218.

## CHM 304. Physical Chemistry. 3 Hours

Fundamentals of thermodynamics, chemical kinetics, electrochemistry, and spectroscopy with a mathematics format. For B.S. chemistry and biochemistry majors and chemical engineers.

## CHM 304L. Physical Chemistry Laboratory. 1 Hour

Course to accompany CHM 304. One three-hour laboratory each week. Corequisite(s): MTH 218.

CHM 313. Organic Chemistry. 3 Hours
Major topics in organic chemistry including synthesis, mechanisms, stereochemistry, and spectroscopy. Required of all chemistry majors and students in the life sciences. Prerequisite(s): CHM 124.
CHM 313L. Organic Chemistry Laboratory. 1 Hour
Common separation, purification, and analytical techniques including chromatography and spectroscopy. One three-hour laboratory each week. Prerequisite(s): CHM 124, 124L Corequisite(s): CHM 313.

## CHM 314. Organic Chemistry. 3 Hours

Major topics in organic chemistry including synthesis, mechanisms, stereochemistry, and spectroscopy. Required of all chemistry majors and students in the life sciences. Prerequisite(s): CHM 313.

CHM 314L. Organic Chemistry Laboratory. 1 Hour
Synthesis and characterization of organic materials utilizing skills from CHM 313L. One three-hour laboratory each week. Prerequisite(s): CHM 313L. Corequisite(s): CHM 314.
CHM 317. Spectroscopic Identification of Organic Compounds. 1 Hour The use of nuclear magnetic resonance, infrared, and mass spectrometry in elucidating structures. Emphasis on interpretation and integration of spectral data in problem solving. Prerequisite(s): (CHM 314, CHM 314L) or equivalent.

CHM 319L. Advanced Organic Synthesis Laboratory. 1 Hour
Preparation of organic compounds by single and multi-step synthetic sequences. Basic techniques in synthesis including use of organometallics, inert atmosphere, temperature control, extraction, vacuum distillation, column chromatography, recrystallization, and spectroscopic characterization methods. One four-hour laboratory each week. Prerequisite(s): CHM 314, CHM 314L.

## CHM 341. Environmental Chemistry. 3 Hours

An introduction to the chemical processes in the environment. Topics include chemical equilibrium in aqueous solution, reaction mechanisms as applied to atmospheric chemistry, and analytical methods commonly applied to environmental samples. Prerequisite(s): CHM 314 or permission of instructor.

## CHM 341L. Environmental Chemistry Laboratory. 1 Hour

Laboratory course to accompany CHM 341. Corequisite(s): CHM 341.

## CHM 390. Seminar III. 0 Hours

Overview of methods of scientific oral presentation and formal conversation within the molecular sciences professional community.

## CHM 404. Special Topics in Physical Chemistry. 3 Hours

Thorough treatment of topics such as electrochemistry, macromolecules, photochemistry, or spectroscopy. May be repeated as topics change.
Prerequisite(s): CHM 302 or CHM 303.

## CHM 412. Intermediate Organic Chemistry. 3 Hours

Modern theory and practice of organic chemistry. May include structurereactivity relationships, reaction mechanism, and synthetic topics not normally treated in introductory courses. Prerequisite(s): CHM 302 or equivalent; CHM 313, CHM 314; senior standing.

## CHM 415. Analytical Chemistry. 2 Hours

Chemical analysis based on modern instrumentation. Chromatographic, electrochemical, and spectroscopic methods. Prerequisite(s): CHM 201, CHM 201L; (CHM 302 or CHM 304).

## CHM 415L. Analytical Chemistry Laboratory. 2 Hours

Course to accompany CHM 415. Two three-hour laboratory sessions each week. Prerequisite(s): CHM 201L; CHM 302 or equivalent.

## CHM 417. Inorganic Chemistry. 3 Hours

An advanced course in modern inorganic chemistry. Atomic structure, principles of bonding and structure, acid-base chemistry, periodicity, coordination compounds, nonaqueous solvents, electrochemistry, molecular symmetry, organometallic compounds, and the chemistry of selected representative elements. Prerequisite(s): CHM 314. Corequisite(s): CHM 302 or CHM 304.
CHM 418L. Inorganic Chemistry Laboratory. 1 Hour Laboratory course dealing with the synthesis and characterization of inorganic and organometallic compounds. Topics include vacuum and inert atmosphere techniques, separation and purification, spectroscopic characterization, X -ray diffraction, magnetic moment, and conductance measurements. Prerequisite(s): CHM 201L, CHM 314L. Corequisite(s): CHM 417.

## CHM 420. Biochemistry. 3 Hours

The fundamental aspects of the chemistry and biochemistry of carbohydrates, lipids, proteins, and nucleic acids. Enzymology, protein purification, bioenergetics, metabolism of carbohydrates, lipids, amino acids, nucleotides and nucleic acids, elementary molecular biology, and control processes are described. Acceptable preparation for medical school. Prerequisite(s): CHM 314.

CHM 420L. Biochemistry Lab for the Medical Sciences. 1 Hour A laboratory course to accompany CHM420, biochemistry. Prerequisite(s): CHM314, CHM314L. Co-requisite(s): CHM420.

## CHM 426. Biosynthetic Organic Chemistry. 3 Hours

Mechanistic fundamentals of the biosynthesis and transformation of organic natural products, with special emphasis on medicinal compounds, toxins, pheromones and other secondary metabolite structures. Prerequisite(s): (CHM 314, CHM 314L) or equivalent.

## CHM 427. Medicinal Chemistry. 3 Hours

The chemical mechanisms of action of the major drug classes will be surveyed with particular emphasis on the facets of organic chemistry that control drug-receptor interactions, metabolism and mechanisms of toxicity and resistance. First term. Prerequisite(s): CHM 314; (CHM 420 or CHM 451).

## CHM 450. Advanced Organic Synthesis. 3 Hours

Fundamentals of synthesis and transformations of organic compounds, with emphasis on mechanisms; pericyclic reactions; small and medium ring synthesis; chemoselectivity, regioselectivity, stereoselectivity, retrosynthesis, functional group transformations, carbon-carbon bond forming reactions, oxidations, reductions and protecting groups. Prerequisite: (CHM 314, CHM 314L) or equivalent.

## CHM 451. General Biochemistry I. 3 Hours

Discussion of the chemistry and biochemistry of carbohydrates, amino acids, proteins, and nucleic acids, including health-science and methodologic aspects. Descriptions of enzymology, protein purification, and carbohydrate metabolism related to such topics as bioenergetics, membranes, and disease processes. Recommended for students desiring entry into graduate and professional schools. Prerequisite(s): CHM 201, CHM 314.

## CHM 452. General Biochemistry II. 3 Hours

Discussion of selected topics in bioenergetics, and metabolism of lipids, amino acids, porphyrins, nucleic acids, and proteins. Current aspects of nutrition, biochemical genetics, endocrinology, regulation, and genetic engineering addressed and related to health-science topics as time permits. Suitable preparation for medical school. Prerequisite(s): CHM 451.

## CHM 454. Rational Drug Design. 3 Hours

Introduction to drug target selection, lead compound discovery, and application of structure-activity relationships and computational chemistry towards refinement and optimization of lead compounds and their derivatives. Use of molecular graphics software and publicly available macromolecular structure databases will provide the foundation for evaluating macromolecular models of drug targets and allow a handson exploration of the structure/function relationships of proteins that have been successful targets of rational drug design. Prerequisite(s): (CHM 420 or CHM 452) or equivalent.

## CHM 462L. Biochemistry Laboratory. 1 Hour

Laboratory course to accompany biochemistry lecture courses. Spectrophotometry, pH and dissociation, enzymologic methodology and analytical techniques, chromatographic techniques. Corequisite(s): CHM 420 or CHM 451.
CHM 463L. Bioanalytical Chemistry Laboratory. 1 Hour
Introduction to analytical methods in current use in biochemistry. Course will focus on separations and spectroscopic methods for the analysis of biomolecules. Prerequisite(s): CHM 201, CHM 201L, CHM 302.

## CHM 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## CHM 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## CHM 480. Professional Practices Seminar. 1 Hour

Practicum which culminates in the presentation of a technical talk on a topic in chemistry to peers and faculty members. Emphasis on the molecular scale of observation.

## CHM 490. Seminar IV. 1 Hour

Presentation of a research topic during the weekly seminar series for the Department of Chemistry. Prerequisite(s): CHM 480.

## CHM 495. Introduction to Research Seminar. 0 Hours

Research topics presented by visiting scientists and faculty, and the results of thesis research by senior students. Required of all junior chemistry and biochemistry majors in the B.S. programs. Grading Option two.

## CHM 496. Professional Practices Seminar. 0 Hours

After discussions of the chemical literature and information retrieval, resumes, graduate education, and career opportunities, students present technical talks on topics with social, ethical, or historical implications. Required of all chemistry and biochemistry majors, both B.S. and B.A.

## CHM 497. Research Seminar. 0 Hours

A series of seminars as described under CHM 495. Required of all senior chemistry and biochemistry majors in the B.S. programs.

## CHM 498. Research \& Thesis. 3 Hours

All students in the B.S. programs including co-op students are required to enroll for a minimum of three semester hours in a research course (CHM 498). Students may take additional research semester hours (CHM 499) if the work extends for more than two semesters. Successful completion of research courses requires the submission of a typewritten thesis and the presentation of a seminar. With the prior approval of the department chairperson, B.S. co-op students may substitute work experience for research. Prerequisite(s): Permission of department chairperson.

## CHM 499. Research \& Thesis. 1-3 Hours

All students in the B.S. programs including co-op students are required to enroll for a minimum of three semester hours in a research course (CHM 498). Students may take additional research semester hours (CHM 499) if the work extends for more than two semesters. Successful completion of research courses requires the submission of a typewritten thesis and the presentation of a seminar. With the prior approval of the department chairperson, B.S. co-op students may substitute work experience for research. Prerequisite(s): CHM 498; permission of department chairperson.

## Communication

- Bachelor of Arts, Communication (p. )

Concentrations:

- Communication Management
- Communication Studies
- Journalism
- Media Production
- Public Relations
- Theatre


## Minors:

- Communication (p. 149)
- Political Journalism (p. 149)

The course requirement for communication majors is 39 semester hours. Teacher licensure through the dual-degree B.A. and B.S.E. program, conducted in conjunction with the Department of Teacher Education in the School of Education and Health Sciences, is an option for communication majors. Consult department chairperson for details.

A minor in communication consists of 15 semester hours. A minor in political journalism is available for political science majors and international studies majors. The political journalism minor consists of 18 semester hours. The department also offers a Bachelor of Arts with a major in theatre. See Theatre (p. 287).

## Faculty

Joseph M. Valenzano, III, Chairperson
Professors Emeriti: Anderson, Blatt, Gilvary, Lain, Morlan Professors: Hess, Robinson, Skill, Thompson, Wallace
Associate Professors: Griffin, Han, Hayford, Scantlin, Valenzano Assistant Professors: Abitbol, Beckner, Dunlevy, Painter,
Sangalang, Taylor, Vibber
Lecturers: Combs, Evans, Flynn, Freitag, Kelley, Oh, Secrease, Sweet, Toomb
Media Specialist in Residence: Kennedy

## Bachelor of Arts, Communication (CMM) minimum 124 hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$


| Oral Communication | 3 |
| :--- | :--- |
| CMM 100 | Principles of Oral Communication |
| Mathematics | 3 |

Social Science 3

SSC 200 Social Science Integrated
Arts

| Natural Sciences ${ }^{4}$ | 7 <br> Crossing Boundaries |
| :--- | ---: |
| Faith Traditions | variable <br> credit |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |
| Advanced Study | variable |
| credit |  |


| Liberal Studies Curriculum |  |  |
| :--- | :---: | :---: |
| Creative and Performing Arts (May include CAP Arts) | 3 |  |
| L2 Proficiency (Proficiency in a language other than English) | $0-11$ |  |
| Literature (May include CAP components) | 3 |  |
| Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) | 3 |  |
| Natural Sciences (Satisfies CAP Natural Science) | 11 |  |
| Social Sciences (Includes CAP Social Science) | 12 |  |
| Major Requirements | 39 |  |
| CMM 100 | Principles of Oral Communication | 3 |
| CMM 201 | Foundations of Mass Communication | 3 |
| CMM 202 | Foundations of Communication Theories \& | 3 |
|  | Research |  |
| CMM 351 | Public Speaking | 3 |

## Select one concentration from:

Communication Management (CMT)

| CMM 320 | Interpersonal Communication | 3 |
| :--- | :--- | :--- |
| CMM 321 | Small Group Communication | 3 |
| CMM 352 | Persuasion | 3 |
| CMM 412 | Research Methods in Communication ${ }^{2}$ | 3 |
| CMM 421 | Organizational Communication and Writing $^{1}$ | 3 |
| CMM 425 | Professional Seminar in Communication <br>  <br>  <br> Optional Courses ${ }^{4}$ | 3 |
| Management in Organizations ${ }^{3}$ |  |  |

## Communication Studies (CSS)

Select courses from CMM 27
Must include a capstone approved by department chair or advisor.
Course selection requires advisor and department chair approval.

## Media Production (RTV)

CMM 343 Scriptwriting for Media Production Platforms ${ }^{1} \quad 3$
CMM 342 Fundamentals of Video Production 3
CMM 341 Audio Production 3

| or CMM 344 | Multimedia Design \& Production I |  |
| :--- | :--- | :--- |
| CMM 348 | Animation Effects | 3 |
| CMM 417 | Introduction to Audience Research ${ }^{2}$ | 3 |
| CMM 397 | Communication Practicum | 1 |
| CMM 397 | Communication Practicum $^{3}$ | 1 |
| CMM 397 | Communication Practicum $^{3}$ | 1 |
| Optional Courses $^{4}$ | 9 |  |


| Journalism (JRN) |  |  |
| :--- | :--- | :--- |
| CMM 330 | Media Writing ${ }^{1}$ | 3 |
| CMM 337 | Journalism Ethics and Values $^{2}$ | 3 |
| CMM 338 | Reporting ${ }^{2}$ | 3 |
| CMM 430 | Editing and Verification | 3 |
| CMM 432 | Media Law | 3 |
| CMM 438 | Multi-Media Journalism ${ }^{3}$ | 3 |
| Optional Courses ${ }^{4}$ | 9 |  |


| Public Relations (PUB) |  |  |
| :--- | :--- | :--- |
| CMM 330 | Media Writing ${ }^{1}$ | 3 |
| CMM 360 | Principles of Public Relations | 3 |
| CMM 365 | Public Relations Strategies | 3 |
| CMM 412 | Research Methods in Communication ${ }^{2}$ | 3 |
| CMM 460 | Advanced Public Relations Writing | 3 |
| CMM 461 | Public Relations Campaigns ${ }^{3}$ | 3 |
| Optional Courses ${ }^{4}$ | 9 |  |


| Communication |  |  |
| :--- | :--- | :--- |
| Theatre (CTR) |  |  |
| THR/VAR 250 | Diversity in Creative \& Performing Arts | 3 |
| THR 304 | Movement for Everyone | 3 |
| THR/EGR 308 | Engineering for the Performing Arts ${ }^{2}$ | 3 |
| THR 310 | Acting for Everyone ${ }^{2}$ | 3 |
| THR 316 | Performance Company ${ }^{5}$ | 0 |
| THR 425 | Theatre Theory \& History $^{1}$ | 3 |
| THR 499 | Creating New Works $^{3}$ | 3 |
| Optional Courses ${ }^{4}$ | 9 |  |


| Breadth |  |
| :--- | ---: | ---: |
| ASI $150 \quad$ Introduction to the University Experience | 1 |
| Professional Studies Block or Interdisciplinary Undergraduate <br> Certificate | 12 |
| Total Hours to total at least | 124 |

1 Writing-intensive course
2 Methods course.
3 Capstone course. Capstone requirement for RTV is fulfilled after the completion of three CMM 397 practicums or a 3 credit RTV internship.
4 Any three CMM or CMS courses. THR course by exception and requires approval of department chair.
5 Four semesters of the 0 credit THR 316 are required for CTR concentration majors to build community and provide professional development opportunities.

| CMM 100 | Principles of Oral Communication | 3 |
| :---: | :---: | :---: |
| Select four CMM courses (300/400-level) ${ }^{1}$ |  | 12 |
| Total Hours |  | 15 |
| In consultation with the chairperson. |  |  |
| Minor in Political Journalism (POJ) |  |  |
| Political Journalism ${ }^{1}$ |  |  |
| CMM 201 | Foundations of Mass Communication | 3 |
| CMM 330 | Media Writing | 3 |
| Select four courses from: |  | 12 |
| CMM 331 | Feature Writing |  |
| CMM 354 | Political Campaign Communication |  |
| CMM 355 | Rhetoric of Social Movements |  |
| CMM 431 | Public Affairs Reporting |  |
| CMM 432 | Media Law |  |
| Total Hours |  | 18 |

1 Available only to international studies majors and political science majors.

## First Year

Fall Hours Spring Hours
ASI $150 \quad 1$ CMM 351 3
CMM 100 (CAP Communication) 3 ENG 100 3,4

| CMM 201 | 3 HST 103, PHL | 3 |
| :---: | :---: | :---: |
|  | 103, or REL |  |
|  | 103 (CAP |  |
|  | Humanities |  |
|  | Commons) |  |
| HST 103, PHL 103, or REL 103 (CAP Humanities | 3 MTH (CAP | 3 |
| Commons) | Mathematics) |  |
| HST 103, PHL 103, or REL 103 (CAP Humanities | 3 Language | 4 |
| Commons) | 141 |  |
| Language 101 | 4 |  |
|  | 17 | 16-17 |


| Fall | Hours Spring | Hours |
| :---: | :---: | :---: |
| CMM 202 | 3 CMM <br> Concentration | 3 |
| CMM Concentration | $\begin{aligned} & 3 \text { SSC } 200 \\ & \text { (CAP social } \\ & \text { science) } \end{aligned}$ | 3 |
| ENG 200 (CAP Writing Seminar) | 3-4 INSS (CAP <br> Natural <br> Science w/ <br> lab) | 4 |
| INSS (CAP Natural Science w/lab) | 4 CAP Faith Traditions | 3 |
| Language 201, or contextual course | 3 Literature | 3 |
|  | 16-17 | 16 |
| Third Year |  |  |
| Fall | Hours Spring | Hours |
| CMM Concentration | 3 CMM <br> Concentration | 3 |
| CMM Concentration | 3 CMM <br> Concentration | 3 |

## Minor in Communication (CMM)

| CAP Arts / Creative and Performing | 3 CAP | 3 |
| :---: | :---: | :---: |
|  | Advanced |  |
|  | Philosophy/ |  |
|  | Religious |  |
|  | Studies |  |
| Social Science - intro level | 3 CAP | 3 |
|  | Advanced |  |
|  | Historical |  |
|  | Studies |  |
| INSS Natural Science | 3 Social | 3 |
|  | Science - |  |
|  | 300/400 level |  |
|  | 15 | 15 |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| CMM Concentration | 3 CMM | 3 |
|  | Concentration |  |
|  | (Satisfies |  |
|  | CAP Major |  |
|  | Capstone) |  |
| CMM Concentration | 3 CAP | 3 |
|  | Integrative |  |
| CAP Advanced Philosophy/Religious Studies | 3 CAP Inquiry | 3 |
| CAP Practical Ethical Action | 3 CAP Diversity | 3 |
|  | and Social |  |
|  | Justice |  |
| Social Science - elective | 3 General | 2 |
|  | elective |  |
|  | 15 | 14 |

Total credit hours: 124-126

## Communication/Social Sciences Courses

CMS 316. Intercultural Communication. 3 Hours
Study of interpersonal communication with emphasis on people from different countries and with different cultural backgrounds. Focus on the influence of culture on communication and language, verbal and nonverbal communication similarities and differences from culture to culture, the articulation of strategies for achieving successful intercultural communication, and the providing of solutions for intercultural miscommunication. Prerequisite(s): CMM 100 and Sophomore standing or higher.

## CMS 414. Global Communication. 3 Hours

Introduction to the main topics in the field of global communication. Emphasis on comparative mass media and current issues in global communication. Will not satisfy humanities requirement.

## CMS 415. Gender and Communication. 3 Hours

Seminar focusing on gender differences in communication, unique aspects to women's communication, and women's rhetoric, and providing solutions to gender and miscommunication. Current theory and research examined. Sophomore standing or higher. Prerequisite(s): CMM 100.

## Communication Courses

## CMM 100. Principles of Oral Communication. 3 Hours

Introduces the relationship between communication and democratic life in contemporary and historical contexts. This course examines the importance of communication in achieving mutual understanding and provides the opportunity to demonstrate effective and ethical dialogue. Students learn to structure messages that deliver complex information to non\#experts, effectively advocate a position, and critique the messages of others.

Communication processes for presenting information in a public speaking context. Focus is on the development of general competencies in development and organization of ideas, research, adaptation to an audience, use of PowerPoint, and delivery.

## CMM 113. Interviewing. 1 Hour

Communication processes for information gathering and employment interviewing. Focus is on the development of general competencies in the conduct and organization of interviews, preparation of resumes, evaluation of questions and responses, research, listening, and nonverbal communication.

CMM 201. Foundations of Mass Communication. 3 Hours
Historical development of mass media in America; survey of mass media theories, impact of mass media on people and society, the role and influence of the news media, new technologies, programming, and pressure groups.

CMM 202. Foundations of Communication Theories \& Research. 3 Hours
Study of the nature and scope of communication theories and research.
Examination of how the communication discipline developed from classical traditions to its modern perspective.
CMM 311. Studies in Oral Performance. 3 Hours
Oral performance of poetry, prose, and drama; combining study of vocal modulations, pitch, inflection, and tone color with intellectual and emotional analysis of selections as a means of making the literature alive and immediately present.

## CMM 313. Nonverbal Communication. 3 Hours

A survey of theory and research in nonverbal communication designed to raise students' awareness of their own and others' nonverbal behaviors. Goals include enabling students to use nonverbal behaviors to enhance their communicative abilities, to more accurately interpret the nonverbal behaviors of others, and to successfully adapt to changing cultural and relational communication contexts.

## CMM 315. International Mass Media. 3 Hours

Focus on the mass media of a particular foreign country or region of the world. Topics may include media content, use, societal effects and ownership.

## CMM 320. Interpersonal Communication. 3 Hours

Study of communication behavior in a variety of dyadic relationships including acquaintance, friendship, work, romantic, and family. Focus on communicative behavior and communicative processes in relationship development including building trust, managing conflict, negotiating power, and listening empathetically.

## CMM 321. Small Group Communication. 3 Hours

Examination of theory and research related to communicative processes in small, task-oriented groups. Applications include a focus upon decision-making strategies, leadership, conflict management, and cohesion. Prerequisite(s): CMM 110.
CMM 322. Interviewing for Communication \& Business. 3 Hours Analysis of communication in structured dyadic interaction. Emphasis on the following types of interviews: information-gathering, employment, appraisal, and persuasive. Application through role-playing and feedback systems. Prerequisite(s): CMM 100.

## CMM 325. Principles of Communication Management. 3 Hours

 Introduction to issues, theory, and research in organizational communication. Topics may include organizational culture, conflict management, small group decision making and collaboration, leadership, diversity, and technology in the modern organization. Prerequisite(s): CMM 100.
## CMM 330. Media Writing. 3 Hours

Students develop and practice writing skills for journalism and public relations across media platforms. Course introduces techniques for writing news and information for mass audiences, news principles and values, and skills for gathering information and interviewing. Clarity and accuracy are emphasized.

## CMM 331. Feature Writing. 3 Hours

Developing and writing nonfiction stories for newspapers and magazines. Story types include personality profile, color, background, consumer, and commentary. Study and practice in journalistic reporting skills and literary writing techniques. Emphasis on content, organization, style, and accuracy. Strong command of AP style necessary. Prerequisite(s): СММ 330.

## CMM 332. Publication Design. 3 Hours

Layout and design of print and electronic publications, including newsletters, brochures, and web-based publications. Instruction in desktop and web publishing software, use of type and illustration, cost appraisal, printing methods.

## CMM 333. Free Lance Writing. 3 Hours

Steps of free-lance publication, from market analysis to query letters to writing and rewriting. Mostly nonfiction, magazine markets, some newspaper and nonfiction book markets.

## CMM 334. Sportswriting. 3 Hours

In addition to game stories, attention is also paid to writing about personalities, legal issues, and financial issues on the interscholastic, intercollegiate, amateur, and professional levels. Strong writing skills and knowledge of journalistic style expected. Prerequisite(s): CMM 330.

## CMM 337. Journalism Ethics and Values. 3 Hours

Exploration of the ethics and values that guide the practice of journalism. Students will develop knowledge of theories and frameworks for journalistic principles and practices, and critically examine and evaluate historical and current ethical challenges. Through discussion, research, and case studies, students will enhance their awareness of ethical issues in journalism and their ability to make ethical choices in all aspects of reporting and public engagement. Prerequisite(s): PHL 103, CMM 100.

## CMM 338. Reporting. 3 Hours

Exploration of issues and institutions of public concern through accurate and ethical beat reporting. Students develop news judgment and research strategies, including accessing public documents and interviewing, and build skills for reporting and editing across media platforms. Prerequisite(s): CMM 330.

## CMM 340. Fundamentals of Broadcasting. 3 Hours

Survey of broadcasting, with emphasis on television and radio networks, programming, regulation, audience measurement, audience effects, and technology. Although attention is given both to the origins and future of the field, contemporary broadcasting is emphasized.

## CMM 341. Audio Production. 3 Hours

Study of the theories, processes, and technologies of audio production practices that can be applied in radio, television, and multimedia production. Exercises in recording of voice, music, and special effects. Course includes the operation of basic studio and field equipment, including analog and basic digital recording and editing.

## CMM 342. Fundamentals of Video Production. 3 Hours

Explores the techniques of studio and remote video production. Includes the technical and creative aspects of planning and script preparation, producing, directing, technical directing, graphics, editing, camera, lighting, and sound for a variety of video programs.

CMM 343. Writing for Electronic and Digital Media. 3 Hours
Study of concrete approaches to and practical applications of professional level writing for video, audio, television, radio, digital and corporate media platforms.

## CMM 344. Multimedia Design \& Production I. 3 Hours

Introduction to producing in the interactive media of CD-ROM and other digital formats. Reviews basic object linking and embedding in familiar computer programs such as Word, PowerPoint, and Freelance Graphics. Students build skills in multimedia authoring, using all the fundamental tools of graphics, text, audio, and video.

## CMM 345. Classic American Film. 3 Hours

Introduction to classic U.S. films through the ages. Revolves around the viewing and analysis of significant Hollywood films. Course varies topically, ranging from a broad overview of classic American films to versions examining a particular film genre to versions exploring a theme through the medium of classic film. May be repeated once as topics change.

## CMM 348. Animation Effects. 3 Hours

The interactive world of media enables communicators to develop exciting new ways to reach their audience from multiple mediums. This course uses Adobe After Effects CC to present ways to animate text, still images in various ways, interactive features, audio \& video, and combinations of other means made possible through the advancement of technology. We will examine how designing creative projects interact in this professional world of media which we see all around us. Prerequisite(s): CMM 342.

## CMM 350. History and Analysis of Propaganda. 3 Hours

In -depth examination of major propaganda campaigns throughout history. Emphasis on twentieth and twenty-first century propaganda as psychological warfare. Includes exploration of how victors of social struggles use their dominance to control the version of historical events in a way that favors their own interpretation. The course includes application of rhetorical, social scientific and cultural, historiographical methods for analyzing propaganda. Prerequisite(s): CMM 100, HST 103.

## CMM 351. Public Speaking. 3 Hours

Oral communication in professional situations. Adaptation of principles of ethical and effective speaking to specific audiences and occasions. Delivery of informative and persuasive speeches. Prerequisite(s): CMM 100.

## CMM 352. Persuasion. 3 Hours

An in depth examination of the attitude - behavior relationship and a detailed overview of persuasion theory. Students will create and test the effectiveness of theoretically derived messages in a service learning project and study the role communication plays this process. Prerequisite(s): CMM 100 and (ENG 100 or 100B or 200 H or ASI 110) and ((HST 103, PHL 103, REL 103) or ASI 120).

## CMM 354. Political Campaign Communication. 3 Hours

Examination of theory and research on the role, processes and effects of communication in political campaigns with emphasis on mass media, public speaking, debates, advertising, and interpersonal communications. Prerequisite(s): CMM 100 and Sophomore standing.

## CMM 355. Rhetoric of Social Movements. 3 Hours

Study of rhetorical communication in American social movements through examination of the strategies, themes and tactics used by agitators and the institutional responses to discourse aimed at social change. Prerequisite(s): CMM 100 and Sophomore standing or higher.

## CMM 356. Argumentation and Advocacy. 3 Hours

Study of theory and practice in persuasive argument. Explores the nature of argument, advocacy, debate, persuasion, and dialogue. Students will learn how to articulate a persuasive case and critique the arguments of others. Prerequisite(s): CMM 100 and (ENG 100 or 100B or 200 H or ASI 110) and ((HST 103, PHL 103, REL 103) or ASI 120).

CMM 357. Religious Rhetoric in American Culture. 3 Hours
Exploration of the theoretical and practical intersections of faith and communication. Addresses how faith is articulated and represented through the use of language, symbols and media. The course explores the relationship of language and religion, the practice of preaching, how religion is depicted in popular culture and through media, and the relationship between faith and politics in contemporary America. Prerequisite(s): CMM 100 and (ENG 100 or 100B or 200 H or ASI 110) and ((HST 103, PHL 103, REL 103) or ASI 120).

## CMM 359. The Road to Hell: The Apocalypse in Classical and Contemporary Forms. 3 Hours

Study of depictions of the apocalypse in classical and contemporary literature, film and speech with special attention to the rhetorical dimensions of those messages. Prerequisite(s): CMM 100; REL 103.

## CMM 360. Principles of Public Relations. 3 Hours

Survey of the field of public relations emphasizing writing and public relations, theoretical implications of the field, the practitioner's role in organization and the community.

## CMM 365. Public Relations Strategies. 3 Hours

This course will allow students to understand why PR practitioners develop PR campaigns the way they do and when campaigns based on internal and external factors should be implemented to best achieve organizational objectives and goals. Throughout this course, considerable emphasis will be placed on understanding the differences between a public relations strategy and a public relations tactic, as well as understanding when to use specific tactics to achieve organizational objectives and goals. Prerequisite(s): CMM 360 .

## CMM 372. Communication for Health Professionals. 3 Hours

Analysis of communication skills that are particularly relevant in the health care setting. The course addresses ways of improving communication between providers and patients through the use of interactions with simulated patients. Primarily serves health science or communication/social science students. Prerequisite(s): CMM 100 and Sophomore standing or higher.

## CMM 381. Faith and Free Expression. 3 Hours

Exploration of issues related to religious expression and the First Amendment. Examination of the impact of the First Amendment on American society through study of its historical, political, social, and religious meaning and influence. Topics may include obscenity laws, prayer in school, and other matters of faith and free speech. Prerequisite(s): CMM 100 and Sophomore standing or higher.

## CMM 385. Dialogue, Power, and Diversity. 3 Hours

Exploration of how diversity and power intersect and how dialogic communication may facilitate interaction about and is affected by diversity and power. Prerequisite(s): CMM 100 and Sophomore standing or higher.

## CMM 390. Independent Study. 1-3 Hours

Supervised study involving directed readings, individual research (library, field, or experimental), or projects in the specialized areas of communication. May be repeated for up to six semester hours. Prerequisite(s): Permission of department chairperson.

## CMM 397. Communication Practicum. 1 Hour

Offers students an opportunity to participate in the operation of Flyer TV, Flyer Radio, or Flyer News (the University of Dayton's student-run media platforms.) One semester hour per term.

## CMM 398. Communication Practicum. 1 Hour

Offers students an opportunity to participate in the operation of Flyer TV or Flyer Radio. One semester hour per term.

## CMM 399. Communication Practicum. 1 Hour

Offers students an opportunity to participate in the operation of Flyer TV or Flyer Radio. One semester hour. This final practicum constitutes the Media Studies capstone experience. Prerequisite(s): CMM 397, CMM 398.

## CMM 410. Family Communication. 3 Hours

Study of the family from a communication perspective, considering the communication processes within the family and the extent to which communication affects and is affected by the family. Prerequisite(s): CMM 100 and (ENG 100 or 100B or 200H or ASI 110) and ((HST 103, PHL 103, REL 103) or ASI 120).

## CMM 411. Health Communication. 3 Hours

Examination of communication theory and research as they relate to health care. Issues include provider-patient interaction, the role of the patient, health organizations, the media and health, end-of-life concerns, and health campaigns. Prerequisite(s): CMM 100 and Sophomore standing or higher.

## CMM 412. Research Methods in Communication. 3 Hours

Study of data gathering and analysis in communication research. Specific attention to survey design and analysis, and focus group implementation and analysis.

## CMM 413. Communication in the Information Age. 3 Hours

Examination of issues related to development, economics, programming, and the future of new mass communication technologies. Prerequisite(s): CMM 201 or permission of instructor.

## CMM 416. Development of Mass Media. 3 Hours

History and analysis of the development and interdependence of mass media, print and electronic. Emphasis on its role in political and economic progress of U.S. and attendant responsibility.

## CMM 417. Introduction to Audience Research. 3 Hours

Overview of how media organizations describe and analyze audiences, the statistical and methodological techniques they use, and how those same methods are used to study the impact of media portrayals. Prerequisite(s): CMM 100 and (ENG 100 or 100 B or 200 H or ASI 110 ) and ((HST 103, PHL 103, REL 103) or ASI 120).

## CMM 420. Communication \& Conflict Management. 3 Hours

Students will study conflict as a process of communication and learn strategies and skills for effective conflict management, which can be used in various relationships in one's life, including family relationships, friendships, and professional relationships. A focus on forgiveness and reconciliation is fundamental to the study of conflictual communication. Prerequisite(s): CMM 100 and sophomore status.

## CMM 421. Organizational Communication and Writing. 3 Hours

This course explores communication in an organizational setting, with particular attention paid to oral and written forms prevalent in contemporary institutions. Students will be exposed to theories of message initiation, diffusion, and reception in organizations; and will examine the role of communication in developing productive work relationships, management practices, and organizational cultures. Prerequisite(s): CMM 100.

## CMM 425. Professional Seminar in Communication Management in Organizations. 3 Hours <br> Capstone experience for Communication Management. Examines a focused topic in organizational communication allowing students the opportunity to diagnose and provide solutions through the integration and application of communication principles and best practices. Prerequisite(s): CMM 325; Senior standing.

CMM 430. Editing and Verification. 3 Hours
Introduction to and practice in copy editing with particular attention to critical thinking and skepticism about content, news judgment, verification of facts and sources, and writing headlines and captions. Emphasis on clear and concise writing for diverse audiences; Associated Press style, proper spelling, grammar and punctuation; and accuracy. Prerequisite(s): CMM 330.
CMM 431. Public Affairs Reporting. 3 Hours
Investigative and specialized reporting on matters of public concern. Practice in gathering information from primary and secondary sources, and writing about complex subjects for mass audiences. Prerequisite(s): CMM 330.

## CMM 432. Media Law. 3 Hours

Exploration of the press, expression and mass media within the context of the U.S. Constitution, state and federal legislation, and court rulings. This course introduces students to core values of the First Amendment, and such topics as government regulation, censorship, copyright protection, libel, and privacy. Prerequisite(s): CMM 100.

## CMM 438. Multi-Media Journalism. 3 Hours

Application of knowledge and skills from previous classes in the journalism concentration to develop in-depth stories across media platforms. Prerequisite(s): CMM 330, CMM 337, CMM 338, CMM 432.

## CMM 439. Special Topics in Journalism. 3-6 Hours

Concentrated study in special areas of journalism. May be repeated with change of topic.

## CMM 440. Broadcast News. 3 Hours

Study of the process and practice of news gathering and writing for radio and television. Course includes research, analysis, writing and editing news and features, as well as legal and ethical concerns of broadcast news. Prerequisite(s): CMM 330, CMM 342.

## CMM 441. Media Processes \& Effects. 3 Hours

Interdisciplinary study of how traditional mass media (TV, radio, newspapers, magazines, films) content influence individuals and impact society and how these technologies differ from new media/social media. Emphasis on the current state of knowledge about the effects of violence, stereotyping, and health messages as well as what is known about the effects of computer games and using the internet. Prerequisite(s): CMM 100 and (ENG 100 or 100 B or 200 H or ASI 110) and ((HST 103, PHL 103, REL 103) or ASI 120).

## CMM 442. Advanced Television Production. 3 Hours

Advanced techniques of both studio and electronic field production and post-production editing for television. Prerequisite(s): CMM 342.

## CMM 444. Multimedia Design \& Production II. 3 Hours

Advanced level multimedia production emphasizing client-based project generation through a design/production team approach. Focus is on interface design; project planning, script writing, story boarding; digital image, sound and video editing; and the use of authoring software. Prerequisite(s): CMM 344.

## CMM 445. Media Performance. 3 Hours

Course focuses on learning and practicing the fundamentals of oncamera and on-air broadcast and digital delivery performance. Students will also practice critical analysis of broadcast performance.

## CMM 446. Electronic Media Management. 3 Hours

Survey of the leadership/management roles and responsibilities of broadcasting, cable television and corporate media enterprises. Prerequisite(s): CMM 340.

## CMM 447. Children and Mass Media. 3 Hours

Introduction to and understanding of how children and adolescents use media in their daily lives. Also examines how that use influences their cognitive, emotional, social, and physical development.

## CMM 449. Topics in Electronic Media. 3 Hours

Concentrated study in special areas of electronic media production, criticism, and management. May be repeated once with change of topic. Depending on topic, prerequisites may be imposed.

## CMM 452. Public Discourse \& Criticism. 3 Hours

Examination of the foundations of the field of communication. Major focus on the development of rhetorical theory with attention to rhetorical analysis and criticism.
CMM 453. Communication, Cybersecurity, and Social Engineering. 3

## Hours

Study of the role persuasion plays in computer hacking and what individuals and organizations can do to defend against social engineering exploits. Prerequisite(s): CMM 100 and (ENG 100 or 100 B or 200 H or ASI 110) and ((HST 103, PHL 103, REL 103) or ASI 120).
CMM 460. Advanced Public Relations Writing. 3 Hours
Study, development and application of public relations strategies and tactics. Emphasis on strategically effective, factually accurate and grammatically sound written communications for organizational and mass audiences. Prerequisite(s): CMM 330, CMM 360, junior or senior standing.

## CMM 461. Public Relations Campaigns. 3 Hours

Capstone course in the PR concentration that focuses on planning and implementing a public relations campaign for an established professional organization. Students work out solutions to communication and public relations problems, and prepare written campaign materials. Prerequisite(s): CMM 330, CMM 360, CMM 460; senior standing.

## CMM 463. Digital Public Relations. 3 Hours

Exploration of Internet's impact on public relations, especially on relationships among public relations practitioners, journalists, and the publics. The perceived credibility and trust issues of the Internet; new trends the digital and social media is bringing to PR; and how to inform, persuade, and build relationships with organizations and their public via digital communication are covered. Prerequisite(s): CMM 360.

## CMM 464. International Public Relations. 3 Hours

Examination of effective public relations (PR) practices in international settings. Analysis and evaluation of real cases to investigate effective PR strategies for different countries or organizational settings. Particular emphasis is placed on how non-profits and/or NGOs employ public relations strategies to constructively engage issues of diversity and social justice. Prerequisite(s): CMM 360.

## CMM 468. Case Studies in PR. 3 Hours

Examination of PR cases that illustrate models and theories, and teach key PR principles. Allows students to critically analyze, judge, and evaluate situations by applying PR principles and theories. Prerequisite(s): CMM 360.

## CMM 469. Special Topics in Public Relations. 3 Hours

A concentrated study in specific areas of public relations. Development of specialized projects. May be repeated once with change of topics. Prerequisite(s): CMM 360 or permission of instructor.

## CMM 471. Communication and Digital Literacy. 3 Hours

Exploration of questions surrounding the development of media literacy skills from childhood through adulthood, creation of media literacy materials applicable to diverse audiences, and evaluation of implications of participatory culture.

## CMM 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## CMM 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Progam in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## CMM 498. Communication Internship. 1-6 Hours

Communication work experience in an approved organization. Student must be in good academic standing. Students are normally limited to a maximum of three semester hours. Under exceptional circumstances, students may petition the department chair for an additional three semester hours if the second internship is at a different organization and the student can demonstrate that the position offers a unique and significant educational opportunity not available through the first internship. Grading Option Two only. Prerequisite(s): CMM 100; CMM 201; CMM 202. Additionally, CMM 330 for PUB and JRN concentrations; CMM 343 for RTV concentration; one course within the concentration for CMT concentrations.

## CMM 499. Special Topics in Communication. 3-6 Hours

Concentrated study in specific areas of speech communication. May be repeated once with change of topic.

## Computer Science

Majors:

- Bachelor of Science, Computer Information Systems (p. 154)
- Bachelor of Science, Computer Science (p. 155)


## Minors:

- Computer Information Systems (p. 156)
- Computer Science (p. 156)

The Department of Computer Science offers two programs leading to a Bachelor of Science degree in either computer science or computer information systems. Both programs require similar introductory core sequence of courses in computer science. The main differences between
the two programs are in the mathematics and science requirements and in the application emphases.

## Computer Science

Computer science is the study of algorithms and their implementation as applications (apps). This includes the study of data structures, software design, programming languages, operating systems, and computer architecture. Each student must take appropriate upperlevel electives from any concentration areas of virtual reality and game development; cybersecurity and computer networks; theory of computation; software engineering and project management; and machine learning, autonomous systems, and cloud computing.

## Computer Information Systems

This program emphasizes computer science concepts with particular attention to systems analysis and design, and includes a concentration area or minor chosen by the student in consultation with the student's advisor.

Both of these B.S. programs provide a foundation for students to embark on successful careers in a variety of computing disciplines, including software engineering, system design, database management, big data, ambient intelligence, gaming, cyber security, computer networking, systems programming, and systems administration. In addition, graduates will be prepared to pursue graduate study in computer science and related disciplines.

Computer Science and Computer Information Systems majors are required to attain grades of C- or better in the following courses: CPS 150, CPS 151, and CPS 350.

A minor in computer science consists of 20 semester hours. A minor in computer information systems consists of 23 semester hours.

## Faculty

Mehdi Zargham, Chairperson
Professors Emeriti: Kester, Lang, Smith, Winslow
Professors: Sritharan, Zargham
Associate Professors: Buckley, Gowda, Perugini, Yao
Assistant Professors: Nguyen, Phung, Shen
Lecturers: Bashias, Sanyal

## Bachelor of Science, Computer Information Systems (CIS) minimum 120 hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |  |
| :--- | :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I |  |




## Minor in Computer Science (CPS)

Computer Science

| CPS 150 | Algorithms \& Programming I | 4 |
| :--- | :--- | ---: |
| CPS 151 | Algorithms \& Programming II | 4 |
| CPS 350 | Data Structures \& Algorithms | 3 |
| Select three CPS courses (320 level or above, excluding CPS 437) | 9 |  |
| Total Hours |  | 20 |

- Bachelor of Science, Computer Information Systems (p. 154)
- Bachelor of Science, Computer Science (p. 157)


## - Computer Information Systems

| Natural Sciences ${ }^{2}$ | 6 |  |
| :--- | :--- | ---: |
|  |  |  |
| Major Requirements | 50 |  |
| CPS 149 | Creative Media Applications | 3 |
| CPS 150 | Algorithms \& Programming I | 4 |
| CPS 151 | Algorithms \& Programming II | 4 |
| CPS 250 | Computer Organization and Architecture | 3 |
| CPS 341 | Discrete Structures | 3 |
| CPS 350 | Data Structures \& Algorithms | 3 |

## First Year

Fall
ASI 150
CPS 149
MTH 116 (Satisfies CAP Mathematics)

Hours Spring
1 CPS 150
3 MTH 148
4 CAP Natural Science w/
lab

| ENG 100 (CAP Humanities Commons) | 3,4 REL 103, PHL 103, or HST | 3 | Computer Science |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 103 (CAP |  | First Year |  |  |
|  | Humanities Commons) |  | Fall | Hours Spring | Hours |
|  |  |  | ASI 150 | 1 CPS 150 | 4 |
| REL 103, PHL 103, or HST 103 (CAP Humanities Commons) | $\begin{gathered} 3 \text { CMM } 100 \\ \text { (CAP } \end{gathered}$ | 3 | CPS 149 (CAP Natural Science) | 3 MTH 169 | 4 |
|  | Communicatio |  | MTH 168 (Satisfies CAP Mathematics) | 4 CAP Natural | 4 |
| REL 103, PHL 103, or HST 103 (CAP Humanities Commons) | 3 |  |  | Science w/ lab |  |
|  |  |  | Science w/lab | 4 REL 103, PHL | 3 |
|  | 17-18 |  |  | 103, or HST |  |
| Second Year |  |  |  | 103 (CAP |  |
| Fall | Hours Spring | Hours |  | Humanities |  |
| CPS 151 | 4 CPS 242 | 3 |  | Commons) |  |
| CPS 341 | 3 CPS 350 | 3 | ENG 100 (CAP Humanities Commons) | 3,4 REL 103, PHL | 3 |
| MTH 207 | 3 Science w/ | 4 |  | 103, or HST |  |
|  | lab (Satisfies |  |  | 103 (CAP |  |
|  | CAP Natural |  |  | Humanities |  |
|  | Science) |  |  | Commons) |  |
| Course for chosen minor ${ }^{1}$ | 3 Course for chosen minor ${ }^{1}$ | 3 | REL 103, PHL 103, or HST 103 (CAP Humanities | 3 |  |
|  |  |  | Commons) |  |  |
|  |  |  |  | 18-19 | 18 |
| ENG 200 (CAP Writing Seminar) | 3-4 SSC 200 | 3 | Second Year |  |  |
|  | (CAP Social |  | Fall | Hours Spring | Hours |
|  | Science) |  | CPS 151 | 4 CPS 250 | 3 |
|  | 16-17 | 16 | CPS 341 | 3 CPS 350 | 3 |
| Third Year |  |  | MTH 218 | 4 MTH 301 | 3 |
| Fall | Hours Spring | Hours | ENG 200 (CAP Writing Seminar) | 3-4 CMM 100 | 3 |
| CPS 310 | 3 CPS Elective | 3 |  | (CAP |  |
| CPS 430 | 3 CPS Elective | 3 |  | Communication) |  |
| Course for chosen minor ${ }^{1}$ | 3 Course for | 3 | SSC 200 (CAP Social Science) | 3 CAP Arts | 3 |
|  | chosen |  |  | 17-18 | 15 |
|  | minor |  | Third Year |  |  |
| Course for chosen minor ${ }^{1}$ | 3 Course for chosen | 3 | Fall | Hours Spring | Hours |
|  |  |  | CPS 352 | 3 CPS 356 | 3 |
| CAP Arts | 3 PHL 319 | 3 | MTH 367 | 3 CPS elective | 3 |
|  | (Satisfies |  | CPS 450 (Satisfies CAP Integrative) | 3 Science | 3 |
|  | CAP Adv. |  |  | elective |  |
|  | Philosophy, |  | Science elective | 3 Social | 3 |
|  | Practical |  |  | Science - |  |
|  | Ethical |  |  | elective |  |
|  | Action) |  | CAP Faith Traditions | 3 PHL 319 | 3 |
|  | CAP Adv. | 3 |  | (Satisfies |  |
|  | Philosophy/ |  |  | CAP Adv. |  |
|  | Religious |  |  | Philosophy, |  |
|  | Studies (Faith |  |  | Practical |  |
|  | Traditions) |  |  | Ethical |  |
|  | 15 | 18 |  | Action) |  |
| Fourth Year |  |  |  | 15 | 15 |
| Fall | Hours Spring | Hours | Fourth Year |  |  |
| CPS 490 | 3 CPS 491 | 3 | Fall | Hours Spring | Hours |
| CPS Elective | 3 CPS ELective | 3 | CPS 490 | 3 CPS 491 | 3 |
| Social Science Elective | 3 CPS Elective | 3 |  | (Satisfies |  |
| CAP Advanced Historical Studies | 3 CAP | 3 |  | CAP Major |  |
|  | Integrative |  |  | Capstone) |  |
| CAP Inquiry | 3 CAP Diversity | 3 | CPS elective | 3 CPS elective | 3 |
|  | and Social |  | CPS elective | 3 CPS elective | 3 |
|  | Justice |  | CAP Inquiry | 3 CAP | 3 |
|  | 15 | 15 |  | Advanced Historical |  |
| Total credit hours: 129-131 |  |  |  | Studies |  |
| 1 The requirements for the Bachel Information Systems include a m consultation with the student's | nce in Computer en by the studen |  | CAP Advanced Philosophy/Religious Studies | 3 CAP Diversity and Social Justice | 3 |
|  | advisor. |  |  | 15 | 15 |

[^3]
## Courses

## CPS 107. Introduction to Computer Science. 3 Hours

An introduction to the field of Computer Science, covering computers and society, the internals and externals of computer hardware and software, as well as some exposure to advanced topics of artificial intelligence, computer forensics, and databases. Intended for science and engineering students.

## CPS 111. Introduction to Personal Computers. 3 Hours

Emphasis on use of operating system, particularly file organization, and applications: word processor, spreadsheet, database and presentation software

CPS 132. Computer Programming for Engineering \& Science. 3 Hours Fundamentals of computer programming including algorithms, program structure, library routines, debugging, and program verification. Calculusbased computer solutions of problems from science and engineering using C++. Corequisite(s): MTH 168.

## CPS 144. Introduction to Computer Programming. 3 Hours

Fundamentals of computer programming including algorithms, program structure, library routines, debugging, and program verification. Computer solutions of problems from social sciences using a suitable compiler language such as Visual Basic.

## CPS 149. Creative Media Applications. 3 Hours

Multidisciplinary, project-driven learning process courses that encourages students to develop problem solving and teamwork skills while fostering creativity and logic. The goal is not only to provide students with some "programming maturity," but to also engage them through working in small teams on existing projects related to their discipline and interest. Projects may include creative animations and games, mobile app developments, or avatars.
CPS 150. Algorithms \& Programming I. 4 Hours
Introduction to computers and programming using a high-level, structured language. Topics include problem solving, algorithms, programming constructs, data representation, stepwise refinement, and debugging.

## CPS 151. Algorithms \& Programming II. 4 Hours

Algorithms and Programming II covers object-oriented design and development, data abstraction, exception handling, linked lists, stacks, queues, binary trees, and recursion using a high level, structured language. Prerequisite(s): CPS 150.

## CPS 242. Web Application Development. 3 Hours

Web application development using the state-of-the-art environments such as markup languages, scripting languages, dynamic web pages, server side technologies, and database access. Prerequisite(s): CPS 151.

## CPS 250. Computer Organization and Architecture. 3 Hours

Machine and assembly language instructions, and writing assembly programs. Design of basic logic circuits needed in constructing a computer. Design of circuits for information encoding, arithmetic units, and transferring and storing information. Data path and control unit for a simple processor. Multiprocessing and alternative parallel systems. Prerequisite(s): CPS 151.

CPS 309. Topics in Computer Science. 1-4 Hours
Lectures or laboratory work in areas of current interest. May be taken more than once. Does not count as upper level credit for majors/minors.

CPS 310. Systems Analysis. 3 Hours
Methodologies for developing software, software development life cycles, data flow approach for system development, data dictionary, process specification, input/output design, E-R diagrams, normalization, and introduction to object-oriented analysis. Prerequisite(s): CPS 151.

## CPS 312. Systems Design. 3 Hours

Software design process; developing structured design (e.g., structure charts) from data flow approach using coupling, cohesion, and other design guidelines; fine-tuning object-oriented analysis model to design using design patterns, and implementation. Prerequisite(s): CPS 310.
CPS 341. Discrete Structures. 3 Hours
Propositional logic, Boolean algebra, predicate logic, logical deductions, proof techniques, sets, combinatorics, recurrences, functions, relations, discrete structures such as graphs, digraphs, and associated algorithms. Prerequisite(s): CPS 150.

## CPS 343. Comparative Languages. 3 Hours

Language design issues, formal syntax specification, data types and storage methods, activation records and procedural object oriented, functional, and logic programming paradigms. Prerequisite(s): CPS 350.

CPS 350. Data Structures \& Algorithms. 3 Hours
Dynamic nonlinear data structures including trees, binary trees, search trees, balanced search trees, priority queues, and graphs, with an emphasis on their implementation, uses, and associated algorithms. Analysis of the computational complexity of algorithms related to these structures. Prerequisite(s): CPS 151.

## CPS 352. Concepts and Implementation of Programming Languages. 3

 HoursStudy of programming language concepts through the implementation of interpreters and assessment of the conceptual differences in the resulting languages. Concepts covered include syntax and semantics, regular and context-free grammars, parsing, binding, scope, parameter passing, lazy evaluation, types, currying, and continuations. A comparative survey of the imperative, functional, logical, and objectoriented paradigms of programming is presented. Prerequisite(s): CPS 350.

## CPS 353. Numerical Methods I. 3 Hours

Study of the algorithms of numerical mathematics with emphasis on interpolation, the solution of nonlinear equations, and linear systems of equations including matrix methods; analysis of errors associated with the algorithms. Prerequisite(s): (CPS 132 or CPS 150); MTH 169.

## CPS 356. Operating Systems. 3 Hours

Introduces the theoretical and practical concepts underlying an operating system's structure and operation. Topics include process and thread creation and management, scheduling, concurrent, multi-threaded programming and synchronization, deadlock, memory management, virtual memory, and computer security. Prerequisite(s): (CPS 250 or ECE 314) and CPS 350.

CPS 387. Computer System Design I. 3 Hours
Study of the elements of computer design. Design of combinatorial and sequential logic circuits using current integrated circuit devices. Discussion of encoders, decoders, registers, counters, etc. as applied to design and use of control, arithmetic, logic, and storage units. Instruction set, addressing modes and CPU design. Laboratory experiments with these devices. Prerequisite(s): CPS 250, CPS 341.

CPS 410. User Interface Design and Development. 3 Hours
Addresses the practical problems of designing interfaces for modern software as well as other interactive media. Topics include interaction framework and styles, design principles, design models, new interactive technologies, usability testing and facets of interaction. Group activities and project work is an integral part of this course. Prerequisite(s): CPS 350.
CPS 415. Software Testing and Security Analysis. 3 Hours
Detailed examination of the software testing and security analysis process. Topics include testing methodologies, code analysis techniques, and secure programing principles and practices. Prerequisite(s): CPS 350.

## CPS 420. Software Engineering. 3 Hours

Provides an overview of the software engineering discipline. Topics include software processes, requirements engineering, system modeling, architectural design, software testing, dependability and security, software reuse, distributed software engineering, project planning, quality management, configuration management, and process improvement. Prerequisite(s): CPS 350.

## CPS 422. Software Project Management. 3 Hours

Introduction to software project management. Topics include process models for software development, project planning techniques, estimation techniques, measuring and controlling work products and processes, managing project risk, teams and communication, and organizational issues. Prerequisite(s): CPS 310.

## CPS 424. Discrete Event Simulation Techniques. 3 Hours

Design and use of simulation models; study and use of special-purpose simulation languages such as GPSS and GASP IV, SIMSCRIPT II.5. Applications. Prerequisite(s): CPS 151.

## CPS 430. Database Management Systems. 3 Hours

Physical and logical organization of databases: the entity-relationship model; relational database model; the data definition and data manipulation language of a commercial database management system; integrity constraints; conceptual database design. Prerequisite(s): CPS 350.

## CPS 432. Database Management Systems II. 3 Hours

Study of query execution and optimization, transaction management, concurrency control, recovery and security techniques. Advanced data models and emerging trends in database systems, like object oriented database systems, distributed database systems, the clientserver architecture, multidatabase and heterogeneous systems. Other current database topics and emerging technologies will be discussed. Prerequisite(s): CPS 430.

## CPS 433. Cyber Forensics. 3 Hours

Preserving, recovering, and analyzing digital evidence found in physical and virtual worlds. Topics include data and information retrieval; computer/media forensic analysis, techniques, and tools; and basic criminal law concepts. Prerequisite(s): CPS 356.

## CPS 434. Big Data and Cloud Computing. 3 Hours

Focuses on technologies to make intelligent decisions for scientific and business applications. Topics include semantic web, knowledge representation languages for expressing metadata, machine learning, data visualization, data integration, and predictive models. Prerequisite(s): CPS 350.

## CPS 437. System Architectures \& Networking. 3 Hours

Issues and techniques used in the physical design of computer-based information systems. Basic operating systems, hardware architecture and networking prinicples. Intended for students majoring in MIS; not open to students majoring in CPS, CIS, or PCS. Prerequisite(s): MIS 380, MIS 385.

## CPS 444. UNIX/Linux Programming. 3 Hours

Prepares students for developing software in the UNIX/Linux environment using the C programming language. Topics include system libraries and system calls, shells, system structures and internals, interprocess communication (pipes and signals), network programming (client-server model and sockets), pattern matching and filters, shell programming, automatic program generation, and GUI programming. Prerequisite(s): CPS 356.
CPS 450. Design and Analysis of Algorithms. 3 Hours
Introduction to order notation and algorithm analysis. Emphasis will be on learning algorithm design techniques such as divide and conquer, greedy approach, and dynamic programming through exposition of classical algorithms from domains such as sorting, string matching, and graph algorithms. Hardness of problems and introduction to the complexity classes P, NP, and NP-complete. Topics also include impact of computing techniques to the improvement or welfare of society as a whole. Prerequisite(s): CPS 341, CPS 350.
CPS 455. Computer Architecture and Design. 3 Hours
Provides a foundation for understanding and evaluating the design principles incorporated in modern computers. Topics include history and classification of computers, instruction-level, data-level, and thread-level parallelism. Prerequisite(s): CPS 250, CPS 350.

## CPS 460. Computer Graphics. 3 Hours

Introduction to primitives and interactive graphics software development. Topics include transforms, clipping, modeling, rendering, texture, animation, and ray tracing. Prerequisite(s): CPS 350.

## CPS 465. Interactive Media. 3 Hours

Provides an exposure to the capabilities of new digital tools to create new experiences. Topics include tools/techniques for collecting, analyzing, and visualizing 3D data; interactive audio/video using motion/light detectors; mobile interfaces; animation; smart rooms; and social networks. Prerequisite(s): CPS 350.

## CPS 470. Computer Networks. 3 Hours

Computer Networks focus on Internet protocols. Topics include packetswitch and multi-access networks, routing, flow control, congestion control, quality of service, Internet protocols, wireless networks, security, and the design of network services. Prerequisite(s): CPS 350.

## CPS 472. Computer and Network Security. 3 Hours

Computer and Network Security covers information protection. Topics includes techniques for security in multi-user and distributed systems, principles of secure design, cryptography, authentication, access-control, intrusion detection and viruses, firewalls, wireless security, cracking WEP keys, and VPN security. Prerequisite(s): CPS 356.

## CPS 473. Reverse Code Engineering. 3 Hours

Study theories on the application of cyber power to achieve certain objectives. Topics includes cyber policy, tracing strategy, targeting, cyber intelligence, measuring effects, and legal and ethical issues. Prerequisite(s): CPS 350.

## CPS 477. Honors Thesis. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## CPS 478. Honors Thesis. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

CPS 480. Artificial Intelligence. 3 Hours
Fundamentals concepts and techniques of intelligent systems. Topics includes knowledge representation, search strategies, predicate logic, and expert systems. Prerequisite(s): CPS 350.

## CPS 481. Intelligent Systems and Machine Learning. 3 Hours

State-of-art techniques in building intelligent systems. Topics include soft computing, agents and multiagent systems, and machine learning. Prerequisite(s): CPS 350.

## CPS 482. Automata Theory. 3 Hours

Formal languages (regular, context-free, recursive, and recursively enumerable), machine models (deterministic and non-deterministic finite automata, push down automata, Turing machines), grammars (regular, context-free, and unrestricted), interplay among these concepts, ChurchTuring thesis, and undecidability. Prerequisite(s): CPS 341.

## CPS 483. Graph Algorithms. 3 Hours

Design and analysis of algorithms for problems based on graphs. Classical algorithms and efficient algorithms for restricted domains of graphs will be covered. Analysis of algorithms, complexity classes P, NP, and NP-complete, traversals, bi-connectedness, strongly-connectedness, 2-SAT, planarity testing, and algorithms for restricted classes of graphs. Prerequisite(s): CPS 341, CPS 350.

## CPS 485. Evolutionary Computation. 3 Hours

The history and use of Evolutionary Computation (EC) are explored. Popular approaches to EC (genetic algorithms, genetic programming, evolution strategies, evolutionary programming) are defined and discussed. Coursework includes implementation of evolutionary techniques and review and analysis of literature in the field. Prerequisite(s): CPS 350.

## CPS 490. Capstone I. 3 Hours

Examination of principles, practices, and methodology for development of large software systems using data flow and object-oriented methodologies. User interface design, software testing, and software project management. Selecting and planning a team project; this involves team formation, project selection, project planning, and proposal writing and presentation. Prerequisite(s): CPS 350.

## CPS 491. Capstone II. 3 Hours

An exercise in the design, implementation, documentation, and deployment of a group project culminating in a presentation to the computer science faculty and industry representatives. Prerequisite(s): CPS 490.

CPS 496. Cooperative Education. 1-3 Hours
Computer science cooperative education work experience in an approved organization. Not open to students with credit in CPS 497. Credit does not apply to major requirements. Repeat to a maximum of three semester hours. Prerequisite(s): Twelve hours of upper-level CPS courses with a GPA of 3.0; total ninety semester hours with a GPA of 2.75; permission of the department in advance of the work.

## CPS 497. Internship. 1-3 Hours

Computer science work experience in an approved organization. Not open to students with CPS 496 credit. Credit does not apply to major requirements. Repeat to a maximum of three semester hours. Prerequisite(s): Twelve semester hours of upper-level CPS courses with GPA of 3.0; total ninely semester hours and 2.75 GPA; permission of department in advance of the work.

## CPS 498. Problems in Computer Science. 1-4 Hours

Individual readings and research in a specialized area. (See CPS 499.) By arrangement. May be taken more than once for additional credit. Prerequisite(s): Permission of department chairperson.

CPS 499. Special Topics in Computer Science. 1-4 Hours
Lectures or laboratory work in advanced topics from the various areas of computer science. By arrangement. May be taken more than once. Prerequisite(s): Permission of department chairperson.

## Criminal Justice Studies

Major:

- Bachelor of Arts, Criminal Justice Studies (p. 161)

Minor:

- Criminal Justice (p. 163)

Criminal Justice is the scientific study of crime, deviance, and the agencies of the criminal justice system. The Bachelor of Arts with a major in Criminal Justice Studies, is a broadly structured interdisciplinary and criminological curriculum designed to introduce students to:

1. A practical and critical understanding of criminal justice, justice studies and criminology.
2. Necessary knowledge for public service, e.g., law enforcement and/or investigative services at the local, state, and national levels; careers in the correctional field, community programs, and other rehabilitative services, as well as staff positions in the judiciary system.
3. Preparation for pursuing advanced study in a criminal justice or criminological graduate program or in law school.

In addition to courses in criminal justice studies, students may take courses in political science, psychology, social work, and sociology.

Those who enter the University of Dayton as first-year students, or as transfers without associate degrees, will be classified under Option A, a total program sequence. Students who transfer to the University of Dayton with acceptable associate degrees in specific fields similar or closely related to criminal justice will be classified under Option B, a transfer program sequence. All students transferring into the curriculum must be in good academic standing and meet entry requirements.

A minor in Criminal Justice Studies consists of 18 semester hours.
Students intending to major or minor in Criminal Justice Studies should consult with the program director to begin planning their program. It is the sole responsibility of students to inform themselves of whatever
changes occur in the curriculum and to observe all the regulations, procedures, and requirements of the University and the Criminal Justice Studies program. The Criminal Justice Studies Program is a part of the Department of Sociology, Anthropology, and Social Work.

## Criminal Justice Advisory Committee

Martha Henderson Hurley, Director
Additional faculty who teach in the Criminal Justice Studies Program are located in several social science departments including: Sociology, Anthropology, and Social Work; Psychology; and Political Science. Faculty who teach in the program: Apolito (Criminal Justice Studies/ Sociology), Becker (Sociology), Berry (Psychology), Davis-Berman (Social Work), Donnelly (Sociology), Ghere (Political Science), Holcomb (Sociology), Ingram (Political Science), Majka (Sociology), Martorano Miller (Political Science), Neeley (Political Science), Reeb (Psychology), Sayre (Social Work), Small (Sociology), Thompson-Miller (Sociology).

## Bachelor of Arts, Criminal Justice Studies-Option A (CJS) minimum 124 hours

| Common Academic Program (CAP) |  |
| :---: | :---: |
| *credit hours will vary depending on courses selected |  |
| First-Year Humanities Commons ${ }^{1}$ | 12 |
| HST 103 The West \& the World |  |
| REL 103 Introduction to Religious and Theological Studies |  |
| PHL 103 Introduction to Philosophy |  |
| ENG 100 Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ | 0-3 |
| ENG 200 Writing Seminar II |  |
| Oral Communication | 3 |
| CMM 100 Principles of Oral Communication |  |
| Mathematics | 3 |
| Social Science | 3 |
| SSC 200 Social Science Integrated |  |
| Arts | 3 |
| Natural Sciences ${ }^{4}$ | 7 |
| Crossing Boundaries | variab |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |
| Advanced Study | variab |
| Philosophy and/or Religious Studies |  |
| Historical Studies ${ }^{5}$ |  |
| Diversity and Social Justice | 3 |
| Major Capstone | 0-3 |

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

## Liberal Studies Curriculum

Creative and Performing Arts (May include CAP Arts) 3
L2 Proficiency (Proficiency in a language other than English) 0-11
Literature (May include CAP Components) 3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) ${ }^{1} 3$
Natural Sciences (Satisfies CAP Natural Science) 11
Social Sciences (Includes CAP Social Science) 12
Major Requirements ${ }^{2,3} 37$
CJS 101 Introduction to Criminal Justice Studies 3-4

CJS 207 Research Methods in Criminal Justice Studies ${ }^{1,4} 3$
CJS 408 Senior Seminar 1
CJS 409 Senior Capstone (Satisfies CAP Major Capstone) 3
SOC 305 Criminological Theory 3
Select two behavior courses from: 6

| PSY 363 | Abnormal Psychology |
| :--- | :--- |
| PSY 461 | Current Implications of Drug Dependency |
| SOC 325 | Deviant Behavior |
| SOC 327 | Criminology |
| SOC 410 | Victimology |
| SWK 325 | Child Abuse |

Select two institutions courses from: 6

| CJS 303 | Theory and Practice of Corrections |
| :--- | :--- |
| POL 303 | State \& Local Government |

POL 303 State \& Local Government

POL 305 Introduction to Public Administration
POL 360 Urban Politics \& Policy
SOC 323 Juvenile Justice
SWK 305 Social Services in the Health Field
Select two law courses from:
CJS 305 Criminal Law
CJS 315 Criminal Procedure
POL 301 The American Judicial Process
POL 411 Constitutional Law
POL 450 Civil Liberities
SOC 326 Law \& Society
variablSelect two social structure courses from: 6
credit CJS 322 Policing \& Society
CJS 336 Comparative Criminal Justice Systems
SOC 328 Racial \& Ethnic Relations
SOC 339 Social Inequality
SOC 351 Urban Sociology
variable
credit Breadth
ASI $150 \quad$ Introduction to the University Experience 1
Total Hours to total at least 124
1 CJS 207, Research Methods in Criminal Justice Studies, requires as a prerequisite MTH 207 or PSY 216 or SOC 308. Neither PSY 216 nor SOC 308 fills the three semester hours mathematics requirement for graduation. and SOC that have a Criminal Justice Studies emphasis. No more than six semester hours of internships may be taken. Also to be offered is CJS 300 Criminal Justice Studies Career Development, CJS 399, Special Topics in Criminal Justice Studies and CJS 497, Service Learning Experience. This course work is in addition to the thirty-six hours required for a CJS interdisciplinary major in the Option A, total program sequence. They are not to be used as substitute courses for those listed in the areas of behavior, institutions, law and/or social structure, unless approved in advanced by the director of the Criminal Justice Studies program and the College of Arts and Sciences.

## Bachelor of Arts, Criminal Justice Studies-Option B (CJS) minimum 124 hours

| Common Academic Program (CAP) |  |
| :---: | :---: |
| *credit hours will vary depending on courses selected |  |
| First-Year Humanities Commons ${ }^{1}$ | 12 |
| HST 103 The West \& the World |  |
| REL 103 Introduction to Religious and Theological Studies |  |
| PHL 103 Introduction to Philosophy |  |
| ENG 100 Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ | 0-3 |
| ENG 200 Writing Seminar II |  |
| Oral Communication | 3 |
| CMM 100 Principles of Oral Communication |  |
| Mathematics | 3 |
| Social Science | 3 |
| SSC 200 Social Science Integrated |  |
| Arts | 3 |
| Natural Sciences ${ }^{4}$ | 7 |
| Crossing Boundaries | varia |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |
| Advanced Study | variab |
| Philosophy and/or Religious Studies |  |
| Historical Studies ${ }^{5}$ |  |
| Diversity and Social Justice | 3 |
| Major Capstone | 0-3 |

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

| Creative and Performing Arts (May include CAP Arts) |  | 3 |
| :---: | :---: | :---: |
| L2 Proficiency (Proficiency in a language other than English) |  | 0-11 |
| Literature (May include CAP Components) |  | 3 |
| Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) ${ }^{1}$ |  |  |
| Natural Sciences (Satisfies CAP Natural Science) |  | 11 |
| Social Sciences (Includes CAP Social Science) |  | 12 |
| Major Requirements ${ }^{\text {2,3,4,5 }}$ |  | 22 |
| CJS 207 | Research Methods in Criminal Justice Studies ${ }^{1}$ | 3 |
| CJS 408 | Senior Seminar | 1 |
| CJS 409 | Senior Capstone (Satisfies CAP Major Capstone) | 3 |
| SOC 305 | Criminological Theory | 3 |
| Select on | ior course from: | 3 |


| PSY 363 | Abnormal Psychology |
| :--- | :--- |
| PSY 461 | Current Implications of Drug Dependency |
| SOC 325 | Deviant Behavior |
| SOC 327 | Criminology |
| SOC 410 | Victimology |
| SWK 325 | Child Abuse |

Select one institutions course from: 3

| CJS 303 | Theory and Practice of Corrections |
| :--- | :--- |
| POL 303 | State \& Local Government |
| POL 305 | Introduction to Public Administration |
| POL 360 | Urban Politics \& Policy |
| SOC 323 | Juvenile Justice |
| SWK 305 | Social Services in the Health Field |

Select one law course from: 3

CJS 305 Criminal Law
CJS 315 Criminal Procedure
POL 301 The American Judicial Process
POL 411 Constitutional Law
POL 450 Civil Liberities
SOC 326 Law \& Society
Select one social structure course from: 3

| CJS 322 | Policing \& Society |
| :--- | :--- |
| CJS 336 | Comparative Criminal Justice Systems |
| SOC 328 | Racial \& Ethnic Relations |
| SOC 339 | Social Inequality |
| SOC 351 | Urban Sociology |

## Breadth

ASI $150 \quad$ Introduction to the University Experience 1
ENG 316 Elements of Style 3
ENG 370 Report \& Proposal Writing (Satisfies CAP Inquiry) 3
or ENG 372 Business and Professional Writing
or ENG 474 Argument and Style
Total Hours to total at least
1 CJS 207, Research Methods in Criminal Justice Studies, require as a prerequisite MTH 207 or PSY 216 or SOC 308. Neither PSY 216 nor SOC 308 fills the three semester hours mathematics requirements for graduation. May substitute SOC 208, POL 207, PSY 217 for CJS 207.

## Liberal Studies Curriculum

2 To be admitted as a major in the program under Option B, a transfer student must have received an accredited associate degree in corrections, law enforcement, police administration, police science, or a similar field of criminal justice and must have a 2.5 cumulative grade-point average on a 4.0 grading system. For criminal justice studies majors who have completed the basic requirements for an accredited two-year criminal justice degree, sixty semester hours beyond the associate degree is suggested, which includes a minimum of twenty-one semester hours in the program. The Liberal Studies Curriculum is required for all criminal justice studies transfer majors in addition to the baccalaureate degree requirements if they were not included in the candidates' associate degree programs. Internships and Independent Studies may be taken in CJS, POL, PSY, and SOC that have a criminal justice studies emphasis. No more than six semester hours of internships may be taken. Also to be offered is CJS 300 Criminal Justice Studies Career Development, CJS 399, Special Topics in Criminal Justice Studies and CJS 497, Service Learning Experience. This course work is in addition to the hours required for a CJS interdisciplinary major in the Option B, transfer program sequence. They are not to be used as substitute courses for those listed in the areas of behavior, institutions, law and/or social structure, unless approved in advance by the director of the Criminal Justice Studies program and the College of Arts and Sciences.
4 To be considered a viable candidate for graduation, a student must have completed a minimum of 124 semester hours with accepted transfer credits.

5 May include CAP components.
Minor in Criminal Justice Studies (CJS)

| Criminal Justice Studies |  |  |
| :--- | ---: | ---: |
| CJS 101 | Introduction to Criminal Justice Studies | $3-4$ |
| SOC 305 | Criminological Theory | 3 |
| Select four CJS courses (300/400 level) ${ }^{1}$ | 12 |  |
| Total Hours | $18-19$ |  |
| 1 | One course from each of the four areas involving behavior, institutions, law, |  |
| and social structure. |  |  |

$\left.\begin{array}{lcr}\text { First Year } & & \\ \text { Fall } & \text { Hours Spring } \\ \text { ASI } 150 & 1 \text { PSY 101 } \\ \text { or POL 201 } \\ \text { (Social }\end{array}\right)$


CJS 207. Research Methods in Criminal Justice Studies. 3 Hours Review of the nature, language, and processes of inquiry involving experiments, studies, surveys, and investigations. The instrumentation, types, and structures of content analysis, questionnaires, interviews, and structured observation, including, analytic techniques, data processing resources, and preparation of research reports are also examined. Prerequisite(s): MTH 207 or PSY 216 or SOC 308.
CJS 300. Criminal Justice Studies Career Development. 1 Hour Exploration of career opportunities and the professional career placement process including setting goals and identifying educational objectives, noting professional concerns, the role of a given criminal justice organization, and assessing experiences.
CJS 303. Theory and Practice of Corrections. 3 Hours
Study of the organization and administration of correctional institutions and other detention facilities with emphasis on probation, parole, and reentry systems to include the rehabilitation and treatment of the incarcerated with reference to correctional law cases. Prerequisite(s): CJS 101 or SSC 200 or Department Chair.

## CJS 305. Criminal Law. 3 Hours

Principles of criminal liability, preparation of case materials, court procedures, and case disposition.

## CJS 315. Criminal Procedure. 3 Hours

Fundamentals of criminal procedure: arrest, search, and seizure; interrogation, constitutional limitations upon state and federal rules of criminal procedure. Prerequisite(s): A course in criminal law.

## CJS 322. Policing \& Society. 3 Hours

Analyzes the history of policing in society and assesses the social and political forces that are correlated with both the rise of formal policing and the variety of structures law enforcement agencies have assumed. Reviews the primary functions of policing in American society and examines those issues affecting federal, state, county, municipal and private policing.

## CJS 336. Comparative Criminal Justice Systems. 3 Hours

Survey of cross-cultural uniformities and diversities in law-enforcement agencies, correctional systems, and the courts in selected countries. Attention is focused on transnational crime and justice. Sophomore standing or higher.

## CJS 347. Senior Project Design. 1 Hour

Preparation for the criminal justice capstone course with a focus on a workable research topic, literature review, and research methods design. Required for Criminal Justice majors. Prerequisite(s): SOC 208 or POL 207 or PSY 217; SOC 305 (may be taken as a corequisite).
CJS 399. Special Topics in Criminal Justice Studies. 1-3 Hours An extensive examination of a current topic affecting the criminal justice system and its law enforcement, corrections or judicial components.
May be repeated to a maximum of three semester hours when the topic changes.

## CJS 408. Senior Seminar. 1 Hour

Preparation for a criminal justice capstone experience. Students will explore vocational and career aspects of criminal justice and criminological disciplines. Required for Criminal Justice majors. Prerequisite(s): SOC 208 or POL 207 or PSY 217; SOC 305 (SOC 305 may be taken as a corequisite).

## CJS 409. Senior Capstone. 3 Hours

Capstone experience in criminal justice studies consisting of a seminar on research, writing, and ethics in criminology and criminal justice with a project and a written and oral presentation; students will reflect on how criminological research will influence their professional and personal activities and how they will serve their communities. Prerequisite(s): CJS 408 or permission of instructor.

## CJS 440. Independent Study. 3 Hours

Directed study and research on selected topics of significant academic publications in law enforcement and criminal justice. Prerequisite(s): An introductory CJS course; permission of instructor.

## CJS 447. Senior Seminar in Criminal Justice Studies. 3 Hours

Capstone experience in criminal justice studies consisting of a seminar on research and writing in criminology and criminal justice, an empirical research project of the student's choosing, and a written and oral presentation of the research.

## CJS 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## CJS 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved CJS 477; approval of University Honors Program.

## CJS 495. Internship in Criminal Justice I. 1-3 Hours

Supervised experience solely in a civilian capacity in a criminal justice or law-enforcement agency. Open to pre-service criminal justice studies majors only; in-service students do not qualify. Students who enroll for internship credit are not given a stipend. Credit granted only under Grading Option Two. Prerequisite(s): 2.5 cumulative grade-point average; sophomore status; permission of program director.

## CJS 496. Internship in Criminal Justice II. 1-3 Hours

Continuation of CJS 495.

## CJS 497. Service Learning Experience. 1 Hour

Supervised community research or service experience that complements a specific upper division course in Criminal Justice Studies. No more than three semester hours of Social Science 497 credits can count for graduation. Repeatable up to three semester hours. Prerequisite(s): Permission of instructor. Corequisite(s): CJS course (300- or 400-level).

## Economics

Major:

- Bachelor of Arts, Economics (p. 165)

Minor:

## - Economics (p. 165)

In cooperation with the Department of Economics and Finance in the School of Business Administration, the College of Arts and Sciences offers the degree of Bachelor of Arts with a major in economics.

The field of economics covers topics ranging from making sound business decisions to tackling some of society's most challenging social issues. Economics students learn to think critically about how choices are made in the presence of scarcity. An undergraduate education in economics enables individuals to better understand and help resolve problems in today's business and society.

The major in economics requires 30 semester hours of courses in economics: ECO 203, ECO 204, ECO 346, ECO 347, ECO 410 or ECO 441, ECO 490, and four elective courses in economics.

A minor in economics is also available, requiring 18 semester hours of courses in economics: ECO 203, ECO 204, ECO 346, ECO 347, and two elective courses in economics.

Information on a specialized degree, applied mathematical economics (MTE), is offered by the Department of Mathematics.

## Faculty

Trevor Collier, Chairperson
Professors Emeriti: Frasca, Gustafson
Edmund B. O'Leary Chair in Economics: John Ruggiero
Professors: Caporale, Ruggiero
Associate Professors: Collier, Poitras
Assistant Professors: Haskell, Williams
Lecturer: John

## Bachelor of Arts, Economics (ECO) minimum 124 hours



## Faith Traditions

Practical Ethical Action
Inquiry
Integrative

| Advanced Study |  | variab credit |
| :---: | :---: | :---: |
| Philosophy and/or Religious Studies |  |  |
| Historical Studies ${ }^{5}$ |  |  |
| Diversity and Social Justice |  | 3 |
| Major Capstone |  | 0-3 |
| Completed with ASI 110 and ASI 120. <br> Or ENG 100A and ENG 100B, or ENG 200H, by placement. <br> Completed with ENG 200 H or ASI 120. <br> Must include two different disciplines and accompanying lab. <br> 5 U.S. History AP credit will not satisfy this requirement. |  |  |
| Liberal Studies Curriculum |  |  |
| Creative and Performing Arts (May include CAP Arts) |  | 3 |
| L2 Proficiency (Proficiency in a language other than English) |  | 0-11 |
| Literature (May include CAP Components) |  | 3 |
| Mathematics (Satisfies CAP Mathematics) ${ }^{1,2}$ |  | 6-9 |
| MTH 138 Calculus I with Review ${ }^{3}$ |  |  |
| MTH 207 Introduction to Statistics ${ }^{4}$ |  |  |
| Natural Sciences (Satisfies CAP Natural Science) |  | 11 |
| Social Sciences, excluding ECO courses (Includes CAP Social Science) |  | 12 |
| Major Requirements |  | 30 |
| ECO 203 | Principles of Microeconomics ${ }^{5}$ | 3 |
| ECO 204 | Principles of Macroeconomics ${ }^{5}$ | 3 |
| ECO 346 | Intermediate Microeconomic Analysis ${ }^{6}$ | 3 |
| ECO 347 | Intermediate Macroeconomic Analysis | 3 |
| $\begin{aligned} & \text { ECO } 410 \\ & \text { or ECO } 441 \end{aligned}$ | Business \& Economic Forecasting Econometrics | 3 |
| ECO 490 | Senior Seminar in Applied Economics (Satisfies CAP Major Capstone) | 3 |
| ECO electives (300/400 level) |  | 12 |
| Breadth |  |  |
| ASI 150 | Introduction to the University Experience | 1 |
| Total Hours to total at least |  | 124 |
| 2 CAP Mathematics is satisfied with MTH 129, MTH 148, MTH 168, or MTH 207. |  |  |
| MTH 168 or MTH 128-MTH 129 may be substituted with perm of department chairperson. |  |  |
| May substitute DSC 210-DSC 211. |  |  |
| Minimum C grade |  |  |
| 6 ECO 340 may be substituted for ECO 346 with permission of the le department chairperson. |  |  |

## Minor in Economics (ECO)

| Economics |  | 3 |
| :--- | :--- | :--- |
| ECO 203 | Principles of Microeconomics | 3 |
| ECO 204 | Principles of Macroeconomics | 3 |
| ECO 346 | Intermediate Microeconomic Analysis ${ }^{1}$ |  |


| ECO $347 \quad$ Intermediate Macroeconomic Analysis |
| :--- |
| Select two ECO courses (300/400 level) |
| Total Hours |
| $1 \quad$ ECO 340 may be substituted for ECO 346 with permission |
| of department chairperson. |


| First Year |  |  |
| :--- | :---: | ---: |
| Fall | Hours Spring | Hours |
| ASI 150 | 1 ECO 204 | 3 |
| ECO 203 | 3,4 ENG 100 | (CAP |
|  | Humanities |  |
|  | Commons) |  |
|  | 3 HST 103, PHL | 3 |
| HST 103, PHL 103, or REL 103 (CAP Humanities | 103, or REL |  |
| Commons) | 103 (CAP |  |
|  | Humanities |  |
|  | Commons) |  |
| HST 103, PHL 103, or REL 103 (CAP Humanities | 3 SCI 190 |  |
| Commons) | $\& 190 \mathrm{C}$ (CAP |  |
|  | Natural |  |
|  | Science w/ |  |
| MTH 137 (Satisfies CAP Mathematics) | lab) |  |
| SOC 101 (Social Science - elective) | 4 MTH 138 | 4 |



| Third Year |  |  |
| :---: | :---: | :---: |
| Fall | Hours Spring | Hours |
| ECO 347 | $3 \text { 300/400 Eco }$ <br> elective | 3 |
| SCI 230 (INSS Natural Science) | 3 300/400 Eco elective | 3 |
| CAP Integrative | 3 CAP Arts / <br> Creative and Performing | 3 |
| Social Science - 300/400 level not ECO | 3 CAP Faith Traditions | 3 |
| Language 201 or contextual course | 3 CAP Practical Ethical Action | 3 |
|  | 15 | 15 |


| Fourth Year |  |
| :--- | :---: |
| Fall | Hours Spring |
| ECO 410 or 441 | 3 ECO 490 |
|  | (Satisfies |
|  | CAP Major |
|  | Capstone) |
| $300 / 400$ Eco elective | 3 300/400 Eco |
|  | elective |

6

CAP Advanced Philosophy/Religious Studies

General elective

Total credit hours: 124-128

## Courses

## ECO 203. Principles of Microeconomics. 3,4 Hours

An introduction to consumer and producer behavior in a market economy, demand and supply, pricing and firm behavior under perfect and imperfect competition, and the distribution of income. Discussion of current topics in microeconomics may be included.
ECO 204. Principles of Macroeconomics. 3 Hours
Introductory economic analysis of the macroeconomy; the determination of gross national product, employment, inflation and the interest rate in the U.S. economy. Government policy, money and banking, and international trade are analyzed.

## ECO 340. Managerial Economics. 3 Hours

Application of economic models to managerial decision making. Topics include demand analysis, forecasting demand, short-run cost analysis, long-run cost and production functions, pricing, and risk and uncertainty. May not get credit for both ECO 340 and ECO 346. ECB, ECO, MTE majors \& minors only. Prerequisite(s): ECO 203.
ECO 346. Intermediate Microeconomic Analysis. 3 Hours
3 Analysis of the theory of consumer behavior, production theory, equilibrium of the firm, price determination in various market structures, distribution of income, allocation of resources, and welfare economics.
May not get credit for both ECO 346 and ECO 340. ECO, ECB, and MTE majors and minors only. Prerequisite(s): ECO 203.

## ECO 347. Intermediate Macroeconomic Analysis. 3 Hours

National income accounting and the determination of the level of income and employment; classical, Keynesian, and post-Keynesian models; private, government, and foreign sectors; theories of inflation and economic growth. ECO, ECB, and MTE majors and minors only. Prerequisite(s): ECO 204, ECO 203.

## ECO 390. Antitrust Economics. 3 Hours

Study of how economic analysis has been applied in the interpretation of the antitrust statutes. Examines major anti-trust laws and relevant case law; reviews economic theories of market behavior. Prerequisite(s): ECO 203.

## ECO 410. Business \& Economic Forecasting. 3 Hours

Forecasting techniques, including ARIMA time series models, econometric models, moving averages, exponential smoothing, and time series decomposition, are used to forecast business and economic variables. Data sources, selection of appropriate forecasting tools and models, and evaluation of forecast results are studied. Prerequisite(s): ECO 203, ECO 204; Statistics (DSC 211 or MTH 207 or MTH 367 or MTH 411).

ECO 415. Game Theory with Business Applications. 3 Hours Introductory course in strategic decision making; provides a thorough discussion of the basic techniques of applied game theory and of systematic thinking in making business decisions. Among the topics covered with applications to business are equilibrium strategies, understanding situations involving conflict and cooperation, auction design and bidding strategy, and bargaining and negotiations. Prerequisite(s): ECO 203.

## ECO 435. Economics of the Environment. 3 Hours

Introduction to the economics of the global environment including an analysis of market failure as a cause of environmental degradation. Topics covered include cost-benefits analysis, criteria for public investment, regulation of the environment, and the sustainable global environment. Prerequisite(s): ECO 203.

## ECO 441. Econometrics. 3 Hours

Training in the art of making economic measurements from empirical data using regression analysis as the principle tool; use of computer software to estimate and test regression equations; interpretation of results using statistical inference. Prerequisite(s): ECO 203, ECO 204,[one of the following DSC 211, MTH 207, MTH 367, or MTH 411].

## ECO 442. Money \& Banking. 3 Hours

Principles of money and monetary systems; commercial banking and the role of the Federal Reserve System; monetary theory and policy; the mechanism of international payments. Prerequisite(s): ECO 203, ECO 204.

## ECO 445. Public Finance. 3 Hours

The economic aspects of government finance at the local, state, and especially the national level; the behavioral effects of various taxes, efficiency in spending, the changing role of the U.S. government, fiscal policy, and intergovernmental revenue and expenditure programs; emphasis on relating analytical tools to current developments. Prerequisite(s): ECO 203, ECO 204.

## ECO 460. Economic Development \& Growth. 3 Hours

Study of various dynamic economic theories of growth and structural change; the role of particular factors of production and related noneconomic variables in the development process, primarily, though not exclusively, of Third World nations. Prerequisite(s): ECO 203, ECO 204.

ECO 461. International Economics. 3 Hours
Major issues surrounding international trade and finance, the economic interdependence of nations and businesses, essential theoretical and empirical tools necessary to monitor and analyze international economic phenomena, and the application of these tools to contemporary business problems and issues. Prerequisite(s): ECO 203, ECO 204.

## ECO 471. Labor Economics. 3 Hours

Theory of labor supply and demand, human capital theory, and the process by which wages are determined in various factor markets; applications to topics of unemployment, unions, migration, discrimination, and skill differentials. Prerequisite(s): ECO 203, ECO 204.

## ECO 480. Sports Economics. 3 Hours

The application of economic analysis to the sports industry. Examines demand and efficiency in the product market; the labor market for professional athletes and mechanisms for restricting competition in that market; problems in achieving an efficient allocation of resources in the sports industry. Prerequisite(s): ECO 203.

ECO 485. Urban \& Regional Economics. 3 Hours
Treatment of certain theoretical concepts such as location theory and theories of land use and land rent; an economic interpretation for the existence of cities; applying economic analysis to the problems of traffic congestion, pollution, race, poverty, and urban sprawl. Prerequisite(s): ECO 203.

ECO 488. Production Economics \& Performance Evaluation. 3 Hours Intermediate course in theoretical and applied microeconomic production theory; provides a thorough discussion of the basic techniques of applied production theory and performance evaluation of decision making units. Topics include returns to scale, technical and allocative efficiency, benchmarking, environmental costs, and programming. Prerequisite(s): ECO 203.

## ECO 490. Senior Seminar in Applied Economics. 3 Hours

The capstone seminar course is required for all Economics and Business Economics majors. Students apply economic analysis to topics of interest through projects, presentations, and group discussion, as directed by the instructor. The course provides students the opportunity to extend their proficiency in theoretical, mathematical, and statistical methods learned in previous economics courses through practical application.Typically offered during the spring semester. Economics or Business Economics majors only. Prerequisite(s): 12 semester hours in Economics, including one (1) of the following: ECO 441 or ECO 410. Senior standing only.

## ECO 491. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

## ECO 492. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

## ECO 494. Seminar. 3 Hours

Subject varies from time to time. May be taken more than once if topic changes. Prerequisites to be announced.

## ECO 496. Cooperative Education. 3 Hours

Optional full-time work period off campus alternating with study period on campus. Does not count toward economics major. Permission of chairperson required. Economics or Business Economics majors only. Prerequisite(s): Permission of department chairperson.

## ECO 497. Internship for General Elective Credit. 1-3 Hours

Practical work experience associated with career development and career exploration relating to the student's major. Permission of the department chair or designee required. Does not replace economics courses for the economics major. Economics or Business Economics majors only. Prerequisite(s): Forty-five semester hours of credit.

## ECO 498. Independent Study in Economics. 1-6 Hours

Directed readings and research in selected fields of economics. The number of semester hours will depend on the amount of work chosen. The course will involve periodic discussions with faculty and other students in the course. May be taken more than once for additional credit. Prerequisite(s): 3.0 GPA in economics with a minimum of nine semester hours in economics; nomination by faculty; permission of the department chairperson.

## English

Major:

- Bachelor of Arts, English (p. 168)

Minor:

- English (p. 170)

The University requirement in English composition is satisfied by the completion of English 100 (ENG 100A and ENG 100B), ENG 200 or ENG 200 H or ASI 120. Completing this requirement is a prerequisite for most other English courses. For placement information, see Composition Competencies in the Degree Requirements section. For additional details, consult the department chairperson or the director of writing programs.

Students majoring in English must complete at least 42 semester hours of English courses, including first-year composition, and at least 24 semester hours at the 300/400 level.

A minor in English consists of 12 semester hours beyond the composition requirement.

Students in B.A. programs can pursue State of Ohio teacher licensing in Integrated Language Arts through the dual-degree B.A. and B.S.E. program conducted in conjunction with the Department of Teacher Education in the School of Education and Health Sciences. Candidates must meet set standards for admission to this program, which must be verified by the Transfer Officer in the Office of the Dean, School of Education and Health Sciences. For further information, consult the Department of English chairperson.

The English department awards a writing certificate to students who achieve a 3.0 grade-point average in 18 semester hours of approved writing and writing-related courses, including at least 12 semester hours of upper-divisional (300-400) courses, and who successfully complete an approved writing portfolio and an assigned, impromptu writing task. The English department also offers a writing internship program. For details on these advanced writing opportunities, consult the department chairperson.

## Faculty

R. Andrew Slade, Chairperson

Tereza Szeghi, Director of Graduate Studies
Laura Vorachek, Director of Undergraduate Studies
Ann Biswas, Director of Writing Programs
Professors Emeriti: August, Henninger, Kimbrough, Labadie, K. Marre, L.
Marre, H. Martin, Means, Murphy, Palumbo, Patrouch, Stockum, Youngkin Professors: Farrelly, McCombe, Pici, Strain, Trollinger, Wilhoit Associate Professors: Bardine, Boehnlein, Carrillo, Haan, Krummel, Morgan, Potter, Slade, Szeghi, Thomas, Vorachek Assistant Professors: Esseili, Fine, Li, Mackay, Toll Lecturers: Adams, Biswas, Burnside, Cook, Craig, DeAloia, Doench, Getrost, Keane-Sexton, Kisel, Light, Lyon, MacLeod, E. Martin, Patterson, Rowe, Taaffe

## Bachelor of Arts, English (ENG) minimum 124 hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$


| Liberal Studies Curriculum |  |  |
| :---: | :---: | :---: |
| Creative and Performing Arts (May include CAP Arts) |  | 3 |
| L2 Proficiency (Proficiency in a language other than English) |  | 0-11 |
| Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) |  | 3 |
| Natural Sciences (Satisfies CAP Natural Science) |  | 11 |
| Social Sciences (Includes CAP Social Science) |  | 12 |
| Major Requirements ${ }^{1,2,3}$ |  | 42 |
| ENG 200 <br> or ENG 200 H <br> or ASI 120 | Writing Seminar II <br> Writing Seminar II <br> The Development of Western Culture in a Global Context | 3 |
| ENG 220 | Foundations of Textual Analysis \& Research | 3 |
| ENG 386 | Genre in Writing | 3 |
| Select one early literature survey course from: |  | 3 |
| ENG 301 | Survey of Early English Literature |  |
| ENG 303 | Survey of Early American Lit |  |
| Select one additional literature survey course from: |  | 3 |
| ENG 301 | Survey of Early English Literature |  |
| ENG 302 | Survey of Later British Literature |  |
| ENG 303 | Survey of Early American Lit |  |
| ENG 304 | Survey of Later American Lit |  |



| ENG 374 | Visual Rhetoric | 3 |
| :--- | :--- | :--- |
| Select one approved new media course from: | 3 |  |
| ENG 375 | Writing for the Web |  |
| ENG 377 | Writing in Social Contexts | 3 |
| ENG 474 | Argument and Style | 3 |
| ENG 497 | Research Seminar-Writing | 3 |
| Select one approved diversity course |  |  |
| ENG elective $(300-400$ level) | 3 |  |

Writing - Professional \& Technical (WPT) ..... 24
ENG 390 Introduction to Rhetorical Theory ..... 3
Select one analysis course from: ..... 3
ENG 366 Health Literacy and Social Justice
ENG 368 Introduction to Professional and Technical Writing
ENG 378 Professional and Technical Writing in Global Contexts
Select two practice courses from: ..... 6ENG $369 \quad$ Writing in OrganizationsENG 370 Report \& Proposal WritingENG 371 Technical CommunicationENG $372 \quad$ Business and Professional WritingENG 373 Writing in the Health Professions
Select one approved new media course from: ..... 3
ENG $375 \quad$ Writing for the Web
Select one research seminar: ..... 3
ENG 497 Research Seminar-WritingENG $475 \quad$ Usability in Technical Writing
Select one approved diversity course ${ }^{4}$ ..... 3
ENG elective (300-400 level) ..... 3
Self-Designed (ESD) ..... 24
Select one approved ENG theory course ${ }^{7}$ ..... 3
Select one approved ENG diversity course ${ }^{4}$ ..... 3
Select one approved ENG research seminar ${ }^{8}$ ..... 3
Approved ENG electives ..... 15
Breadth
ASI $150 \quad$ Introduction to the University Experience 1
Total Hours to total at least ..... 124
Satisfies CAP First and/or Second-Year Writing Seminar.
May include CAP Arts.3 ENG 100A and ENG 100B together will satisfy the requirement of 3semester hours of ENG 100. ASI 120 satisfies the requirement of 3semester hours of ENG 200H. Students exempt from ENG 200H dueto ACT/SAT scores still need to complete 42 semester hours for themajor.

4 Approved courses for the English major diversity requirement include: ENG 307, ENG 333, ENG 335,ENG 336, ENG 339, ENG 340, ENG 341, ENG 345, ENG 346, ENG 360, and ENG 366.

At least 9 of the 18 required credit hours in ENG electives and
research seminars must be taken in approved literature courses. At least 3 of these 9 hours must be in a literature course designated as "early" (e.g. pre-1800 English literature; pre-1865 American literature). Not all courses in the track may be taken in a single national literary tradition.
6 Teaching Track students who are also enrolled in the Bachelor of Science in Education degree program in Teacher Education for Adolescent-Young Adult English and Language Arts must fulfill their literature survey requirements with the two early surveys: ENG 301 and ENG 303, and they must take an approved ENG new media course in place of the ENG elective.
7
Theory course options for the Self-Designed Track include: ENG 388, ENG 389, ENG 390, ENG 391, ENG 476, ENG 488, and ENG 489. The option selected for the Self-Designed Track must also be approved by the academic advisor and department chairperson.
8
Research seminar options for the Self-Designed Track include: ENG 490, ENG 496, and ENG 497. The option selected for the SelfDesigned Track must also be approved by the academic advisor and department chairperson.

## Minor in English (ENG)

| English |  |
| :--- | :--- |
| Select four ENG courses $\left(300 / 400\right.$ level) ${ }^{1}$ | 12 |


| Total Hours | 12 |
| :--- | :--- |

1 In addition to the composition requirement.

| First Year |  |  |
| :---: | :---: | :---: |
| Fall | Hours Spring | Hours |
| ASI 150 | 1 ASI 120 (CAP Humanities Commons) | 8 |
| ASI 110 (CAP Humanities Commons) | 7 MTH (CAP <br> Mathematics) | 3 |
| Social Science - intro level | 3 Language $141$ | 4 |
| Language 101 | 4 |  |
|  | 15 | 15 |
| Second Year |  |  |
| Fall | Hours Spring | Hours |
| ENG 220 | 3 ENG 386 | 3 |
| ENG 303 (or additional ENG literature) | 3 ENG 301 (or additional ENG literature) | 3 |
| INSS (CAP Natural Science w/lab) | 4 CMM 100 <br> (CAP <br> Communication) | 3 |
| Language 201 or contextual course | $\begin{aligned} & 3 \text { SSC } 200 \\ & \text { (CAP Social } \\ & \text { Science) } \end{aligned}$ | 3 |
| Social Science - elective | 3 INSS (CAP <br> Natural <br> Science w/ <br> lab) | 4 |
|  | 16 | 16 |

## Third Year

Fall

| Hours Spring | Hours |
| :---: | ---: |
| 3 ENG | 3 |
| Concentration |  |
| 3 ENG | 3 |
| Concentration |  |

ENG Concentration

ENG Concentration

| CAP Arts / Creative and Performing | 3 ENG Concentration | 3 |
| :---: | :---: | :---: |
| CAP Advanced Historical Studies | 3 CAP Faith Traditions | 3 |
| Social Science - 300/400 level | 3 CAP Practical Ethical Action | 3 |
| INSS Natural Science | 3 |  |
|  | 18 | 15 |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| ENG 498 | 3 ENG 499 <br> (Satisfies <br> CAP Major Capstone) | 0 |
| ENG Research Seminar | 3 ENG <br> Concentration | 3 |
| CAP Inquiry | 3 ENG <br> Concentration | 3 |
| CAP Integrative | 3 CAP <br> Advanced <br> Philosophy/ Religious Studies | 3 |
| CAP Advanced Philosophy/Religious Studies | 3 CAP Diversity and Social Justice General elective (optional) | 3 |
|  | 15 | 15 |

## Total credit hours: 125

## Courses

ENG 100. Writing Seminar I. 3,4 Hours
Introductory composition course focused on personal and academic literacies, with an emphasis on expository writing. Instruction and practice in developing college-level reading, writing, research, and critical thinking skills. Emphasis is on a process approach to writing effective academic prose. Students must pass the course with a grade of C - or higher to satisfy College of Arts and Sciences' composition competency requirement.

## ENG 100A. Writing Seminar 1A. 2 Hours

First half of two-semester introductory composition course sequence focused on personal and academic literacies, with an emphasis on expository writing. Instruction and practice in developing college-level reading, writing, research, and critical thinking skills. Emphasis is on a process approach to writing effective academic prose. Students must pass the course with a grade of C - or higher to satisfy College of Arts and Sciences' composition competency requirement. Prerequisite(s): Placement as determined by the Office of the Dean.

## ENG 100B. Writing Seminar 1B. 2 Hours

Second half of year-long introductory composition course focused on personal and academic literacies, with an emphasis on expository writing. Instruction and practice in developing college-level reading, writing, research, and critical thinking skills. Emphasis is on a process approach to writing effective academic prose. Students must pass the course with a grade of C- or higher to satisfy College of Arts and Sciences' composition competency requirement. Prerequisite(s): ENG 100A.

ENG 151. Introduction to Literature. 3 Hours
Critical study of literary forms - fiction, drama, and poetry - representative of various eras and cultures. Prerequisite(s): ENG 100 or ENG 100B or ASI 110 or equivalent. ENG 100 or ENG 100B may be taken as a corequisite.

## ENG 198. English Scholars' Seminar. 3 Hours

Study and seminar discussion of selected literary masterworks and appropriate criticism thereof, with equal emphasis on composition. Open by permission only to first-year students in the Berry Scholars Program. Students must pass the course with a grade of C- or higher to satisfy the University requirement in general reading and writing competencies.

## ENG 200. Writing Seminar II. 3-4 Hours

Variable topic composition course focused on academic discourse, research, and argumentation. Instruction and practice in developing reading, writing, and research skills introduced in ENG 100 and employed across the curriculum. Emphasis on rhetorical analysis and a process approach to writing effective academic arguments. Students must pass the course with a grade of C- or higher to satisfy College of Arts and Sciences' composition competency requirement. Prerequisite(s): ENG 100, or (ENG 100A and ENG 100B) or ENG 101, and sophomore status, or placement as determined by the Dean's Office.
ENG 200H. Writing Seminar II. 3 Hours
Variable theme composition course focused on academic discourse, research, and argumentation. Instruction and practice in developing reading, writing, and research skills introduced in ENG 100 and employed across the curriculum. Emphasis is on rhetorical analysis and a process approach to writing effective academic arguments. Students must pass the course with a grade of C- or higher to satisfy College of Arts and Sciences' composition competency requirement. Prerequisite(s): Placement as determined by the Office of the Dean.
ENG 203. Major British Writers. 3 Hours
Study of four or five writers representative of the principal periods in English literature. Prerequisite(s): ENG 100 or ENG 100B or ENG 200H or ASI 110 equivalent.

## ENG 204. Major American Writers. 3 Hours

Study of four or five writers representative of the principal periods in American literature. Prerequisite(s): ENG 100 or ENG 100B or ENG 200H or ASI 110 equivalent.

## ENG 205. Major World Writers. 3 Hours

Study (in translation) of four or five writers representative of the principal periods in (chiefly Western world) literature, exclusive of English and American literature. Prerequisite(s): ENG 100 or ENG 100B or ENG 200H or ASI 110 equivalent.

## ENG 210. Poetry. 3 Hours

Study of representative examples of a major literary genre.
Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.
ENG 220. Foundations of Textual Analysis \& Research. 3 Hours
Introduction to the skills and habits of reading, writing, textual analysis and research that are central to the discipline of English. Prerequisite(s): ENG 100 or ENG 100 B or ENG 200 H or ASI 110 or equivalent.

## ENG 230. Topics in Literature. 1-6 Hours

Exploration of varying approaches to the study of literature. Can be repeated under special circumstances. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

## ENG 242. Sophomore Honors. 3 Hours

Seminar in which selected works from the literature of Western civilization are studied. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

ENG 270. Reading \& Writing in the American University. 4 Hours Provides students who are English language learners with an understanding of rhetorical principles and the conventions of Western academic literacy as well as competence in applying those principles and conventions for success as writers in an American university. Prerequisite(s): Permission of department chairperson.

## ENG 271. Technical Writing Laboratory. 2 Hours

Designed to complement Engineering Technology courses by analyzing representative technical reports and documents and by providing guidance in planning, drafting, and revising writing assignments. Its focus is on the discipline-specific types of writing in the professional technical/ engineering fields including laboratory reports, correspondence, technical descriptions, specifications, and proposals. Prerequisite(s): ENG 270.

## ENG 271L. Technical Writing Laboratory. 2 Hours

Designed to complement Engineering Technology courses by analyzing representative technical reports and documents and by providing guidance in planning, drafting, and revising writing assignments. Its focus is on the discipline-specific types of writing in the professional technical/ engineering fields including laboratory reports, correspondence, technical descriptions, specifications, and proposals. Prerequisite(s): ENG 270.

## ENG 272. Writing \& Research. 3 Hours

Study and practice of research methods commonly required to complete writing assignments across the curriculum. Formulation of research questions, use of appropriate methods to gather data, analysis of information, and creation of effective written documents. Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 or equivalent.
ENG 280. Introduction to Creative Writing. 3 Hours
Introduction to writing poetry, short fiction, and creative non-fiction.

## ENG 282. Introduction to Writing Poetry. 3 Hours

Beginning course in analyzing and writing poetry. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 284. Intro-Writng Fiction. 3 Hours

Beginning course in analyzing and writing short fiction. Prerequisite(s): ENG 100 or ENG 100 B or ENG 200 H or ASI 110 equivalent.

## ENG 286. Introduction to Writing Drama. 3 Hours

Beginning course in analyzing and writing short plays. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

## ENG 300. Literary Analysis \& Research - Poetry. 3 Hours

Detailed analysis of selected poems, with attention to their use of traditional forms and conventions, combined with training in standard methods of interpretation and research. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

## ENG 301. Survey of Early English Literature. 3 Hours

Survey of English literature from the Medieval period to the end of the eighteenth century. Prerequisite(s): ENG 100 or ENG 100B or ENG 200H or ASI 110 equivalent.

## ENG 302. Survey of Later British Literature. 3 Hours

Survey of British literature from the early nineteenth century Romantic period to the present. Emphasis is placed on a critical engagement with creative literary genres, including poetry, fiction, drama and prose. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 or equivalent.

## ENG 303. Survey of Early American Lit. 3 Hours

Survey of American literature from the Colonial period to 1865. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 or equivalent.

## ENG 304. Survey of Later American Lit. 3 Hours

Survey of American literature from 1865 to the present. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 or equivalent.

ENG 305. Survey of American Literature. 3 Hours
Survey of American literature from the Colonial period to the present. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

## ENG 306. Survey of Continental Literature. 3 Hours

Survey of continental European literature from Homer to the present. Prerequisite(s): ENG 100 or ENG 100B or ENG 200H or ASI 110 equivalent

## ENG 307. Varieties of English. 3 Hours

Introduction to regional, social, and ethnic varieties of English in North America and throughout the world, focusing on the relationships among English language use, culture, power, status, and identity. Prerequisite(s): English 100, 100B, 200H, or ASI 110 or equivalent.

ENG 308. Intermediate Poetry Workshop. 3 Hours
Intensive practice in the writing of poems. Prerequisite(s): ENG 282 or permission of department chairperson.

ENG 310. Intermediate Fiction Workshop. 3 Hours
Intensive practice in the writing of fiction. Prerequisite(s): ENG 284 or permission of department chairperson.

ENG 312. Advanced Writing of Drama. 3 Hours
Intensive practice in the writing of plays. Prerequisite(s): ENG 286 or permission of department chairperson

ENG 313. Social Justice \& Dramatic Literature. 3 Hours
Survey of dramatic literature that engages issues pertaining to diversity and social justice. Survey may include domestic and global dramatic literatures that grapple with processes of identity, representation, and performing the "other.".

## ENG 315. Creative Nonfiction. 3 Hours

Study, analysis, and writing of a number of creative nonfiction forms, including memoir, personal essay, biography, opinion essay, and weblogs. Focus on writing process, rhetorical awareness, style, and voice in expressive writing. Prerequisite(s): ENG 100 or ENG 100B or ENG 200H or ASI 110 equivalent.

## ENG 316. Elements of Style. 3 Hours

Study of stylistic options available to all writers. Examination of and practice in adapting writing style for various audiences and purposes, altering style to achieve desired effects, and developing a distinctive written voice. Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 or equivalent

## ENG 317. Contemporary Poetry. 3 Hours

Study of selected poems by recent writers. Prerequisite(s): ENG 100 or ENG 100B or ENG 200H or ASI 110 equivalent.

## ENG 318. Detective Fiction. 3 Hours

Introduction to detective fiction, focusing on its developments, conventions, subgenres and themes, including crime and concepts of justice. Emphasis is placed on the methods of inquiry in literary studies with the aim of developing students' critical reading and writing skills. Prerequisite(s): ENG 100 or ENG 100B or ENG 200H or ASI 110 (or equivalent).

## ENG 319. Contemporary Fiction. 3 Hours

Study of selected novels and short fiction by recent writers.
Prerequisite(s): ENG 100 or ENG 100B or ENG 200H or ASI 110 equivalent.

## ENG 320. Contemporary Drama. 3 Hours

Study of selected plays to illustrate major tendencies of modern drama. Prerequisite(s): ENG 100 or ENG 100B or ENG 200H or ASI 110 equivalent.

ENG 321. Reading Popular Music. 3 Hours
A focus on popular music texts and scholarly approaches to these texts drawn from a wide range of academic disciplines. Assignments and in-class activities will emphasize critical reading and writing skills as applied to both the popular music texts and the secondary sources which analyze them. Course may be repeated as topics change. Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 .

## ENG 322. Masterpieces of World Literature. 3 Hours

Intensive study of major literary works representative of various cultures. Works are studied in translation, although an English language work or two may be included for appropriate comparison. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

## ENG 323. Literature of the Christian Tradition. 3 Hours

Study of literary works that form part of the Christian religious tradition. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

## ENG 324. The Novel. 3 Hours

Consideration of selected novels to illustrate various fictional modes. Prerequisite(s): ENG 100 or ENG 100 B or ENG 200 H or ASI 110 equivalent.

ENG 325. Science Fiction. 3 Hours
Survey of science fiction with detailed analysis of selected novels and short fiction. Prerequisite(s): ENG 100 or ENG 100B or ENG 200H or ASI 110 equivalent

## ENG 326. Sport \& Literature. 3 Hours

An historical approach to analyzing the function of sport in society and literature, from Greek times to contemporary times. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

## ENG 327. Studies in Popular Fiction. 3 Hours

Analysis of selected artifacts of popular culture with reference to serious literature. May be repeated as topics change. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

## ENG 328. American Nobel Authors. 3 Hours

Analysis and discussion of the works of several American Nobel Prize winners in the field of literature. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

## ENG 329. Short Story. 3 Hours

Study of the techniques employed in the writing of the short story.
Analysis of various models of the short story. Prerequisite(s): ENG 100 or ENG 100B or ENG 200H or ASI 110 equivalent.

## ENG 330. Development of Drama. 3 Hours

Study of the historical development of the drama from its beginnings to the nineteenth century. Analysis of plays from each significant period. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

## ENG 331. Studies in Film. 3 Hours

Studies in special topics in film to introduce students to the conceptual and analytical practices of cinema as an art form. Emphasis is placed on a critical engagement with the formal and stylistic dimensions of motion pictures, as well as discussions of the various roles that the cinema plays in society. May be repeated as topics change. Prerequisite(s): (ENG 100 or ENG 100B or ENG 200H) or ASI 110) or equivalent.

## ENG 332. Studies in Literature \& Film. 3 Hours

Studies in literary texts and the film treatments of those texts. May be repeated as topics change. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

ENG 333. Images of Women in Literature. 3 Hours
Examination of significant works from literature that present and respond to images of women, with critical attention to social and historical context, including application of feminist critical approaches. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 or equivalent.

## ENG 334. Modern Men -- Images. 3 Hours

Critical examination of significant literary works that portray males in traditional and non-traditional roles. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.
ENG 335. African American Literature. 3 Hours
Study of African American writers and their oral and literary traditions. Emphasis on issues such as race, gender, and religion. Prerequisite(s): ENG 100 or ENG 100 B or ENG 200 H or ASI 110 equivalent.

## ENG 336. Gender and Fiction. 3 Hours

Study of the relationship between gender and fiction as constructions that give shape and meaning to human experience and introduction to critical and literary methods for reading both. Consideration given to the impact of gender on the production and reception of fiction and to the ways fiction writers not only inscribe but also challenge conventions of gender and genre. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200 H ) or ASI 110) or equivalent.

## ENG 337. Studies in Folklore. 3 Hours

Selected studies in American and/or world folklore. May be repeated as topics change. Prerequisite(s): ENG 100 or ENG 100B or ENG 200H or ASI 110 equivalent.
ENG 338. Images of Business. 3 Hours
Examination of the modern world of work, the image of the business 'professional', and the influence of organization on global society and values as these themes are revealed primarily in modern literature. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

ENG 339. American Indian Literature. 3 Hours
Study of American Indian writers and their oral and literary traditions. Emphasis on such issues as race, gender, and religion. Prerequisite(s): ENG 100 or ENG 100 B or ENG 200 H or ASI 110 equivalent.

## ENG 340. US Prison Literature and Culture. 3 Hours

Introduction to some of the major voices that have emerged from the prison system from the rise of the modern prison in the late eighteenth century through the contemporary period. Emphasis will be placed on critical engagement with multiple literary texts and film, as well as discussions of contemporary social issues regarding prison culture. This course will also bring together different disciplinary perspectives in order to enhance students' understanding of the significant issues within prison literature and culture. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

## ENG 341. Asian-American Literature. 3 Hours

Study of Asian American writers and their literary traditions. Emphasis on issues of race, gender, and class. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

## ENG 342. Literature and the Environment. 3 Hours

Study of global environmental literature, fiction and non-fiction, focusing on issues of environmental justice and sustainability and how they intersect with race, class, gender, and place. Prerequisite(s): ENG 100, or 100 B, or 200 H , or ASI 110.

ENG 343. Literature of the Fifties. 3 Hours
Study of three identifiable cultures of the 1950s in America that were concerned with dillusionment, conformity, alienation, and artistic standards in literature: African-American, Beat, and Jewish writers. Prerequisite(s): ENG 100 or ENG 100B or ENG 200H or ASI 110 equivalent.

## ENG 344. Literature of the Sixties. 3 Hours

Examination of the Sixties from the perspectives of cultural and literary studies. To this end, it focuses on major works of fiction, essays, New Journalism, and film. Prerequisite(s): ENG 100 or ENG 100B or ENG 200H or ASI 110 equivalent.

## ENG 345. Colonial \& Postcolonial Literature. 3 Hours

Examination of significant literary works that reveal the diversity of human cultures shaped by colonial and postcolonial contexts. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

## ENG 346. Literature \& Human Rights. 3 Hours

Study of works of literature that address human rights concerns, supplemented with study of foundational philosophical, theological, and political texts that address the meaning and origin of human rights. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

## ENG 347. Young Adult Literature. 3 Hours

Critical study of literature written for young adults, including an analysis of the historical trends, debates, and issues in the field. Prerequisite(s): ENG 100 or 100 B or 200 H or ASI 110 .

## ENG 348. Modern Irish Literature. 3 Hours

Consideration principally of the Irish literary revival of the late nineteenth and early twentieth centuries with appropriate background material. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

## ENG 349. Children's Literature and Culture. 3 Hours

Interdisciplinary study of children's literature and culture as diverse historical, social, and artistic expressions. Prerequisite(s): (ENG 100 or ENG 100B), ENG 200 H , or ASI 110 or equivalent.

## ENG 350. European Literature of Antiquity. 3 Hours

Study of significant works from the Old Testament and Greek, Roman, English, Irish, and/or Scandinavian writers. Prerequisite(s): ENG 100 or ENG 100B or ENG 200H or ASI 110 equivalent.

## ENG 351. European Literature of Middle Ages. 3 Hours

Study of selected literary masterpieces of western civilization in the Middle Ages. Prerequisite(s): ENG 100 or ENG 100B or ENG 200H or ASI 110 equivalent.

## ENG 353. Literature of the Renaissance. 3 Hours

Study of selected literary masterpieces from England and the Continent that illustrate the culture and ideas of the Renaissance. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

## ENG 354. Literature of the Enlightenment. 3 Hours

Study of selected English and European literature from the Age of Reason. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

## ENG 355. Literature of the Romantic Age. 3 Hours

Study of the Romantic Revolution as illustrated in representative writings of English and European authors. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

## ENG 356. European Literature of the 19th Century. 3 Hours

Study of representative masterpieces from the literature of England and the Continent during the nineteenth century. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

ENG 357. European Literature of the Early 20th Century. 3 Hours Study of significant English and European literature that illustrates the ideas and culture of the early modern period. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.
ENG 358. Contemporary Literature of Europe. 3 Hours
Study of selected western European literature that illustrates the ideas and culture of the present age. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

## ENG 359. Discourse Analysis. 3 Hours

Study of methods for critical analysis of discourse in contemporary social contexts. Emphasis on techniques for analyzing language as social practice. Prerequisite(s): ENG 200, ASI 120 or equivalent.

ENG 360. US Latina/Latino Literature. 3 Hours
Introduction to the diverse cultures and literary forms that define Latina/ o literature, along with appropriate interpretive methods for thinking, researching, and writing about Latina/o literature. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 or equivalent.

ENG 362. Shakespeare. 3 Hours
Study of selected plays and poems of Shakespeare. Prerequisite(s): ENG 100 or ENG 100 B or ENG 200 H or ASI 110 equivalent.

ENG 362L. Shakespeare Performance Laboratory. 1 Hour
Study of Shakespearean performances through films, video tapes, and recordings. Three hours a week. Students in 362L must have already taken or be registered for ENG 362 or an equivalent Shakespeare course. Corequisite(s): ENG 362 or equivalent Shakespeare course.
ENG 363. Shakespeare's Worlds. 3 Hours
Concentrated analysis of the various worlds created in Shakespeare's plays and their interconnection with and depiction of the major elements of the historical world of early modern England. In the process of this integrated analysis, the Historical Study and Arts Study domains will be respected and taught as separate disciplines. This course is cross-listed with HST 308.

## ENG 365. Studies in an Author. 3 Hours

The study and analysis of a significant author's work, literary achievement and influence. May be repeated as topics change. Prerequisite(s): ENG 200 or ENG 200 H or ASI 120.

## ENG 366. Health Literacy and Social Justice. 3 Hours

Study of health literacy from a public health and social justice perspective, examining the impact of limited health literacy on people's access to and understanding of written healthcare information. Students identify and practice using the key elements of effective written information for groups marginalized by differences such as race, socioeconomic class, culture, gender, sexual orientation, and dis/ability. Focus is on research, writing, and designing effective health information materials for diverse audiences. Study of the influences that have served to obstruct access to and understanding of health information and the ability to navigate healthcare systems and services. Junior or senior standing (This course requires prior experience with academic writing and knowledge of writing in the students' own discipline) Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 or equivalent.
ENG 368. Introduction to Professional and Technical Writing. 3 Hours Examination of the histories, theories, processes, functions, and tools of writing in field-specific workplace contexts such as corporate, legal, medical, scientific, technical, and non-profit settings. Prerequisite(s): ENG 100 or ENG 100 B or ENG 200 H or ASI 110 or equivalent.

ENG 369. Writing in Organizations. 3 Hours
Intensive study and production of rhetorically effective texts for a variety of professional purposes and audiences. Emphasis on strategically employing technology and writing skills to analyze, create, and edit print and digital texts such as web documents, grant proposals, reports, newsletters, instructions, and other forms of internal and external communication reflective of current workplace practices. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 or equivalent.

## ENG 370. Report \& Proposal Writing. 3 Hours

Analysis and practice in effective report and proposal writing. Emphasis on employing appropriate rhetorical and technological tools to analyze, produce, and edit proposals and reports for both business and nonprofit audiences. Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 or equivalent; junior or senior standing.

## ENG 371. Technical Communication. 3 Hours

Study and practice of effective written communication in technical professions. Emphasis on rhetorical and technological tools and editing skills needed to analyze and create technical documents with written and visual elements. Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 or equivalent; junior or senior standing.

## ENG 372. Business and Professional Writing. 3 Hours

Analysis and practice in effective workplace communication. Emphasis on rhetorical elements to produce documents for both business and professional situations. Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 or equivalent; junior or senior standing.

## ENG 373. Writing in the Health Professions. 3 Hours

Intensive practice in reading and writing for the healthcare professions. Practice in rhetorically composing written medical information in specific genres for various purposes and audiences (such as patient educational materials to patients and families and medical reports to health professionals). Critical reading, analysis, and reflection on issues, trends, and texts in healthcare. Topics include medical writing research strategies and writing the personal essay for graduate/professional school applications. Prerequisite(s): (ENG 200 or ENG 200H) or ASI 120) or equivalent; junior or senior standing.

## ENG 374. Visual Rhetoric. 3 Hours

Exploration of theories of visual rhetoric and application of those theories to specific instances of visual rhetoric in culture and history. Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 or equivalent.

## ENG 375. Writing for the Web. 3 Hours

Study of the theory and practice of writing rhetorically effective website content and producing websites. Focus on writing and editing effective web content that engages users. Prerequisite(s): ENG 200, ENG 200H, or ASI 120.

## ENG 376. Topics in Writing. 1-6 Hours

Analysis of and practice in specific forms of writing. May be repeated as forms change. Prerequisite(s): (ENG 200 or ENG 200H) or ASI 120) or equivalent.

## ENG 377. Writing in Social Contexts. 3 Hours

Examination of the role writing plays in establishing, maintaining, and regulating social relationships in a specified social context. Involves rhetorical analysis of discourse conventions common to those contexts, original research of writing practices in those contexts, and practice writing within those contexts with attention to audience, genre, and style. Prerequisite(s): ENG 100 or ENG 200H or ASI 110.
ENG 378. Professional \& Technical Writing. 3 Hours
Professional and Technical Writing.

ENG 379. Rhetoric of Science. 3 Hours
Introduction to the role rhetoric and language play in science writing. Focus on the rhetorical analysis of public policy controversies involving science and technology and the role rhetoric plays in the public's understanding of these issues. Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 or equivalent.

## ENG 380. Studies in Literature. 1-6 Hours

Study of special topics or themes in literature. May be repeated as topics change. Prerequisite(s): ENG 200, ENG 200H, ASI 120.

## ENG 382. Mozart's Operas. 3 Hours

An interdisciplinary survey of Mozart's operas - German and Italian, serious and comic. Class discussions will be supplemented by extensive listening and/or viewing of recorded performances and, when possible, attendance at live performances. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

## ENG 383. Tragic Dilemma. 3 Hours

Examination of tragedy from ancient times to modern times, with emphasis on both the form(s) of tragedy and the tragic vision of life. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

## ENG 384. Christianity \& Modern Poetry. 3 Hours

Study of selected poets from the modern period whose work draws from the major literary, intellectual, cultural, and theological traditions of Christianity. Prerequisite(s): Examination of tragedy from ancient times to modern times, with emphasis on both the form(s) of tragedy and the tragic vision of life. Prerequisite(s): ENG 100 or ENG 100B or ENG 200H or ASI 110 equivalent.
ENG 385. Religion \& Literature. 3 Hours
Interdisciplinary study of literature and religion, seeking the sacred in the secular, discussing the doctrines of humans and of God in major writings, especially those of current collegiate interest. Prerequisite(s): ENG 100 or ENG 100B or ENG 200 H or ASI 110 equivalent.

## ENG 386. Genre in Writing. 3 Hours

Survey of various approaches to the study of genre, with emphasis on analysis and production of texts within academic and/or professional genres. Prerequisite(s): ENG 220.

## ENG 387. Literature \& Ethics. 3 Hours

Prerequisite(s): ENG 220 or permission of department chairperson.
ENG 388. Introduction to Literary Theory. 3 Hours
Introduction to Literary Theory, its historical development, rhetorical and argumentative strategies, and practice. Prerequisite(s): ENG 220.

ENG 389. Introduction to Poetics and Narrative Theory. 3 Hours
Examination of a variety of poetic and narrative theories and their application to the study of creative writing. Prerequisite(s): ENG 220 or permission of department chairperson.
ENG 390. Introduction to Rhetorical Theory. 3 Hours
Examination of a variety of rhetorical theories from classical, modern, and contemporary times. Students explore the limits and possibilities of these theories for explaining persuasion, identification, and affect across texts aimed at diverse audiences. Prerequisite(s): ENG 220 or permission of the department chairperson.

## ENG 391. Introduction to Composition Theory. 3 Hours

Study of the principal current theories of composition, with application to the teaching and evaluating of writing. Prerequisite(s): ENG 220 or permission of the department chairperson.

ENG 392. Writing for Grants and Non-Profits. 3 Hours
Practice in the genres related to the non-profit sector, including proposals, letters, and reports. Experiential learning and civic engagement through partnership with local non-profits to identify community needs and seek funding for projects addressing those needs through targeted grant proposals and related documents. Prerequisite(s): ENG 200, ENG 200 H, ASI 120 or equivalent.
ENG 393. Approaches to Literature for Middle and High School. 3 Hours The theory and practice of introducing literature and language arts to a diverse middle and high school student population. Strategies for planning and implementing textual interpretation techniques appropriate to secondary education settings. The investigation and use of literary analysis, critical theory, and approaches to writing about multiple genres of literature. Prerequisite(s): (ENG 200 or ENG 200H) or ASI 120 or equivalent.

## ENG 395. Junior Honors Tutorial. 3 Hours

Independent directed study on special topics for selected students. May be repeated as topic or instructor changes. Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 or equivalent; junior standing; permission of instructor.

## ENG 405. Chaucer. 3 Hours

Study of Chaucer's life, world, language, and literary achievement, concentrating on The Canterbury Tales (in Middle English).
Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 or equivalent.

## ENG 407. Medieval English Literature. 3 Hours

Study of the dominant types in the literature of England from the beginning to 1500 . Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 or equivalent.

## ENG 410. Early Renaissance Literature. 3 Hours

Survey of the literature of the sixteenth century from Thomas More to Sidney and Spenser. Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 or equivalent.

ENG 414. Later Renaissance Literature. 3 Hours
Survey of the literature of the early seventeenth century from Bacon, Jonson, and Donne to Marvell, exclusive of Milton. Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 or equivalent.
ENG 431. Milton. 3 Hours
Study of the major and minor poems and selected prose of Milton. Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 or equivalent.

## ENG 433. Studies in Neo-Classical Literature. 3 Hours

Study of English literature from Dryden to Johnson. May be repeated as topics change. Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 or equivalent.

## ENG 438. English Romanticism. 3 Hours

Study of the major poets and critics of the Romantic Age. Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 or equivalent.

ENG 444. Studies in 19th Century English Literature. 3 Hours
Study of English literature in the nineteenth century. May be repeated as topics change. Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 or equivalent.

## ENG 448. 20th Century British Literature. 3 Hours

Study of significant developments in modern British literature.
Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 or equivalent.
ENG 451. American Romanticism. 3 Hours
Study of significant developments in American literature of the mid-19th century. Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 or equivalent.

ENG 453. American Realism \& Naturalism. 3 Hours
Study of representative writers from the post-Civil War period in American literature. Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 or equivalent.

## ENG 455. 20th Century American Literature. 3 Hours

Study of significant developments in American literature of the twentieth century. Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 or equivalent.
ENG 460. Advanced Poetry Workshop. 3 Hours
Intensive practice in writing of poetry and production of a chapbook. Prerequisite(s): ENG 308.

## ENG 462. Advanced Fiction Workshop. 3 Hours

Intensive practice in writing of fiction and production of a novella or short story cycle. Prerequisite(s): ENG 310.

## ENG 466. TESOL Methods for Teaching English Language Learners. 3

 HoursIntroduction to key concepts in Teaching English to Speakers of Other Languages.. Theoretical perspectives on second language (ESL) and literacy instruction will be interwoven with practical techniques for classroom instruction. Students will investigate approaches to teaching the four skills of English (reading, writing, listening, speaking) across varying contexts and proficiency levels. Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 ; and junior or senior standing or permission of department chairperson.

## ENG 468. Introduction to Linguistics. 3 Hours

Introduction to the basic concepts and procedures of general linguistics, including language description, history, variation, theory, and acquisition. Prerequisite(s): ENG 200 or ENG 200H or ASI 120 or equivalent; junior or senior standing or permission of department chairperson.

## ENG 470. History of English. 3 Hours

Study of stages in the development of the English language and of influences shaping its development from the beginning to the present. Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 or equivalent; junior or senior standing or permission of department chairperson.

## ENG 472. The Structure of English. 3 Hours

Study of the grammatical structure of modern English from traditional and modern linguistic points of view. Prerequisite(s): ENG 200 or ENG 200 H or ASI 120 or equivalent; junior or senior standing or permission of department chairperson.

## ENG 474. Argument and Style. 3 Hours

Intensive study of argumentative writing with emphasis on different methods of argumentation and appropriate stylistic choices for each. Prerequisite(s): (ENG 200 or ENG 200H) or ASI 120.
ENG 475. Usability in Technical Writing. 3 Hours
Examination of theory and methods of usability testing in technical writing. Students survey approaches to usability testing in print and online technical writing. Students plan, conduct, and analyze usability tests for selected print and digital texts. Students analyze and design test plans, conduct testing sessions, write reports, and present recommendations. Prerequisite(s): (ENG 200 or ENG 200H or ASI 120) and ENG 368.

## ENG 476. Composition Theory. 3 Hours

Study of the principal current theories of composition, with application to the teaching and evaluating of writing. Prerequisite(s): ENG 316 or permission of instructor.

## ENG 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## ENG 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved ENG 477; approval of University Honors Program.

## ENG 480. Independent Study. 1-6 Hours

Individual investigations of special topics under faculty direction. May be repeated under special circumstances. Prerequisite(s): At least fifteen semester hours of English; permission of department chairperson.

## ENG 481. Topics in English Studies. 1-6 Hours

Systematic study of a specialized topic in English Studies.
Prerequisite(s): 200- or 300-level English course excluding ENG 200,
ENG 200H.

## ENG 482. Modern Poetry. 3 Hours

Concentrated, advanced study in the development of modern poetry, both English and American. Prerequisite(s): ENG 200 or ENG 200H or ASI 120 or equivalent.

## ENG 485. Internshp in Writing. 1-6 Hours

Application of writing skills to specific projects of an approved organization. Practical and professional experience offered to juniors and seniors (particularly English majors and minors) as a supplement to the writing curriculum. Option 2 grading only. Prerequisite(s): ENG 370, ENG 371, ENG 372; junior or senior standing; 2.5 cumulative GPA and at least 3.0 GPA in English courses; permission of Internship Coordinator.

## ENG 488. Literary Theory. 3 Hours

Comparative critical reading of classical and modern theoretical texts and analysis of critical methodology. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.

## ENG 489. Rhetorical Criticism. 3 Hours

Study and practice of classical and contemporary rhetorical theories and techniques. Focus on writing rhetorical analyses of non-literary texts, including political discourse, advertising, scholarly essays, and visual images. Prerequisite(s): ENG 272 or ENG 316 or permission of instructor; junior or senior standing.

## ENG 490. Research Seminar-Literature. 3 Hours

Concentrated study of a topic designed to integrate selected aspects of literary history, critical approaches, and research skills developed by English majors in previous required courses. May be repeated as topics change. Prerequisite(s): (ENG 220 or 300 ) and (ENG 301 or 302 or 303 or 304 or 305) and(ENG 388 or 476 or 488 or 489) and (junior or senior standing or permission of department chairperson).

ENG 495. Senior Honors Tutorial. 3 Hours
Independent directed study on special topics for selected students. May be repeated as topic or instructor changes. Prerequisite(s): Permission of department chairperson.
ENG 496. Research Seminar-Teaching. 3 Hours
Examination of methods for teacher research in the field of English/ Language Arts. Students will practice various methods and create research proposals for their capstone course project. Prerequisite(s):
(ENG 220 or 300 ) and (ENG 301 or 302 or 303 or 304 or 305 ) and(ENG 391 or 476 or 488 or 489) and (ENG 393 or 466) and (junior or senior standing or permission of department chairperson).

## ENG 497. Research Seminar-Writing. 3 Hours

Advanced study of one or more theories or research methodologies from the fields of creative writing, rhetoric and composition, or professional and technical writing and their application to an appropriate research question in the field. May be repeated as topic changes. Prerequisite(s): (ENG 220 or ENG 300) and (ENG 389 or ENG 390 or ENG 391 or ENG 476 or ENG 489) and (junior or senior standing or permission of department chairperson).

## ENG 498. Capstone I-Project. 3 Hours

Part one of the capstone for English majors. Independent project (research or other form of scholarship) under the direction of an individual faculty mentor. English majors only. Prerequisite(s): ENG 490 or ENG 496 or ENG 497.

## ENG 499. Capstone II-Seminar. 0 Hours

Part two of the English major capstone. Weekly seminar integrating the work of the capstone project (ENG 498) with students' past experiences and future goals. Students prepare their capstone projects for public presentation, present those projects in a public forum, and reflect upon the process and product of their work. Prerequisite(s): ENG 498.

## Family Development

The interdisciplinary minor in family development increases understanding of the meaning and dynamics of marriage and parenthood in contemporary society. It examines the family as a major institution affecting society and surveys the individual, social, and economic problems found within families. This background contributes to preparation for careers in areas such as social work, psychology, education, communication, human ecology, and religious work.

Students minoring in family development must complete 16 semester hours, including ASI 448, SOC 331 and 12 semester hours from approved courses. The total semester hours for the minor must come from three different academic disciplines and may double count to majors and other minors.

Students desiring to minor in family development should notify their advisors, their deans, and the coordinator of family development.

## Family Development Coordinator

Brenda Donnelly (Fitz Center for Leadership in Community)

## Minor in Family Development (FDV)

Family Development

| ASI 448 | Seminar in Family Development | 1 |
| :--- | :--- | ---: |
| SOC 331 | Marriages \& Families | 3 |
| Select four courses from three different disciplines: | 12 |  |
| ANT 320 |  | Anthropology of Childhoods |
| CMM 410 | Family Communication |  |


| CMM 447 | Children and Mass Media |
| :--- | :--- |
| CMS 415 | Gender and Communication |
| HST 351 | American Gender \& Women's History |
| HST 352 | Family History |
| HST 353 | History of Women in European Societies |
| HST 354 | History of Women \& Gender in the Middle East |
| PHL 318 | Family Ethics |
| PSY 251 | Human Growth \& Development |
| PSY 351 | Child Psychology |
| PSY 353 | The Psychology of Adult Development \& Aging |
| PSY 355 | Developmental Psychopathology |
| PSY 443 | Women, Gender, and Psychology |
| PSY 457 | Television \& Its Effects on Children |
| PSY 462 | Human Sexuality |
| REL 344 | Christian Marriage |
| REL 362 | Christian Family Values \& Television |
| SOC 322 | Sex Roles \& Society |
| SOC 323 | Juvenile Justice |
| SOC 330 | Perspectives on Aging |
| SOC 333 | Sociology of Sexualities |
| SOC 355 | Families \& the Economy |
| SWK 325 | Child Abuse |
| SWK 327 | Parenting: Social Welfare Role |
| SWK 330 | Perspectives on Aging |
| SWK 331 | Death, Dying and Suicide |

Total Hours
16

## Film Studies

The interdisciplinary minor in film studies (FLM) provides students an opportunity to explore one of the most popular and influential media from the twentieth century to the present. Students study the history, theory, and aesthetics of film and consider film from literary, philosophic, religious, economic, and creative perspectives. The minor complements many of the existing majors in the arts and sciences and enhances the academic preparation of students who are considering graduate school and/or careers in film criticism, screenwriting, or film production.

Students minoring in film studies must complete 13 semester hours including four approved three-credit film courses in various disciplines and a one-credit required capstone course, ASI 350.

Students desiring to minor in film studies should notify their respective deans and the coordinator of film studies.

## Film Studies Committee

James Farrelly (English), Coordinator
Griffin (Communication, McCombe (English), Zukowski (Religious Studies).

## Minor in Film Studies (FLM)

Film Studies

| ASI 350 | Interdisciplinary Film Study ${ }^{1}$ | 1 |
| :--- | :--- | ---: |
| Select four courses from: ${ }^{2}$ | 12 |  |
| CMM 345 | Classic American Film |  |
| ENG 331 | Studies in Film |  |


| ENG 332 | Studies in Literature \& Film |  |
| :--- | :--- | :--- |
| MUS 327 | Music in Film |  |
| PHL 324 | Philosophy \& Film |  |
| REL 372 | Religion \& Film | 13 |
| Total Hours |  |  |
| 1 | Capstone course taken after all elective courses have been |  |
| 2 | completed. |  |
|  | Or other courses with permission of the committee. |  |

## General Studies

- Bachelor of General Studies (p. 178)

The Bachelor of General Studies program is designed for those students who desire to pursue a non-traditional degree program at the University outside of any departmental major. This degree program permits great latitude in utilizing the academic resources of the University for planning and acquiring an education to meet individual needs. Students may plan their programs to the best advantage of their particular educational objectives. Students build their programs on the foundation of University's Common Academic Program requirements.

## Bachelor of General Studies (GEN) minimum 120 hours

Admission requirements for the Bachelor of General Studies are the same as those for any other degree offered in the College of Arts and Sciences.

Candidacy for the Bachelor of General Studies may be declared in the first year but not later than the commencement of a student's last 30 semester hours of study. An application for acceptance into the degree program must be completed and approved by an Assistant Dean in the College of Arts and Sciences. Any students in good academic standing may request transfer into this program.

The General Studies student is required to plan an academic program to satisfy the requirements for graduation in consultation with an Assistant Dean. The General Studies student must complete a minimum of the last 30 semester hours of study under the supervision of an Assistant Dean who will serve as the student's advisor. The usual policy of prerequisites remains in effect in this program:

1. College of Arts and Sciences' Competencies and the University's Common Academic Program requirements.
2. Three semester hours of mathematics selected from courses offered by the Mathematics department (excluding MTH 205).
3. Study of the natural sciences by completing seven semester hours in approved natural science courses (biology, chemistry, geology, physics), including one course with accompanying laboratory.
4. A minimum of 54 semester hours of courses at the $300-400$ level with a grade point average of 2.0 or better.
5. Not more than 30 semester hours of work from any one academic discipline.
6. Credits earned in completion of the Bachelor of General Studies may not be applied at a later time to the credits for a second degree from the College of Arts and Sciences.
7. Successful completion of GNS 480, Senior Capstone course.

| *credit hours will vary depending on courses selected |  |
| :---: | :---: |
| First-Year Humanities Commons ${ }^{1}$ | 12 |
| HST 103 The West \& the World |  |
| REL 103 Introduction to Religious and Theological Studies |  |
| PHL 103 Introduction to Philosophy |  |
| ENG 100 Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ | 0-3 |
| ENG 200 Writing Seminar II |  |
| Oral Communication | 3 |
| CMM 100 Principles of Oral Communication |  |
| Mathematics | 3 |
| Social Science | 3 |
| SSC 200 Social Science Integrated |  |
| Arts | 3 |
| Natural Sciences ${ }^{4}$ | 7 |
| Crossing Boundaries | variable credit |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |
| Advanced Study | variable credit |

Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice 3
Major Capstone 0-3

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5
U.S. History AP credit will not satisfy this requirement.

## Major Requirements

| ${\text { General Studies Area at the } 300 / 400 \text { level }^{1,2}}^{\text {GNS } 480}$ Senior Capstone | 54 |
| :--- | ---: |

## Breadth

ASI 150 Introduction to the University Experience 1
Total Hours to total at least 120

1 Includes 300/400 CAP courses.
2 May not include more than thirty semester hours from any one academic discipline.

## First Year

| Fall | Hours Spring | Hours |
| :--- | :---: | ---: |
| ASI 150 | 1 ENG 100 | 3,4 |
|  | (CAP |  |
|  | Humanities |  |
| CMM 100 (CAP Communication) | Commons) |  |
|  | 3 HST 103, PHL | 3 |
|  | 103, or REL |  |
|  | 103 (CAP |  |
|  | Humanities |  |
|  | Commons) |  |


| HST 103, PHL 103, or REL 103 (CAP Humanities | 3 CAP | 3 | - Bachelor of Science, Geology (p. 181) |
| :---: | :---: | :---: | :---: |
| Commons) | Mathematics |  |  |
| HST 103, PHL 103, or REL 103 (CAP Humanities | 3 CAP Natural | 4 | Minor: |
| Commons) | Science w/ lab |  | - Geology (p. 182) |
| CAP Arts | 3 General Elective | 3 | Geology is the study of the Earth, both past and present. It incorporates |
| CAP Natural Science | 3 |  | many aspects of our complex planet including its composition, structure, |
|  | 16 | 16-17 | environment, internal and surficial processes, and the development of |
| Second Year |  |  | life, continents, and oceans through time. Geology plays a critical role in |
| Fall | Hours Spring | Hours | interpreting the Earth's long history of physical and biological changes, |
| ENG 200 (CAP Writing Seminar) | 3-4 CAP Faith Traditions (GS Major) | 3 | finding and managing natural resources, and understanding natural hazards and future environmental change. |
| SSC 200 (CAP Social Science) | 3 General Studies Major | 3 | The geology department offers two programs leading to Bachelor of Science degrees in geology and environmental geology. The geology |
| General Studies Major | 3 General Studies Major | 3 | (GEO) major provides basic courses in the geological sciences as well as a range of advanced level classes that allow students to develop courses |
| General Studies Major | 3 General Elective | 3 | of study that complement particular interests within the field such as energy and mineral resources, plate tectonics or paleontology. |
| General Elective | 3 General | 3 |  |
|  | Elective |  | The environmental geology (EVG) program is broad in scope, providing a |
|  | 15-16 | 15 | broad foundation in the fundamentals of earth and environmental science |
| Third Year |  |  | as well as an interdisciplinary curriculum that includes geology, biology, |
| Fall | Hours Spring | Hours | chemistry, and other allied science courses. The EVG curriculum stresses |
| CAP Advanced Philosophy/Religious Studies (GS | 3 CAP | 3 | the interdisciplinary nature of modern environmental issues such as |
| Major) | Advanced Historical |  | climate change and the development of alternative energy resources. |
|  | Studies (GS <br> Major) |  | The geology department also offers a Geographic Information Systems |
| CAP Inquiry | 3 CAP | 3 | (GIS) Certificate Program. GIS is used in a wide range of disciplines, |
|  | Advanced |  | and the certificate program is a great option for professionals, |
|  | Philosophy/ |  | graduate students, and undergraduate students who are interested in |
|  | Religious |  | becoming proficient at managing, analyzing, and displaying all forms of |
|  | Studies (GS <br> Major) |  | geographically referenced information. |
| CAP Integrative (GS Major) | 3 CAP Practical Ethical Action (GS Major) | 3 | The geology department aims to prepare students for both careers in the geological sciences, and for further academic studies. Hence, graduates |
| General Studies Major | 3 General Studies Major | 3 | of the department are also highly competitive for entry to graduate programs. Geology department majors pursue careers in a wide range of |
| General Elective | 3 General Elective | 3 | settings including: |
|  | 15 | 15 | - State and Federal Geological Agencies |
| Fourth Year |  |  | - Geological Consulting Companies |
| Fall | Hours Spring | Hours | - Natural Resource Exploration, Development and Management |
| General Studies Major | 3 GNS 480 | 0-3 | - Museums |
| General Studies Major | 3 CAP Diversity and Social Justice | 3 | - Research Laboratories <br> - Education |
| General Studies Major | 3 General Studies Major | 3 | Environmental geologists address critical needs of our society including |
| General Elective | 3 General Studies Major | 3 | global climate change, groundwater protection, energy resources, and the identification and assessment of natural hazards. |
| General Elective | 2 General | 3 |  |
|  | Studies Major |  | A minor in geology consists of 12 semester hours. |
|  | General | 2 |  |
|  | Elective |  | Faculty |
|  | 14 | 14-17 | Daniel Goldman, Chairperson |
| Total credit hours: 120-125 |  |  | Professor Emeritus: Ritter |
|  |  |  | Professors: Goldman, Pair, Sandy |
| Geolody |  |  | Associate Professors: Haritashya, Koziol, A. McGrew, Wu |
|  |  |  | Visiting Professor: Bedaso |
| Majors: |  |  | Lab Coordinator: Klosterman |

[^4]
## Bachelor of Science, Environmental Geology (EVG) minimum 120 hours

The following program, leading to the Bachelor of Science with a major in environmental geology, is designed to present students with the basic courses in the geological sciences as well as provide specific environmental geology courses. The program also requires additional related science courses.

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$


Philosophy and/or Religious Studies

| Historical Studies ${ }^{5}$ | 3 |
| :--- | ---: |
| Diversity and Social Justice | $0-3$ |
| Major Capstone |  |

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

| Science Breadth Requirements |  |  |
| :--- | :--- | :---: |
| (Satisfies CAP Mathematics and CAP Natural Science) |  |  |
| BIO 151 | Concepts of Biology I: Cellular \& Molecular Biology | 3 |
| BIO 152 | Concepts of Biology II: Evolution \& Ecology | 3 |
| CHM 123 | General Chemistry <br> \& 123L | and General Chemistry Laboratory |
| CHM 124 | General Chemistry <br> \& 124L | 4 |
| MTH 168 General Chemistry Laboratory | Analytic Geometry \& Calculus I |  |

PHY $207 \quad$ General Physics II - Electricity \& Magnetism ${ }^{2} \quad 3$
Major Requirements ..... 61

Year 1
GEO 115 Physical Geology 4
\& 115L and Physical Geology Laboratory
GEO 116 Geological History of the Earth 4
\& 116L and Geological History of the Earth Laboratory
Year 2

| GEO 201 | Mineralogy | 4 |
| :--- | :--- | :--- |
| $\& 201 \mathrm{~L}$ | and Mineralogy Laboratory |  |
| GEO 208 | Environmental Geology | 3 |


| GEO 208 | Environmental Geology | 3 |
| :--- | :--- | :--- |
| Year 3 |  |  |


| GEO 301 | Structural Geology | 4 |
| :--- | :--- | :---: |
| $\& 301$ L | and Structural Geology Laboratory | 4 |
| GEO 307 | Geomorphology | 4 |
| $\& 307 \mathrm{~L}$ | and Geomorphology Laboratory | 4 |
| GEO 310 | Stratigraphy and Sedimentology <br> $\& 310 \mathrm{~L}$ | and Stratigraphy and Sedimentology Laboratory |


| Year 4 |  |  |
| :--- | :--- | ---: |
| GEO 308 | Problems \& Decisions in Environmental Geology |  |$\quad 3$

Select GEO electives from: 4
GEO 302 Glacial Geology
\& 302L and Glacial Geology Laboratory
GEO 303 Field Geology
GEO 401 Paleontology \& 401L and Paleontology Laboratory
GEO 403 Advanced Stratigraphy
\& 403L and Sedimentology Laboratory
GEO 404 Problems in Geology
GEO 411 Petrology
\& 411L and Petrology Laboratory
GEO 412 Introductory Geochemistry
\& 412L and Introductory Geochemistry Laboratory
GEO 450 Applied Geographic Information Systems
Select six science electives from: 17
BIO 310 Ecology
\& 310L and Ecology Laboratory
BIO 350 Applied Microbiology
\& 350L and Applied Microbiology Laboratory
BIO 452 Biology of Rivers \& Lakes
\& 452L and Biology of Rivers \& Lakes Laboratory
BIO 459 Environmental Ecology
\& 459L and Environmental Ecology Laboratory
CEE 312 Geotechnical Engineering
\& 312L and Geotechnical Engineering Laboratory
CEE 390 Environmental Pollution Control
CEE $434 \quad$ Water \& Wastewater Engineering
\& 434L and Water \& Wastewater Engineering Laboratory

| CHM 201 | Quantitative Analysis <br> and Quantitative Analysis Laboratory |
| :--- | :--- |
| CHM 301L 302 | Physical Chemistry |
| CHM 313 | Organic Chemistry <br> and Organic Chemistry Laboratory |
| \& 313L | Environmental Chemistry |
| CHM 341 | and Environmental Chemistry Laboratory |
| \& 341L | Computer Programming for Engineering \& Science |
| CPS 132 | Introduction to Computer Programming |
| CPS 144 | Analytic Geometry \& Calculus III |
| MTH 218 | Applied Differential Equations |
| MTH 219 | Statistical Methods I |
| MTH 367 | Statistical Methods II |
| MTH 368 |  |
| Breadth |  |
| ASI 150 | Introduction to the University Experience |
| Social and Behavioral Sciences (Includes CAP Social Science) | 6 |
| Total Hours to total at least | 120 |

1 May substitute MTH 148-MTH 149 with permission of department chairperson.
2 May substitute PHY 201-PHY 202 with permission of department chairperson.

## Bachelor of Science, Geology (GEO) minimum 120 hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1} 12$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |

Second-Year Writing Seminar ${ }^{3} \quad 0-3$
ENG 200 Writing Seminar II
Oral Communication

| CMM 100 Principles of Oral Communication |  |
| :---: | :--- |
| Mathematics | 3 |

Social Science 3
SSC $200 \quad$ Social Science Integrated
Arts
Natural Sciences ${ }^{4} \quad 7$

| Crossing Boundaries | variab <br> credit |
| :--- | :--- |


| Faith Traditions |
| :--- |
| Practical Ethical Action |
| Inquiry |

Integrative

$\left.$| Advanced Study |
| :--- |
| Philosophy and/or Religious Studies |
| Historical Studies ${ }^{5}$ | | varia |
| :---: |
| cred | \right\rvert\,

Major Capstone
Completed with ASI 110 and ASI 120.
Or ENG 100A and ENG 100B, or ENG 200H, by placement.
Completed with ENG 200H or ASI 120.
Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

## Science Breadth Requirements

| (Satisfies CAP Mathematics and CAP Natural Sciences) |  |  |
| :--- | :--- | ---: |
| CHM 123 | General Chemistry | 4 |
| \& 123L | and General Chemistry Laboratory |  |
| CHM 124 | General Chemistry |  |
| \& 124L | and General Chemistry Laboratory | 4 |
| MTH 168 | Analytic Geometry \& Calculus I |  |
| MTH 169 | Analytic Geometry \& Calculus I ${ }^{1}$ | 4 |
| PHY 206 | General Physics I - Mechanics $^{2}$ | 4 |
| PHY 207 | General Physics II - Electricity \& Magnetism $^{2}$ | 3 |

Major Requirements

Year 1
GEO 115 Physical Geology 4
\& 115L and Physical Geology Laboratory

GEO 116 Geological History of the Earth 4
\& 116L and Geological History of the Earth Laboratory
Year 2
GEO $201 \quad$ Mineralogy 4
\& 201L and Mineralogy Laboratory
Year 3
$\left.\begin{array}{lll}\text { GEO 301 } & \begin{array}{l}\text { Structural Geology } \\ \text { \& 301L }\end{array} & \text { and Structural Geology Laboratory }\end{array}\right] 4$

| \& 307L | and Geomorphology Laboratory |
| :--- | :--- |
| Year 4 |  |

GEO 303 Field Geology 6

GEO 310 Stratigraphy and Sedimentology 4
\& 310L and Stratigraphy and Sedimentology Laboratory
GEO 401 Paleontology 4
\& 401L and Paleontology Laboratory
GEO 403 Advanced Stratigraphy 4
\& 403L and Sedimentology Laboratory
GEO 498 Geological Research and Thesis (Satisfies CAP 4 Major Capstone)
Select GEO electives from: 4
GEO 302 Glacial Geology
\& 302L and Glacial Geology Laboratory
GEO 308 Problems \& Decisions in Environmental Geology
\& 308L and Problems \& Decisions in Environmental Geology Laboratory
GEO 309 Surface \& Groundwater Hydrology and Surface and Groundwater Hydrology Laboratory
Problems in Geology
Petrology
and Petrology Laboratory

| $\begin{aligned} & \text { GEO } 412 \\ & \& 412 \mathrm{~L} \end{aligned}$ | Introductory Geochemistry and Introductory Geochemistry Laboratory |
| :---: | :---: |
| GEO 450 | Applied Geographic Information Systems |
| GEO 477 | Honors Thesis Project |
| Science electives and laboratories where applicable from: |  |
| BIO, CHM, CPS, GEO, MTH, PHY, Engineering ${ }^{3}$ |  |
| Breadth |  |
| ASI 150 | Introduction to the University Experience |
| Social and Behavioral Sciences (Includes CAP Social Science) |  |
| Total Hours to total at least |  |
| May substitute MTH 148-MTH 149 with permission of department chairperson. |  |
| May substitute PHY 201-PHY 202 with permission of department chairperson. |  |
| 3 With per | on of department chairperson. |

## Minor in Geology (GEO)

## Geology

| ${\text { Select four GEO courses }(300 / 400 \text { level })^{1}}^{12}$ |  |
| :--- | :--- |
| Total Hours | 12 |

Appropriate prerequisites must be completed.

- Bachelor of Science, Environmental Geology (p. 182)
- Bachelor of Science, Geology (p. 181)


## Environmental Geology

First Year


| Social Science - elective | 3 ENG 200 (CAP Writing Seminar) | 3-4 |
| :---: | :---: | :---: |
|  | 17 | 17-18 |
| Third Year |  |  |
| Fall | HourSpring | Hours |
| GEO 301 | 4 GEO 307 | 4 |
| \& 301L | \& 307L |  |
| Science elective | 4 SSC 200 (CAP Social Science) | 3 |
| CAP Arts | 3 CAP Inquiry | 3 |
| CAP Faith Traditions | 3 CAP Advanced Philosophy/Religious Studies | 3 |
| CAP Adv. Philosophy/ Practical Ethical Action | 3 CAP Advanced Historical Studies | 3 |
|  | 17 | 16 |
| Fourth Year |  |  |
| Fall | HourSpring | Hours |
| GEO 498 (Satisfies CAP | 4 GEO 310 | 4 |
| Major Capstone) | \& 310L |  |
| CAP Integrative | 3 GEO 401 | 4 |
|  | \& 401L |  |
| CAP Diversity and Social Justice | $\begin{gathered} 3 \text { GEO } 403 \\ \& 403 \mathrm{~L} \end{gathered}$ | 4 |
| General elective (optional) | 3 General Elective | 3 |
|  | 13 | 15 |

Total credit hours: 131-133

## Courses

GEO 103. Principles of Geography. 3 Hours
The study of spatial processes that shape the Earth's physical and cultural environment through a survey of major branches of physical and human geographic inquiry.

## GEO 104. Biology-Geology Field Course. 3 Hours

Fundamental earth science topics with emphasis on direct field experience. One week on campus, three weeks in the Rocky Mountains near Denver, Colorado, and one week of travel. For all non-geology and non-biology majors. Corequisite(s): BIO 104; (BIO 104L or GEO 104L).
GEO 104L. Biology-Geology Field Laboratory. 1 Hour
Course to accompany GEO 104.
GEO 109. Earth, Environment, and Society. 3 Hours
This course examines the complex relationship between natural geologic processes and their effects on human society. The course will examine fundamental geologic processes and associated hazards (such as earthquakes, tsunamis, volcanic eruptions, flooding) while also assessing human impacts such as pollution, energy industry and landuse planning. This course provides an opportunity to discuss, from a geologic perspective, the ramifications of and potential solutions to problems associated with utilization of Earth's resources. Laboratory optional but not required. No prerequisite.
GEO 109L. Earth, Environment, and Society Lab. 1 Hour
Laboratory exercises in Earth and Environmental Science to accompany GEO 109 Lecture. Two hours each week.

## GEO 115. Physical Geology. 3 Hours

Introductory course in geologic principles and processes. Examines Earth's major systems including the solid Earth, atmosphere, hydrosphere, and cryosphere. Laboratory optional for non-majors.

## GEO 115L. Physical Geology Laboratory. 1 Hour

Physical Geology Lab - laboratory excercises in Physical Geology to accompany GEO 115 lecture. Co-requisite(s): GEO 109 or GEO 115.

GEO 116. Geological History of the Earth. 3 Hours
Study of earth history over the last 4.6 billion years - from its origins to the present day. Includes earth origins, the development of the earth during the Precambrian including evolution of the atmosphere, and the appearance of prokaryotic and eukaryotic life. Major biological development and environmental, tectonic, and climatic changes during the last half-billion years (the Phanerozoic) will be examined, including the Pleisotocene "Ice Age" and Anthropocene conditions. Prerequisite(s): (GEO 109 or GEO 115); permission of instructor.

## GEO 116L. Geological History of the Earth Laboratory. 1 Hour

 Geological History of the Earth Laboratory - laboratory exercises in Historical Geology to accompany GEO 116 lecture. Co-requisite(s): GEO 116.
## GEO 198. Geology, Landscape \& Environment of the Miami Valley. 3

 HoursField-based course examining the geologic history of the Miami Valley and Dayton area; processes leading to the modern landscape; the impact of human activity will be assessed. Prerequisite(s): GEO 109 or GEO 115 or permission of instructor.

## GEO 201. Mineralogy. 3 Hours

Introduction to crystallography, crystal chemistry and crystal structure. Study of the major groups of rock-forming minerals, their association and occurrence with emphasis on identification by physical properties and optical techniques. Prerequisite(s): (GEO 109 or GEO 115) or permission of instructor.

## GEO 201L. Mineralogy Laboratory. 1 Hour

Course to accompany GEO 201. Three hours per week.

## GEO 202. The Inner Earth. 4 Hours

Exploration of the Earth's internal processes of magmatism, metamorphism and deformation as part of its larger-scale processes of convection, conduction, and plate tectonics. Prerequisite(s): GEO 201 and GEO 201L.

## GEO 204. Geology for Teachers. 4 Hours

Introduction for preservice teachers to the Earth system and the processes that operate in the atmosphere, hydrosphere, biosphere, and solid Earth. Emphasis is on understanding how interactions among these fundamental Earth systems maintain our livable planet. Students will explore the Earth system through best practices in teaching and inquiry, and through field trips. For ECE, EMS, and EMM majors only. Students completing this course may not take SCI 210. Prerequisite(s): EDT 110; SCI 190.

## GEO 208. Environmental Geology. 3 Hours

Envirionmental Geology is the study of the relationship of geologic factors to natural hazards and the problems of water supply, pollution, erosion, land use, and earth resource utilization. Laboratory optional.
GEO 208L. Environmental Geology Laboratory. 1 Hour
Laboratory course to accompany GEO 208. This lab is designed to provide practical exercises that will enhance a student's understanding of how human beings interact with the geological environment.
Lab activities will take an experiential, inquiry\#based approach to topics relevant in past, present, and future societies. One two\#hour laboratory per week concurrently run with the GEO 208 lecture course. Prerequisite(s): GEO 208 (or co-requisite).

## GEO 218. Geological Site Investigation for Engineers. 3 Hours

Exploration of the principles of geological site investigation applied to land-use planning, geohazard risk analysis, and diverse engineering applications.

## GEO 234. Energy Resources. 3 Hours

The chemical and geological aspects of formation, production, and benefits/costs (including environmental impacts) of energy derived from fossil fuels (coal and hydrocarbons), biofuels (e.g., ethanol production), radioactive materials (nuclear power), and renewable sources (e.g., geothermal, hydro, wind, and solar power).

## GEO 301. Structural Geology. 3 Hours

The origin and development of structural features of the earth's crust; folding, faulting, volcanism, mountain building, and metamorphism. Prerequisite(s): GEO 115, GEO 116, GEO 201.
GEO 301L. Structural Geology Laboratory. 1 Hour
Course to accompany GEO 301. Two hours each week.
GEO 302. Glacial Geology. 3 Hours
The origin of mountain and continental glaciers; their depositional features and erosive activity; history of glaciation in geologic past with special emphasis on North American Quaternary ice advances. Prerequisite(s): GEO 115, GEO 116.

GEO 302L. Glacial Geology Laboratory. 1 Hour
Course to accompany GEO 302. Two hours each week.
GEO 303. Field Geology. 6 Hours
Field studies in Geology and Environmental Geology. This course focuses on geologic field techniques, and rock outcrop description and interpretation. Current field sites include Colorado and New Zealand. Prerequisite(s): GEO 115 or Geo 109 or Geo 208 or SCI 210, and GEO 116.

GEO 307. Geomorphology. 3 Hours
Detailed study of landforms and the erosional processes that develop them. Prerequisite(s): GEO 115, GEO 116.

GEO 307L. Geomorphology Laboratory. 1 Hour Course to accompany GEO 307. Two hours each week.

GEO 308. Problems \& Decisions in Environmental Geology. 3 Hours An in-depth examination of selected environmental problems and the way in which scientific information guides practice and policy. Topics will range from investigations of natural hazards to considerations of land use and water resources. Prerequisite(s): (GEO 109 or GEO 115) or permission of instructor.

GEO 308L. Problems \& Decisions in Environmental Geology Laboratory. 1 Hour
Course to accompany GEO 308. Two hours each week and periodic field work.
GEO 309. Surface \& Groundwater Hydrology. 3 Hours
This course is designed to provide a science or engineering student with the fundamental concepts and principles central to the study of water as a resource. This will include an examination of all components of the hydrologic cycle including surface-water hydrology and management, groundwater hydrogeology, and water resource management. Prerequisite(s): (GEO 109 or GEO 218) or permission of instructor.

GEO 309L. Surface and Groundwater Hydrology Laboratory. 1 Hour Laboratory exercises to accompany GEO 309. Three hours per week.

## GEO 310. Stratigraphy and Sedimentology. 3 Hours

Investigation and interpretation of sedimentary rocks, sedimentary environments, and the stratigraphic record. Prerequisite(s): GEO 116.

GEO 310L. Stratigraphy and Sedimentology Laboratory. 1 Hour Laboratory exercises to accompany GEO 310. Two hours each week. Corequisite(s): GEO 310.

GEO 401. Paleontology. 3 Hours
The study of ancient life. The morphology, ecology, evolution, and stratigraphic distributions of selected invertebrates, vertebrates, and plants.

## GEO 401L. Paleontology Laboratory. 1 Hour

Course to accompany GEO 401. Two hours each week.

## GEO 403. Sedimentology. 3 Hours

Detailed study of sediments: their sources, environments of deposition, and methods of consolidation. Emphasis on the interpretation of ancient sediments. Prerequisite(s): GEO 201.

## GEO 403L. Sedimentology Laboratory. 1 Hour

Course to accompany GEO 403. Two hours each week.

## GEO 404. Problems in Geology. 1-4 Hours

Consideration of special problems involving advanced work in the laboratory and library; arranged to meet the needs of individual students.

## GEO 411. Petrology. 3 Hours

Study of the formation of sedimentary, igneous, and metamorphic rocks. Prerequisite(s): GEO 201.

## GEO 411L. Petrology Laboratory. 1 Hour

Course to accompany GEO 411. Two hours each week. Prerequisite(s): GEO 201.

## GEO 412. Introductory Geochemistry. 3 Hours

Study of elementary thermodynamics, aqueous geochemistry, and principles governing the distribution of trace elements, radioisotopes and stable isotopes in igneous, metamorphic and sedimentary rocks. Emphasis on applications and solution of geological problems. Prerequisite(s): GEO 201 or permission of instructor.

## GEO 412L. Introductory Geochemistry Laboratory. 1 Hour

Course to accompany GEO 412. Three hours each week.
GEO 450. Applied Geographic Information Systems. 4 Hours Introduction of concepts and implementation of analysis in geographic information systems (GIS).

## GEO 455. Envrionmental Remote Sensing. 4 Hours

Introduction to principles and concepts of remote sensing, a sophisticated technology of earth observation that provides fundamental data for global environmental investigation. Prerequisite(s): GEO 208 or permission of instructor.

## GEO 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## GEO 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

GEO 479L. Envrionmental Instrumentation Laboratory. 2 Hours The understanding and use of field and laboratory based equipment to study current environmental issues. Emphasis on team-centered approaches to investigating environmental problems. Prerequisite(s): (BIO 151, BIO 152) or (GEO 115, GEO 116) or permission of instructor.
GEO 480. Senior Capstone Project \& Presentation. 3 Hours
Project and presentation in the scholarship, activity and/or practice related to the major. Students will present their work in a forum appropriate to the major.

## GEO 485. Geographic Information Systems Applications in Water Resources Planning \& Management. 4 Hours

An introduction to GIS applications in water resource management. Following an introduction to GIS basics, this course focuses on GIS techniques in surface water modeling and floodplain delineation and management.

## GEO 495. Geology Seminar. 1 Hour

Introduction to professional practices in the geosciences. Students will attend seminar talks by guest speakers, research career options and graduate programs in the earth sciences, develop a professional resume, and participate in other profession-building activities. May be repeated. Prerequisite(s): Permission of instructor.

## GEO 498. Geological Research and Thesis. 4 Hours

Research project within an area of the geological sciences, including, but not limited to, environmental geology, geochemistry, geomorphology, or paleontology. The results are to be presented in a written thesis. Prerequisite(s): Permission of Instructor.

## Global Languages and Cultures

## Majors:

- Bachelor of Arts, French (p. 185)
- Bachelor of Arts, German (p. 186)
- Bachelor or Arts, Spanish (p. 187)

Minors:

- French (p. 187)
- German (p. 187)
- Italian (p. 187)
- Spanish (p. 188)

The Department of Global Languages and Cultures offers instruction in Arabic, Chinese (Mandarin), French, German, Italian, Latin, Russian, and Spanish and thus brings a distinctively international perspective to the university community. The language programs focus on the development of proficiency in speaking, writing, reading, and listening, and integrate the study of literature, linguistics, business, and culture.

Faculty members in the Department of Global Languages and Cultures lead one-month language-immersion study programs in China, France, Germany, Italy, Latin America, and Spain in conjunction with the Center for International Programs (CIP). Participants in these programs can earn up to seven semester hours of language credit.

Students in B.A. programs can acquire teacher licensure in French, German, or Spanish through the dual-degree B.A. and B.S.E. programs conducted in conjunction with the Department of Teacher Education in the School of Education and Health Sciences. For details consult the department chairperson.

All new students who have previously studied their language of choice, continue their study in courses in which all enrolled students are at approximately the same level of proficiency. Students' proficiency levels for the first enrollment in a language class are determined by the results of the department's two-phase placement examination. Credit, but not placement, is awarded for scores of three or higher on the Advanced Placement language examinations.

A major in French or Spanish consists of 28 semester hours at the 300level or higher. A major in German consists of 25 semester hours at the 300 -level or higher. Many students combine a major in the department with a major in another discipline.

A minor in French, German, Italian or Spanish consists of 12 semester hours at the 300-level in the target language. Courses taught in English do not count. A minimum of 6 semester hours of course work at the $300-400$ level in the minor must be completed at the University. This does not include EM Credit.

Courses beyond the 100-level in Latin and Russian are not offered on a regular basis. Please consult the department chairperson for details.

## Faculty

Francisco Peñas-Bermejo, Chairperson
Professors Emeriti: Chiodo, Conard, Krugh, Mosher, O'Meara, Romaguera Professors: Peñas-Bermejo
Associate Professors: Espinoza, Ventura, Work
Assistant Professors: Aguilar-Sánchez, Costales, Yang
Lecturers: Castro García, Crowner, Elyamani, Figueroa, Schellhammer, Tanova, Tello-Sánchez

## Bachelor of Arts, French (FRN) minimum 124 hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1} 12$


Philosophy and/or Religious Studies

| Historical Studies ${ }^{5}$ | 3 |  |
| :--- | :--- | ---: |
| Diversity and Social Justice | $0-3$ |  |
| Major Capstone |  |  |
| 1 | Completed with ASI 110 and ASI 120. |  |
| 2 | Or ENG 100A and ENG 100B, or ENG 200H, by placement. |  |
| 3 | Completed with ENG 200H or ASI 120. |  |
| 4 | Must include two different disciplines and accompanying lab. |  |
| 5 | U.S. History AP credit will not satisfy this requirement. |  |


| Liberal Studies Curriculum | 3 |
| :--- | ---: |
| Creative and Performing Arts (May include CAP Arts) | 3 |
| Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) | 11 |
| Natural Sciences (Satisfies CAP Natural Science) | 12 |
| Social Sciences (Includes CAP Social Science) |  |

## Major Requirements

| FRN 301 | Intensive Review of French Language Skills | 3 |
| :---: | :--- | :---: |
| FRN 311 | French Conversation I | 3 |
| or FRN 312 | French Conversation II |  |
| FRN 321 | French Composition I | 3 |
| or FRN 322 | French Composition II |  |

Select one course from: 3

| FRN 331 | Phonetics \& Diction |
| :--- | :--- |
| FRN 469 | French Linguistics |
| LNG 468 | Introduction to Linguistics |


| Select one course from: | 3 |  |
| :---: | :--- | :--- |
| FRN 341 | French Culture \& Civilization |  |
| FRN 381 | History of French Cinema |  |
| Select one course from: | 3 |  |


| FRN 360 | Explication De Textes (Select one course from: ) |
| :--- | :--- |
| FRN 361 | Survey of French Literature I |
| FRN 362 | Survey of French Literature II |
| FRN 450 | French Literature |
| FRN 452 | Old World Meets New (FRN) |
| Select three FRN courses (300/400 level) |  |

LNG $495 \quad$ The Language Major in Professional Careers 1
$\overline{\text { Total Hours }} 28$

| Breadth |  |  |
| :--- | :--- | :--- |
| ASI 150 | Introduction to the University Experience | 1 |

1 Courses in English do not count toward the major with the exception of LNG 468. Students in the E11A program should note that courses in translation do not count toward the forty-five semester hours of a foreign language required for teacher certification

## Bachelor of Arts, German (GER) minimum 124 hours

Common Academic Program (CAP)<br>*credit hours will vary depending on courses selected<br>First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |  |
| :---: | :---: | :---: |
| REL 103 | Introduction to Religious and Theological St |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| SSC 200 | Social Science Integrated |  |
| Arts |  | 3 |
| Natural Sciences ${ }^{4}$ |  | 7 |
| Crossing Boundaries |  | variable credit |
| Faith Traditions |  |  |
| Practical Ethical Action |  |  |
| Inquiry |  |  |
| Integrative |  |  |
| Advanced Study |  | variable credit |
| Philosophy and/or Religious Studies |  |  |
| Historical Studies ${ }^{5}$ |  |  |
| Diversity and Social Justice |  | 3 |
| Major Capstone |  | 0-3 |
| Completed with ASI 110 and ASI 120. <br> Or ENG 100A and ENG 100B, or ENG 200H, by placement. <br> Completed with ENG 200H or ASI 120. <br> Must include two different disciplines and accompanying lab. <br> U.S. History AP credit will not satisfy this requirement. |  |  |
| Liberal Studies Curriculum |  |  |
| Creative and Performing Arts (May include CAP Arts) |  | 3 |
| Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) |  | 3 |
| Natural Sciences (Satisfies CAP Natural Science) |  | 11 |
| Social Sciences (Includes CAP Social Science) |  | 12 |
| Major Requirements |  |  |
| GER 301 | Intensive Review of German Language Skills | 3 |
| GER 311 or GER 312 | German Conversation I <br> German Conversation II | 3 |
| GER 321 or GER 322 | German Composition I German Composition II | 3 |
| Select one course from: |  | 3 |
| GER 469 | German Linguistics |  |
| LNG 468 | Introduction to Linguistics |  |
| Select one course from: |  | 3 |
| GER 341 | German Culture \& Civilization |  |
| GER 342 | Germany and the New Europe |  |
| Select one course from: |  | 3 |
| GER 351 | German Film |  |
| GER 361 | Survey of German Literature I |  |
| GER 362 | Survey of German Literature II |  |

Philosophy and/or Religious Studies

Diversity and Social Justice 3
Major Capstone 0-3
Completed with ASI 110 and ASI 120.
Or ENG 100A and ENG 100B, or ENG 200H, by placement.
Completed with ENG 200 H or ASI 120.
Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

## Major Requirements

or GER 312 German Conversation II
or GER 322 German Composition II

| GER 450 | German Literature |  |
| :---: | :---: | :---: |
| Select two GER courses (300/400 level) ${ }^{1}$ |  |  |
| LNG 495 | The Language Major in Professional Careers (Satisfies CAP Major Capstone) | 1 |
| Total Hours |  | 25 |
| Breadth |  |  |
| ASI 150 | Introduction to the University Experience | 1 |
| Total Hours to total at least 124 |  |  |
| 1 Courses in English do not count toward the major with the exception of LNG 468. Students in the E11A program should note that courses in translation do not count toward the forty-five semester hours of a foreign language required for teacher certification. |  |  |

## Bachelor of Arts, Spanish (SPN) minimum 124 hours



Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) 3
(Sien
Social Sciences (Includes CAP Social Science) 12
Major Requirements 28

| LNG 495 | The Language Major in Professional Careers <br> (Satisfies CAP Major Capstone) | 1 |
| :--- | :--- | :--- |
| SPN 311 | Spanish Conversation I | 3 |
| SPN 312 | Spanish Conversation II | 3 |
| SPN 321 | Spanish Composition I | 3 |
| Select one course from: | 3 |  |

Select one course from: 3
SPN 440 Spanish Sociolinguistics
or SPN 469 Spanish Linguistics
Select one course from:
SPN 341 Spanish Culture \& Civilzation
or SPN 342 Ibero-American Culture \& Civilization
Select one course from:
SPN 361 Survey of Spanish Literature I (Select on course from: )
or SPN 362 Survey of Spanish Literature II
or SPN 363 Survey of Spanish-American Literature I
or SPN 364 Survey of Spanish-American Literature II
or SPN 450 Topics in Pre-20th Century Spanish Literature
or SPN 451 Topics in Pre-20th Century Spanish-American Literature
or SPN 471 Topics from 20th and 21st Century Spanish Literature
or SPN 472 Topics in Contemporary Spanish-American Literature and Film
or SPN 480 Spanish \& Ibero-American Cinema1

| SPN 361 | Survey of Spanish Literature I (Select on course |
| :---: | :--- |
| from: ) |  |
| or SPN 362 | Survey of Spanish Literature II |

Nes )
Crossing Boundaries varia

Select three SPN courses (300/400 level) ${ }^{1} 9$
Breadth
ASI $150 \quad$ Introduction to the University Experience 1
Total Hours to total at least 124 ble

Students in the E11A program should note that courses in translation do not count toward the forty-five semester hours of a foreign language required for teacher certification.

## Minor in French (FRN)

variablerench
credit
Select four FRN courses (300/400 level) $\quad 12$

Total Hours 12

## Minor in German (GER)

German
Select four GER courses (300/400 level) $\quad 12$

Total Hours 12

## Minor in Italian (ITA)

| Italian | 12 |
| :--- | ---: |
| Select four ITA courses (300/400 level) | 12 |

Liberal Studies Curriculum
Creative and Performing Arts (May include CAP Arts) ..... 3

Creative and Performing Arts (May include CAP Arts)

## eral Studies Curriculum

Or ENG 100A and ENG 100B, or ENG 200H, by placement.

3 Completed with ENG 200 H or ASI 120.

4 Must include two different disciplines and accompanying lab.

U.S. History AP credit will not satisfy this requirement.

Completed with ASI 110 and ASI 120.

## Faith Traditions

Practical Ethical Action
Inquiry
Integrative

| Advanced Study | varia <br> cred |
| :--- | ---: |
| Philosophy and/or Religious Studies |  |
| Historical Studies ${ }^{5}$ | 3 |
| Diversity and Social Justice | $0-3$ |

Major Capstone ..... 0-3

Clinale

Minor in Spanish (SPN)

## Spanish <br> French

| Select four SPN courses (300/400 level) | 12 |
| :--- | :--- |
| Total Hours | 12 |

- Bachelor of Arts, French (p. 185)
- Bachelor of Arts, German (p. 186)
- Bachelor or Arts, Spanish (p. 187)

| First Year |
| :--- |
| Fall |
| ASI 150 |
| FRN 101 |
| HST 103, PHL 103, or REL 103 (CAP Humanities |
| Commons) |
| HST 103, PHL 103, or REL 103 (CAP Humanities |
| Commons) |
| CMM 100 (CAP Communication) |
| INSS (CAP Natural Science) |


| Second Year |  |  |
| :--- | :---: | ---: |
| Fall | Hours Spring | Hours |
| FRN 201 | 3 FRN 301 | 3 |
| ENG 200 (CAP Writing Seminar) | $3-4$ CAP Arts | 3 |
| INSS Natural Science w/lab | 4 CAP | 3 |
|  | Integrative | 3 |
| Social Science - intro level | 3 SSC 200 |  |
|  | (CAP Social | 3 |
| General elective | Science) | 3 |
|  | 3 Social |  |
|  | Science - |  |
|  | elective | 3 |
|  | $16-17$ | 15 |


| Third Year |  |  |
| :---: | :---: | :---: |
| Fall | Hours Spring | Hours |
| FRN 311 or 312 | 3 FRN 321 or 322 | 3 |
| CAP Faith Traditions | 3 FRN Major Requirement or Elective | 3 |
| CAP Inquiry | 3 CAP <br> Advanced Philosophy/ Religious Studies | 3 |
| Creative \& Performing Arts | 3 CAP <br> Advanced Historical Studies | 3 |
| Social Science - 300/400 level | 3 General elective | 3 |
|  | 15 | 15 |

Fourth Year

| Fall | Hours Spring | Hours |
| :---: | :---: | :---: |
| FRN Major Requirement or Elective | 3 LNG 495 <br> (Satisfies CAP Major Capstone) | 1 |
| FRN Major Requirement or Elective | 3 FRN Major Requirement or Elective | 3 |
| FRN Major Requirement or Elective | 3 FRN Major Requirement or Elective | 3 |
| CAP Practical Ethical Action | 3 CAP Diversity and Social Justice | 3 |
| CAP Advanced Philosophy/Religious Studies | 3 General elective General elective | 3 1 |
|  | 15 | 14 |
| Total credit hours: 124-126 |  |  |


| Fall | Hours Spring | Hours |
| :--- | ---: | ---: |
| ASI 150 | 1 GER 141 | 4 |


| GER 101 | 4 ENG 100 | (CAP |
| :---: | :---: | :---: |

(CAP
Humanities
Commons)
HST 103, PHL 103, or REL 103 (CAP Humanities
3 HST 103, PHL

103 (CAP
Humanities
Commons)
HST 103, PHL 103, or REL 103 (CAP Humanities 3 MTH (CAP 3
Commons) Mathematics)

CMM 100 (CAP Communication) 3 INSS (CAP 4 Natural Science w/ lab)

| INSS (CAP Natural Science) | 3 |
| :--- | :--- |

Second Year
Fall Hours Spring Hour
GER 2013 GER 301

ENG 200 (CAP Writing Seminar) 3-4 CAP Arts
INSS Natural Science w/lab
4 CAP
Integrative
3 SSC 200
3
(CAP Social Science)
General Elective 3 Social Science elective

|  | Science <br> elective |  |
| :--- | :--- | ---: |
| Third Year | $16-17$ | 15 |
| Fall | Hours Spring | Hours |

GER 311 or $312 \quad 3$ GER 321 or

CAP Faith Traditions 3 GER Major
3


ARA 301. Arabic Conversation and Composition I. 3 Hours Intensive practice in Modern Standard Arabic with emphasis on development of writing and speaking skills. Students will increase their vocabulary and their grammatical accuracy on topics related to contemporary life in the Arabic world. Prerequisite(s): ARA 201 or equivalent.

## ARA 302. Arabic Conversation and Composition II. 3 Hours

Continuation of intensive practice in Modern Standard Arabic with emphasis on development of writing and speaking skills. Students will increase their vocabulary and their grammatical accuracy on topics related to contemporary life in the Arabic world. Prerequisite(s): ARA 301 or equivalent.

## ARA 315. Modern Arabic Culture. 3 Hours

Introduction to Arabic culture and civilization with emphasis on social, cultural, political, historical, and artistic aspects of the modern Arab world. Conducted in English.

## ARA 391. Directed Study of Colloquial Arabic. 1-3 Hours

Guided study of selected topics and/or issues involving Modern Standard Arabic, colloquial Arabic, culture or literature under the supervision of an instructor. Admission to this course and number of semester hours require approval of the chairperson. May be repeated when topic changes. Prerequisite(s): ARA 201 or equivalent or Approval of department chair.

## Chinese Courses

CHI 101. Basic Proficiency in Mandarin Chinese I. 4 Hours
Development of basic communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission is restricted to those who have not studied Mandarin Chinese or have placed into this course by examination.
CHI 141. Basic Proficiency in Mandarin Chinese II. 4 Hours
Further development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Prerequisite(s): CHI 101 or placement by examination.

## CHI 170. Study Abroad. 3 Hours

Study in a foreign country/region whose everyday language is Chinese, focusing on the culture and civilization of the country. Conducted in English. Available only during the summer session. Repeatable when topic and content change. Prerequisite(s): CHI 101 (may be taken as a corequisite).

## CHI 201. Intermediate Mandarin Chinese I. 4 Hours

Expansion and extension of proficiency and intercultural skills in reading, listening, writing, and speaking through conversation practice, reading assignments, composition assignments, and grammar exercises. Successful completion of this course includes the demonstration of the proficiency level required by the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite(s): CHI 141 or placement by examination.

## CHI 202. Intermediate Mandarin Chinese II. 4 Hours

Continued development of proficiency and intercultural skills in reading, listening, writing, and speaking through conversation practice, reading assignments, composition assignments, and grammar exercises. Prerequisite(s): CHI 201 or placement by examination.

CHI 301. Communicating in Chinese. 3 Hours
Further development of communicative skills in Mandarin Chinese through extensive practice in language use. With improved linguistic skills, students will learn to use the language with a growing awareness of cultural appropriateness. Prerequisite(s): CHI 201 or equivalent.
CHI 313. Chinese Conversation and Composition I. 3 Hours
Intensive practice to further develop students' language skills in Mandarin Chinese. Emphasis on vocabulary expansion, refinement of grammar and style, improvement of writing, as well as a growing understanding of typical Chinese communicative conventions in language use. Prerequisite(s): (CHI 202 or CHI 301 ) or equivalent.

## CHI 314. Chinese Conversation and Composition II. 3 Hours

CHI 314 is a continuation of intensive practice to further develop students' language skills in Mandarin Chinese. Emphasis on vocabulary development, refinement of grammar and style, improvement of writing, as well as a growing understanding of typical Chinese communicative conventions in language use. Prerequisite(s): CHI 313 or equivalent.

## CHI 345. Chinese Civilization and Culture. 3 Hours

Introduction to the culture and civilization of China with an emphasis on how the key ideas and practices of Chinese culture shape the daily lives of contemporary Chinese people. Taught in English.

## CHI 391. Directed Study. 1-3 Hours

Guided study on selected topics and/or issues involving language proficiency, literature, linguistics or culture under the supervision of an instructor. Admission to this course and number of semester hours require approval of the chairperson. May be repeated when topic changes. Prerequisite(s): CHI 202; permission of department chairperson.

## French Courses

## FRN 101. Basic Proficiency in French I. 4 Hours

Development of basic communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission is restricted to those who have not studied French or have placed into this course by examination.

## FRN 131. Intensive Fundamental French. 2 Hours

Intensive development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission restricted to those who have previous experience with the language and place into this course by examination. Credit granted for only ONE of the following: FRN 101 or FRN 131.

## FRN 141. Basic Proficiency in French II. 4 Hours

Further development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Prerequisite(s): (FRN 101 or FRN 131) or placement by examination.

## FRN 201. Intermediate French I. 3 Hours

Development of reading, listening, writing, and speaking skills. Language laboratory required. Successful completion of this course includes the demonstration of the proficiency level required by the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite(s): FRN 141.

## FRN 270. Intermediate Study Abroad. 1-7 Hours

Intermediate intensive study in a foreign country/region whose everyday language is French. Instruction in language, culture and civilization. Conducted in French. Available only during the summer session. Repeatable when subtitle and content change. Prerequisite(s): FRN 141 or equivalent.

FRN 301. Intensive Review of French Language Skills. 3 Hours
Enhancement of existing skills in the four areas of language learning: speaking, listening, reading and writing. Intensive exposure to contemporary cultural content in France and the French-speaking world. Prerequisite(s): FRN 201.

## FRN 311 . French Conversation I. 3 Hours

Intensive practice in speaking French to develop oral communication skills. Emphasis on vocabulary development, listening comprehension, simulation of life-like situations, and discussions on French life and culture. FRN 311 and FRN 312 may be taken in any order. Prerequisite(s): FRN 301.

## FRN 312. French Conversation II. 3 Hours

Intensive practice in speaking French to develop oral communication skills. Emphasis on vocabulary development, listening comprehension, simulation of life-like situations, and discussions on French life and culture. FRN 311 and FRN 312 may be taken in any order. Prerequisite(s): FRN 301.

## FRN 321. French Composition I. 3 Hours

Practice in composition on topics dealing with French life and culture. Systematic vocabulary enrichment, refinement of grammar, and assimilation of stylistic patterns. Emphasis on correct writing and creativity. Initiation into the concept of style in French prose. Prerequisite(s): FRN 311 or FRN 312.

## FRN 322. French Composition II. 3 Hours

Practice in composition on topics dealing with French life and culture. Systematic vocabulary enrichment, refinement of grammar, and assimilation of stylistic patterns. Emphasis on correct writing and creativity. Initiation into the concept of style in French prose. Prerequisite(s): FRN 311 or FRN 312.

## FRN 325. Introduction to Commercial French. 3 Hours

Introduction to French business and the French position in international trade. Basic vocabulary of the office and the world of trade, introduction to formal correspondence and transactions. Prerequisite(s): FRN 311 or FRN 312.

## FRN 331. Phonetics \& Diction. 3 Hours

## FRN 341. French Culture \& Civilization. 3 Hours

Introduction to the history of French civilization with emphasis on the arts and life in each major cultural period. Recommended for all French majors and minors. Prerequisite(s): FRN 311 or FRN 312.

## FRN 350. French Literature in Translation. 3 Hours

Course to acquaint students with major topics in French and Francophone literature. Conducted in English. Repeatable when subtitle and content change.

## FRN 352. Old World Meets New (ENG). 3 Hours

Readings of (1) non-fictional narratives regarding French encounters with American Indians in the sixteenth and seventeenth centuries and (2) literary and philosophical works on this topic. Conducted in English. Students receive credit for either FRN 352 or FRN 452, not both.
FRN 360. Explication De Textes. 3 Hours
Introduction to method of analyzing literary texts, both prose and poetry. Elements of French versification. Recommended for all French majors and prospective teachers. Prerequisite(s): FRN 311 or FRN 312.

## FRN 361. Survey of French Literature I. 3 Hours

Major texts, trends, authors from the Middle Ages to the present, showing influences and continuity. Lectures, discussions, oral and written reports. Recommended for all French majors and prospective teachers. Prerequisite(s): FRN 311 or FRN 312.

## FRN 362. Survey of French Literature II. 3 Hours

Major texts, trends, authors from the Middle Ages to the present, showing influences and continuity. Lectures, discussions, oral and written reports. Recommended for all French majors and prospective teachers. Prerequisite(s): FRN 311 or FRN 312.

## FRN 370. Advanced Study Abroad. 1-7 Hours

Advanced intensive study in a foreign country/region whose everyday language is French, treating its language, culture, and civilization. Conducted in French. Available only during the summer session. Repeatable when subtitle and content change. Prerequisite(s): FRN 301.

FRN 381. History of French Cinema. 3 Hours
Survey of the trends, styles, and principal directors in the history of French cinema. Discussion of personal, social, and cultural values portrayed in films. Prerequisite(s): FRN 311 or FRN 312.

## FRN 450. French Literature. 3 Hours

Lectures and discussion concentrating on specialized genres, periods, or authors. Repeatable when subtitle and content change. Prerequisite(s):

## FRN 311 or FRN 312.

## FRN 452. Old World Meets New (FRN). 3 Hours

Readings of (1) non-fictional narratives regarding French encounters with American Indians in the sixteenth and seventeenth centuries and (2) literary and philosophical works on this topic. Conducted in French. Students receive credit for either FRN 352 or FRN 452, not both. Prerequisite(s): FRN 311 or FRN 312.

## FRN 469. French Linguistics. 3 Hours

Synchronic analysis of modern French language, including a contrast of the French sound system, morphology, and syntax with English structures; the historical derivation of French, creolization, and approaches to teaching French to English-speaking persons. Conducted in French. Prerequisite(s): FRN 311 or FRN 312.

## FRN 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## FRN 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation wit the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## FRN 491. Independent Study. 1-3 Hours

Independent research project under the guidance of an instructor. Admission to project and number of semester hours require approval of the chairperson. Prerequisite(s): FRN 301; permission of department chairperson.

## German Courses

GER 101. Basic Proficiency in German I. 4 Hours
Development of basic communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission is restricted to those who have not studied German or have placed into this course by examination.

## GER 131. Intensive Fundamental German. 2 Hours

Intensive development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission restricted to those who have previous experience with the language and place into this course by examination. Credit granted for only ONE of the following: GER 101 or GER 131.

## GER 141. Basic Proficiency in German II. 4 Hours

Further development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Prerequisite(s): (GER 101 or GER 131) or placement by examination.

## GER 201. Intermediate German I. 3 Hours

Systematic grammar review. Increased use of the language in written exercises and classroom discussions based on readings. Exposure to the development of German civilization and culture. Successful completion of this course includes the demonstration of the proficiency level required by the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite(s): GER 141.

## GER 301. Intensive Review of German Language Skills. 3 Hours

 Enhancement of existing skills in the four areas of learning: speaking, listening, reading, writing. Intensive exposure to contemporary cultural content in Germany and the German-speaking world. Prerequisite(s): GER 201 or equivalent.
## GER 311. German Conversation I. 3 Hours

Practice to increase listening comprehension and fluency in speaking about topics from the personal and everyday to issues of current interest with focus on describing and narrating in paragraph-length structures. In -depth exploration of cultural commonalities and differences between the German-speaking countries and the United States. Focus on development of vocabulary and practice of expressions essential for oral communication. GER 311 and GER 312 may be taken in any order. Prerequisite(s): GER 301.

## GER 312. German Conversation II. 3 Hours

Practice to increase listening comprehension and fluency in speaking about topics from the personal and everyday to issues of current interest with focus on describing and narrating in paragraph-length structures. In-depth exploration of cultural commonalities and differences between the German-speaking countries and the United States. Focus on development of vocabulary and practice of expressions essential for oral communication. GER 311 and GER 312 may be taken in any order. Prerequisite(s): GER 301.

## GER 321. German Composition I. 3 Hours

Practice in personal and topical writing in German that seeks to develop the ability to write well-structured paragraphs. Systematic vocabulary building and grammatical refinement and review. Readings on key issues of the day and/or topics providing crucial insight into German and European thinking and concerns. May be taken in either sequence. Prerequisite(s): GER 311 or GER 312.

GER 322. German Composition II. 3 Hours
Practice in personal and topical writing in German that seeks to develop the ability to write well-structured paragraphs. Systematic vocabulary building and grammatical refinement and review. Readings on key issues of the day and/or topics providing crucial insight into German and European thinking and concerns. May be taken in either sequence. Prerequisite(s): GER 311 or GER 312.

## GER 325. Commercial German. 3 Hours

Introduction to the business language, customs, and economic profile of the German-speaking countries. Vocabulary of the office and world of trade. Business correspondence. Germany's economic and cultural position and goals within the context of the European Union and the world. Course provides an introduction to working in an international business setting. Prerequisite(s): GER 311 or GER 312 or equivalent.

## GER 341. German Culture \& Civilization. 3 Hours

Introduction to German culture and civilization with emphasis on the arts, intellectual developments, and life in various periods of German history. Conducted in German. Prerequisite(s): GER 311 or GER 312.

## GER 342. Germany and the New Europe. 3 Hours

Examination of developments in the life and culture, and the political, economic, and social realities in Germany from the end of WWI to the reunited country of today which is the largest member of EU. Course also explores the ideas and ideals on which the EU is founded, its present influence in the world, and how this new Europe differs from the United States of America. Conducted in German. Prerequisite(s): (GER 311 or 312) or equivalent.

## GER 350. German Literature \& Civilization. 3 Hours

Course to acquaint students with major German writers and literary movements. Conducted in English. Repeatable when subtitle and content change.

## GER 351. German Film. 3 Hours

Introduction to the aesthetic and thematic richness of German film. Students will study the cinema of the Weimar Republic within its historical context and its appropriation by Hollywood. This course will also introduce cross-cultural films having to do with idenity, women, immigrant workers, asylum seekers, postcolonialization, nationalism, social theory, ideology, and political activism. Prerequisite(s): GER 311 or GER 312.

## GER 361. Survey of German Literature I. 3 Hours

German literary works from 1750 to the present reflecting the philosophy, aesthetics, and concerns of the time. Skills development for reading literary and cultural texts and writing on analytic and interpretative topics. May be taken in either sequence. Prerequisite(s): ((GER 311 or GER 312); (GER 321 or GER 322)) or equivalent.

## GER 362. Survey of German Literature II. 3 Hours

German literary works from 1750 to the present reflecting the philosophy, aesthetics, and concerns of the time. Skills development for reading literary and cultural texts and writing on analytic and interpretative topics. May be taken in either sequence. Prerequisite(s): ((GER 311 or GER 312); (GER 321 or GER 322)) or equivalent.

## GER 370. Study Abroad. 1-6 Hours

Intensive study in a foreign country whose everyday language is German, treating the culture and civilization of the country. Conducted in German. Available only during the summer session. Repeatable when subtitle and content change. Prerequisite(s): GER 301.

GER 450. German Literature. 3 Hours
Lectures and discussions in German in such specialized areas as Medieval lyric, Romanticism, twentieth-century novel, modern drama, and individual authors. Repeatable when subtitle and content change. Prerequisite(s): GER 311 or GER 312.

## GER 469. German Linguistics. 3 Hours

Synchronic analysis of modern German language, including a contrast of the German sound system, morphology, and syntax with English structures; the historical derivation of German, the modern German dialects, and approaches to teaching German to English-speakers. Conducted in German. Prerequisite(s): GER 311 or GER 312.

## GER 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## GER 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## GER 491. Independent Study. 1-3 Hours

Independent research project under the guidance of an instructor. Admission to project and number of semester hours require approval of chairperson. Prerequisite(s): GER 301; permission of instructor.

## Hindi Courses

HND 101. Beginning Hindi I. 3 Hours
Development of fundamental communication skills in reading, listening, writing, and speaking through extensive practice in language use. Admission to HND 101 restricted to those who have not studied Hindi or have placed into that course by examination. Offered only in India in connection with the B.A. Program in Philosophy. Credit is granted for only one of the following: HND 101, HND 102 or HND 121.

## HND 102. Beginning Hindi II. 3 Hours

Development of fundamental communication skills in reading, listening, writing, and speaking through extensive practice in language use. Admission to HND 102 is open only to those who have successfully completed 101. Offered only in India in connection with the B.A. Program in Philosophy. Credit is granted for only one of the following: HND 101, HND 102 or HND 121.

## HND 121. Elementary Hindi. 4 Hours

Review and further development of fundamental communication skills in reading, listening, writing, and speaking. Admission restricted to those who have studied the language for at least two years and place into the course by examination. Offered only in India in connection with the B.A. Program in Philosophy. Credit granted for only one of the following: HND 101 and HND 102 or HND 121.

## HND 141. Basic Proficiency in Hindi. 3 Hours

Further development of communication skills in reading, listening, writing, and speaking. Admission by examination or successful completion of HND 102 or HND 121. Successful completion of this course includes the demonstration of the minimal level of proficiency required for the College of Arts and Sciences' Liberal Studies Curriculum. Offered only in India in connection with the B.A. Program in Philosophy.

## HND 201. Intermediate Hindi I. 3 Hours

Review of the essentials of grammar, intensive conversation and comprehension exercises, reading of graded modern prose and poetry; brief essays in Hindi. Offered only in India in connection with the B.A.. Program in Philosophy. Prerequisite(s): HND 141; previous study of elementary Hindi in school or elsewhere; ability to speak, read, understand, and write simple Hindi.

## HND 202. Intermediate Hindi II. 3 Hours

Review of the essentials of grammar, intensive conversation and comprehension exercises, reading of graded modern prose and poetry; brief essays in Hindi. Offered only in India in connection with the B.A.. Program in Philosophy. Prerequisite(s): HND 201.

## Italian Courses

ITA 101. Beginning Italian I. 4 Hours
Development of basic communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission is restricted to those who have not studied Italian or have placed into this course by examination.

## ITA 141. Basic Proficiency in Italian. 4 Hours

Further development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Prerequisite(s): ITA 101 or placement by examination.

## ITA 170. Study Abroad. 3 Hours

Study in a foreign country/region whose everyday language is Italian, focusing on the culture and civilization of the country. Conducted in English. Available only during the summer session. Repeatable when topic and content change. Prerequisite(s): ITA 101 (may be taken as a corequisite).

## ITA 201. Intermediate Italian I. 3 Hours

Development of reading, listening, writing, and speaking skills.
Conversation practice, oral reports, reading assignments, composition assignments, and grammar exercises. The course is conducted in Italian. Successful completion of this course includes the demonstration of the proficiency level required by the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite(s): ITA 141.

## ITA 301. Intensive Review of Italian Language Skills. 3 Hours

Practice and refinement of the skills learned in the previous classes (ITA-101, ITA-141 and ITA-201). The goal is to engage the students to interact in Italian through discussions of current events, social problems, and cultural aspects of modern Italy. Prerequisite(s): ITA 201.

## ITA 313. Communicating in Italian I. 3 Hours

Intensive practice in speaking and writing Italian at an advanced level. Emphasis on building vocabulary, learning correct idiomatic usage, increasing fluency, and improving syntax and style. The course is conducted in Italian. ITA 313 and 314 may be taken in either sequence. Prerequisite(s): ITA 202.

## ITA 314. Communicating in Italian II. 3 Hours

Intensive practice in speaking and writing Italian at an advanced level. Emphasis on building vocabulary, learning correct idiomatic usage, increasing fluency, and improving syntax and style. The course is conducted in Italian. ITA 313 and 314 may be taken in either sequence. Prerequisite(s): ITA 202.

## ITA 321. Italian Composition I. 3 Hours

Practice in Italian language composition on a variety of topics. Development of writing skills with emphasis on the complexities of structure and idioms and composition techniques. Systematic refinement and mastery of grammar and assimilation of stylistic patterns. Prerequisite(s): ITA 301.

## ITA 322. Italian Composition II. 3 Hours

Practice in Italian language composition on a variety of topics. Development of writing skills with emphasis on the complexities of structure and idioms and composition techniques. Systematic refinement and mastery of grammar and assimilation of stylistic patterns. Prerequisite(s): ITA 313 or ITA 314.

## ITA 341. Italian Culture \& Civilization I. 3 Hours

Survey of the major historical and cultural events in Italy from the Middle Ages to the present. All readings, lectures, discussions, reports, and tests are in Italian. ITA 341 and 342 may be taken in either sequence. Prerequisite(s): ITA 202.

## ITA 350. Topics of Italian Literature I. 3 Hours

Concentration using lecture and discussion of specialized genres, periods, or authors of Italian literature prior to the twentieth century. Conducted in Italian. Repeatable when content changes. Prerequisite(s): ITA 311 or ITA 312.

## ITA 361. Survey of Italian Literature I. 3 Hours

Italian literature from its beginnings in the thirteenth century to the present. Principal writers and literary trends; the techniques of literary analysis. Lectures, discussions, readings, and papers are in Italian. ITA 361 and ITA 362 may be taken in either sequence. Prerequisite(s): ITA 202.

## ITA 362. Survey of Italian Literature II. 3 Hours

Italian literature from its beginnings in the thirteenth century to the present. Principal writers and literary trends; the techniques of literary analysis. Lectures, discussions, readings, and papers are in Italian. ITA 361 and ITA 362 may be taken in either sequence. Prerequisite(s): ITA 202.

## ITA 451. Topics of Italian Literature II. 3 Hours

Concentration, using lecture and discussion, on specialized genres, periods, or authors of Italian literature from 1700 to the twentieth century. Conducted in Italian. Repeatable when content changes. Prerequisite(s): ITA 311 or ITA 312.

## ITA 491. Independent Study. 1-3 Hours

Independent research project under the guidance of an instructor. Admission to project and number of semester hours require approval of chairperson. Prerequisite(s): ITA 202 or permission of instructor.

## Languages Courses

## LNG 000. Language Placeholder. 0 Hours

## LNG 101. Beginning Language Study. 4 Hours

Development of fundamental communication skills in reading, listening, writing, and speaking with a focus on basic proficiency in survival communication, and familiarization with culture in languages other than those regularly taught in the Department of Languages. May be offered through distance learning or study abroad with the support of the Department of Languages. No previous study of the language is presupposed (for LNG 101 only). Offered with different suffixes according to the language studied.

## LNG 141. Basic Proficiency in Language. 4 Hours

Further development of communication skills in reading, listening, writing, and speaking with a focus on basic proficiency in survival communication, and familiarization with culture in languages other than those regularly taught in the Department of Languages. Offered with different suffixes according to the language studied. Prerequisite(s): LNG 101 in the same language or equivalent.

## LNG 201. Intermediate Language I. 4 Hours

Expansion and extension of listening, speaking, reading, and writing skills through conversation practice, reading assignments, composition assignments, and grammar exercises. Offered with different suffixes according to the language studied. Prerequisite(s): LNG 141 in the same language or equivalent.

## LNG 202. Intermediate Language II. 4 Hours

Continued development of proficiency in listening, speaking, reading and writing through conversation practice, reading assignments, composition assignments, and grammar exercises. Offered with different suffixes according to the language studied. Prerequisite(s): LNG 201 in the same language or equivalent.

## LNG 320. Instructed Second Langauge Acquisition. 2 Hours

Study of cognitive, linguistic, sociolinguistic, and constructivist approaches to instructed second language acquisition, including the relationship between classroom interaction and language acquisition.
LNG 330. Teaching World Languages in the Elementary School (PK-6). 4 Hours
An introduction to the pedagogical, philosophical, and psychological aspects of teaching foreign languages in elementary school. Topics: national and state standards, learners with special needs, reading in the foreign language, and professional associations. Prerequisite(s): EDT 110; at least two 300-level courses in the language to be taught.

## LNG 468. Introduction to Linguistics. 3 Hours

Survey of the various aspects of a scientific description of human language: phonetics, phonology, morphology, syntax, semantics, and pragmatics. Interdisciplinary exploration of the reciprocal impact of linguistics on psychology, sociology, and language acquisition theory. Prerequisite(s): ((ENG 102 or ENG 200 or ENG 200H) or ASI 120) or equivalent; junior or senior standing or permission of department chairperson.

## LNG 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

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Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.
LNG 495. The Language Major in Professional Careers. 1 Hour Exploration of lifelong learning opportunities to maintain and increase functional proficiency in the language studied; the relationship between language proficiency and intercultural studies, and the application of language proficiency in the workplace. Student's language and cultural proficiency-level at the conclusion of the undergraduate experience will be determined. Required of declared majors in languages (FRN, GER, and SPN). Taught in English. Prerequisite(s): Completion of 18 credit hours of upper-division courses in language major.

## Latin Courses

LAT 101. Basic Proficiency in Latin I. 4 Hours
Development of basic skills in reading, listening, and writing through extensive practice in language use. Admission is restricted to those who have not studied Latin or have placed into this course by examination.

## LAT 131. Intensive Fundamental Latin. 2 Hours

Intensive development of fundamental skills in reading, listening, and writing through extensive practice in language use. Admission restricted to those who have previous experience with the language and place into this course by examination. Credit granted for only ONE of the following: LAT 101 or LAT 131.

## LAT 141. Basic Proficiency in Latin II. 4 Hours

Further development of fundamental skills in reading, listening, and writing through extensive practice in language use. Prerequisite(s): (LAT 101 or LAT 131) or placement by examination.

## LAT 201. Intermediate Latin I. 3 Hours

Systematic review of grammar, exercises in vocabulary development, readings from Caesar, Cicero, Virgil, or Ovid. Successful completion of this course includes the demonstration of the proficiency level required by the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite(s): LAT 141.

## LAT 202. Intermediate Latin II. 3 Hours

Systematic review of grammar, exercises in vocabulary development, readings from Caesar, Cicero, Virgil, or Ovid. Prerequisite(s): LAT 201.

## LAT 321. Latin Composition \& Syntax. 3 Hours

Practice in writing Latin, for enrichment of vocabulary, refinement of grammar, and control of major Latin prose styles. Prerequisite(s): LAT 202.

## LAT 350. Latin Literature. 3 Hours

Advanced readings in a particular author or genre (epic, drama, history, philosophy). Repeatable when subtitle and content change. Prerequisite(s): LAT 202.

## LAT 491. Independent Study. 1-3 Hours

Independent research project under the guidance of an instructor. Admission to project and number of semester hours require approval of chairperson. Prerequisite(s): LAT 202 or permission of department chairperson.

## Russian Courses

RUS 101. Basic Proficiency in Russian I. 4 Hours
Development of basic communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission is restricted to those who have not studied Russian or have placed into this course by examination.

## RUS 141. Basic Proficiency in Russian II. 4 Hours

Further development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Prerequisite(s): RUS 101 or placement by examination.

## RUS 201. Intermediate Russian I. 3 Hours

Review of the essentials of grammar, intensive conversation and comprehension exercises, reading of graded modern and contemporary prose and poetry. Successful completion of this course includes the demonstration of the proficiency level required by the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite(s): RUS 141.

## RUS 202. Intermediate Russian II. 3 Hours

Review of the essentials of grammar, intensive conversation and comprehension exercises, reading of graded modern and contemporary prose and poetry. Prerequisite(s): RUS 201.

## RUS 311. Russian Conversation I. 3 Hours

Vocabulary development, pattern drills, and the use of idioms in discussion and oral reports centered on Russian life and culture. RUS 311 and 312 may be taken in either sequence. Prerequisite(s): RUS 202.

## RUS 312. Russian Conversation II. 3 Hours

Vocabulary development, pattern drills, and the use of idioms in discussion and oral reports centered on Russian life and culture. RUS 311 and RUS 312 may be taken in either sequence. Prerequisite(s): RUS 202.

## RUS 321. Russian Composition. 3 Hours

Practice in composition on topics dealing with Russian life and culture; personal and business letters. Short weekly assignments to build vocabulary and control of idioms. Prerequisite(s): RUS 202.

## RUS 361. Survey of Russian Literature. 3 Hours

Russian literature and its development during the nineteenth and twentieth centuries. Study of exemplary works and literary movements. Prerequisite(s): RUS 202.

## RUS 491. Independent Study. 1-6 Hours

Independent study under the guidance of an instructor. Admission to course and number of semester hours require approval of chairperson. Repeatable when content changes.

## Spanish Courses

## SPN 101. Basic Proficiency in Spanish I. 4 Hours

Development of basic communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission is restricted to those who have not studied Spanish or have placed into this course by examination.

## SPN 131. Intensive Fundamental Spanish. 2 Hours

Intensive development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission restricted to those who have previous experience with the language and place into this course by examination. Credit granted for only ONE of the following: SPN 101 or SPN 131.

## SPN 141. Basic Proficiency in Spanish II. 4 Hours

Further development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Prerequisite(s): (SPN 101 or SPN 131) or placement by examination.

## SPN 201. Intermediate Spanish I. 3 Hours

Intensive development of the basic principles of Spanish through writing and conversation, stressing fluency. Language laboratory required.
Successful completion of this course includes the demonstration of the proficiency level required by the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite(s): SPN 141.

## SPN 202. Intermediate Spanish II. 3 Hours

Intensive development of the basic principles of Spanish through writing and conversation, stressing fluency. Language laboratory required. Prerequisite(s): SPN 201.

## SPN 270. Study Abroad. 1-6 Hours

Intensive study in a foreign country whose everyday language is Spanish, treating the culture and civilization of the country. Conducted in Spanish. Available only during the summer session. Repeatable when subtitle and content change. Prerequisite(s): SPN 141 or equivalent.
SPN 311. Spanish Conversation I. 3 Hours
Development of fluency in the vocabulary and idioms of the spoken language through discussion of topics related to contemporary life in the Hispanic world. Prerequisite(s): SPN 202.

## SPN 312. Spanish Conversation II. 3 Hours

Development of fluency in the vocabulary and idioms of the spoken language through discussion of topics related to contemporary life in the Hispanic world. May be taken concurrently with SPN 321. Prerequisite(s): SPN 311 and SPN 321. May be taken concurrently with SPN 321.

## SPN 321. Spanish Composition I. 3 Hours

Practice in composition on a variety of topics. Systematic refinement and mastery of grammar and assimilation of stylistic patterns. Emphasis on developing facility in writing clearly and correctly in Spanish. May be taken concurrently with 311. Prerequisite(s): SPN 311. May be taken concurrently.

## SPN 322. Spanish Composition II. 3 Hours

Practice in composition on a variety of topics. Systematic refinement and mastery of grammar and assimilation of stylistic patterns. Emphasis on developing facility in writing clearly and correctly in Spanish. Prerequisite(s): SPN 321.

## SPN 325. Spanish in Business Settings. 3 Hours

SPN 325 will give students an opportunity to expand and practice their cross-cultural communication skills to interact with Spanish speakers in business settings. This course will develop geographic literacy and cultural understanding of the Spanish-speaking world, as these are central to being able to conduct business successfully in Spanish. The course will also provide students with a foundation in the vocabulary and discourse used in when interacting in business situations. Prerequisite(s): SPN 311 and SPN 321.

## SPN 341. Spanish Culture \& Civilzation. 3 Hours

Readings and discussions on the historical, social, political, and cultural phenomena of Spain. Conducted in Spanish. Prerequisite(s): SPN 311 and SPN 321.

## SPN 342. Ibero-American Culture \& Civilization. 3 Hours

Readings and discussions on the historical, social, political, and cultural phenomena of Ibero-America. Conducted in Spanish. Prerequisite(s): SPN 311 and SPN 321.

## SPN 350. Hispanic Literature in Translation. 3 Hours

Course to acquaint students with major Spanish and Spanish-American writers and literary movements. Conducted in English. Repeatable when subtitle and content change.

## SPN 361. Survey of Spanish Literature I. 3 Hours

Readings and analysis of the works of major Spanish authors and discussion of the principal literary trends in Spain from the Middle Ages to the 1800's. Lectures, discussions, and assignments in Spanish. Prerequisite(s): SPN 311 and SPN 321.

## SPN 362. Survey of Spanish Literature II. 3 Hours

Readings and analysis of the works of major Spanish authors and discussion of the principal literary trends in Spain from the 1800's to the present day. Lectures, discussions, and assignments in Spanish. Prerequisite(s): SPN 311 and SPN 321.

## SPN 363. Survey of Spanish-American Literature I. 3 Hours

Readings and analysis of the works of major Spanish-American authors and discussion of the principal literary trends in Spanish America from Discovery and Conquest through Realism and Naturalism. Conducted in Spanish. Prerequisite(s): SPN 311 or SPN 312.

## SPN 364. Survey of Spanish-American Literature II. 3 Hours

Readings and analysis of the works of major Spanish-American authors and discussion of the principal literary trends in Spanish America from Modernism through the present day. Conducted in Spanish. Prerequisite(s): SPN 311 and SPN 321.

## SPN 370. Study Abroad. 1-6 Hours

Intensive study in a foreign country whose everyday language is Spanish, treating the culture and civilization of the country. Conducted in Spanish. Available only during the summer session. Repeatable when subtitle and content change. Prerequisite(s): SPN 202.

## SPN 380. Spanish \& Ibero-American Cinema. 3 Hours

Introduction to cinematography and culture of Spanish and IberoAmerican countries, emphasizing themes related to human rights (Socioeconomic, class, sexuality, gender, ethnicity), as well as critical and theoretical perspectives on films from these regions. Conducted in English. Prerequisite(s): ENG 102 or equivalent.

## SPN 440. Spanish Sociolinguistics. 3 Hours

Analysis of the interrelations between linguistic practices and ideas in the Spanish-speaking world and the social contexts in which they develop. Topics examined include language contact, minority languages, and human rights; language policy and education planning; socially conditioned variation according to gender, class, and ethnicity; and linguistic ideologies and identities in Spain and Latin America. Conducted in Spanish. Prerequisite(s): SPN 312 and 321 or permission of department chairperson.

## SPN 450. Topics in Pre-20th Century Spanish Literature. 3 Hours

Lectures and discussions concentrating on specialized genres, periods, or authors of Peninsular literature prior to the twentieth century. Conducted in Spanish. Repeatable when subtitle and content change. Prerequisite(s): SPN 312 and SPN 321.

## SPN 451. Topics in Pre-20th Century Spanish-American Literature. 3

 HoursLectures and discussions concentrating on specialized genres, periods, or authors of Spanish-American literature prior to the twentieth century. Conducted in Spanish. Repeatable when subtitle and content change. Prerequisite(s): SPN 312 and SPN 321.

## SPN 469. Spanish Linguistics. 3 Hours

Synchronic analysis of modern Spanish language, including a contrast of the Spanish sound system, morphology, and syntax with English structures; the historical derivation of Spanish, the modern Spanish dialects (Spain and Latin America), and approaches to teaching Spanish to English speakers. Conducted in Spanish. Prerequisite(s): SPN 312 and SPN 321.
SPN 471. Topics from 20th and 21 st Century Spanish Literature. 3 Hours Lectures and discussions concentrating on specialized periods, genres, or authors of the twentieth and twenty-first centuries of Peninsular literature. Conducted in Spanish. Repeatable when subtitle and content change. Prerequisite(s): SPN 312 and SPN 321.
SPN 472. Topics in Contemporary Spanish-American Literature and Film. 3 Hours
Lectures and discussions concentrating on specialized periods, genres or authors of twentieth-century Spanish-American literature. Conducted in Spanish. Repeatable when subtitle and content change. Prerequisite(s): SPN 312 and SPN 321.

## SPN 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consulation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

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Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## SPN 480. Spanish \& Ibero-American Cinema. 3 Hours

Introduction to cinematography and culture of Spanish and IberoAmerican countries, emphasizing themes related to human rights (socioeconomic, class, sexuality, gender, ethnicity), as well as critical and theoretical perspectives on films from these regions. Conducted in Spanish. SPN 342 recommended. Prerequisite(s): SPN 312 or equivalent; SPN 321.

## SPN 491. Independent Study. 1-3 Hours

Independent research project under the guidance of an instructor. Admission to project and number of semester hours require approval of chairperson. Prerequisite(s): SPN 202; permission of department chairperson.

## SPN 497. Service Learning Experience. 1-3 Hours

Supervised service experience or project which requires the use of Spanish. Repeatable up to a total of three semester hours.
Prerequisite(s): SPN 311 or equivalent.

## History

Major:

[^5]Minor:

- History (p. 199)

History critically studies the past and those key values which have shaped society. The best tradition of historical study enables students to assess change over time and to create an interpretative narrative of the human experience. As an intellectual discipline, historical study includes historiography and historiographical interpretation, critical evaluation of historical sources, and causation and contextualization. Students in historical studies courses should be able to identify what historical details are necessary to understand how change occurs and how the topic at hand relates to wider (temporal and spatial) historical frameworks.

History also provides students with a sense of perspective and with the ability to make critical judgments - skills that are broadly applicable and extremely useful in a broad range of professions across the long term of one's professional career. Those with a sharply honed historical consciousness know that often what appears to be a simple solution to a simple problem will not work because unexpressed historical forces and traditions lie just beneath the surface. Therefore, historical consciousness and historical analysis helps to make the world and the problems we confront on a daily basis - from the mundane to profound comprehensible. From the broadest perspective, to be ignorant of history is to be, in a very fundamental way, intellectually defenseless, unable to understand the workings of this or other societies which are critical elements necessary in understanding our daily problems and devising solutions for them.

Students majoring in history are offered a flexible curriculum that allows them to have a double major or one or more minors. Students are also strongly encouraged to develop interdisciplinary areas of concentration to meet their interests and vocational and professional goals. Examples of areas of concentration are:

## - Prelaw

- Business (with course work in Marketing, Finance, and other technical fields)
- International Studies and Human Rights
- Historical Administration, Preservation, and Archival Management
- Social Sciences, Mathematics and Statistics, and Economics

History majors should consult the department's Director of Curriculum and Advising for further details.

History majors pursue professions in numerous fields including:

- Historians as Educators Elementary Schools
Secondary Schools
Postsecondary Education
Historic Sites and Museums
- Historians as Researchers

Museums and Historical Organizations
Cultural Resources Management and Historic Preservation Think Tanks

- Historians as Communicators

Writers and Editors
Journalists
Documentary Editors
Producers of Multimedia Material

- Historians as Information Managers
Archivists
Records Managers
Librarians
Information Managers
- Historians as Advocates
Lawyers and Paralegals
Litigation Support
Legislative Staff Work
Foundations
- Historians in Businesses and Associations
Historians as Skilled Managers in Corporations
Contract Historians
Historians and Nonprofit Associations

Students in B.A. programs can acquire teacher licensure through the dual-degree B.A. and B.S.E. program conducted in conjunction with the Department of Teacher Education in the School of Education and Health Sciences. For details consult the department chairperson.

A history minor consists of 18 semester hours.

## Faculty

Juan Santamarina, Chairperson
Distinguished Service Professors: Alexander, Palermo
Professors Emeriti: Eid, Flockerzie, Morman, Palermo, Taylor
Professors: Amin, Bednarek, Fleischmann, Heitmann, Trollinger
Associate Professors: Agnew, Borbonus, Cadegan, Carlson, Carter, Darrow, Hume, Merithew, Roy, Santamarina
Assistant Professors: Glont, Sutherland, UhIman
Lecturers: Bartley, Gomez, Jaffe, Sanderson, Sextro, Washington

## Bachelor of Arts, History (HST) minimum 124 hours

Common Academic Program (CAP)
$\begin{array}{ll}\text { *credit hours will vary depending on courses selected } & \\ \text { First-Year Humanities Commons }{ }^{1} & 12\end{array}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |
| Second-Year Writing Seminar |  |${ }^{3}$ 0-3

ENG $200 \quad$ Writing Seminar II
Oral Communication 3

| CMM $100 \quad$ Principles of Oral Communication | 3 |
| :---: | :---: |

Social Science 3

| SSC $200 \quad$ Social Science Integrated |  |
| :--- | :--- |
| Arts | 3 |

Natural Sciences ${ }^{4} \quad 7$
Crossing Boundaries $\quad$ variab

Faith Traditions
Practical Ethical Action
Inquiry
Integrative

| Advanced Study |  |  |
| :---: | :---: | :---: |
| Philosophy and/or Religious Studies |  |  |
| Historical Studies ${ }^{5}$ |  |  |
| Diversity and Social Justice |  | 3 |
| Major Capstone |  | 0-3 |
| Completed with ASI 110 and ASI 120. <br> Or ENG 100A and ENG 100B, or ENG 200H, by placement. <br> Completed with ENG 200 H or ASI 120. <br> Must include two different disciplines and accompanying lab. <br> U.S. History AP credit will not satisfy this requirement. |  |  |
| Liberal Studies Curriculum |  |  |
| Creative and Performing Arts (May include CAP Arts) |  | 3 |
| L2 Proficiency (Proficiency in a language other than English) |  | 0-11 |
| Literature (May satisfy CAP Components) |  | 3 |
| Mathematics, exlcuding MTH 205 (Satisfies CAP Mathematics) |  | 3 |
| Natural Sciences (Satisfies CAP Natural Science) |  | 11 |
| Social Sciences (Includes CAP Social Science) |  | 12 |
| Major Requirements ${ }^{1}$ |  |  |
| HST 103 | The West \& the World | 3 |
| HST 150 | Introduction to the Historian's Craft | 3 |
| HST 251 or HST 252 | American History to $1865^{2}$ American History Since 1865 | 3 |
| HST 300 | Career Development in History | 1 |
| HST 301 | Research Methods Seminar | 3 |
| HST 498 | History Capstone Seminar (Satisfies CAP Major Capstone) | 3 |
| Select two courses from: |  | 6 |
| HST 210 Making of Modern South Asia |  |  |
| HST 220 | Survey of Ancient History |  |
| HST 260 | History of Pre-Modern East Asia |  |
| HST 280 | Making of the Modern Middle East |  |
| HST 299 | Historical Background to Contemporary Issues |  |
| Select 4 HST courses (300 level) ${ }^{3}$ |  | 12 |
| Select one HST seminar (400 level) ${ }^{4}$ |  | 3 |
| Breadth |  |  |
| ASI 150 | Introduction to the University Experience | 1 |
| Total Hours to total at least |  | 124 |
| 1 Includes CAP components. |  |  |
| Students who are majoring in both History and Adolescence to Young Adult (AYA) Integrated Social Studies (History and Social Science) Education in the School of Education and Allied Professions are required to take both HST 251 and HST 252, and only one nonU.S. 200-level area survey. |  |  |
| ${ }^{3}$ These electives should be distributed so that the student will have taken history (HST) electives in three geographical areas: United States, Europe, and at least one of the following: Africa, Asia, Latin America, Middle East. |  |  |

4
Three semester hours of the seminar requirement may be achieved through the fulfillment of an experiential component earned through completion of three semester hours of HST 495 Internship.

## Minor in History (HST)

| History |  |  |
| :--- | :--- | ---: |
| HST 103 | The West \& the World | 3 |
| HST 251 | American History to 1865 | 3 |
| or HST 252 | American History Since 1865 |  |
| Select two courses in American history (300/400 level) | 6 |  |
| Select two courses in Non-American history (300/400 level) | 6 |  |
| Total Hours | 18 |  |


| First Year |  |  |
| :--- | :---: | ---: |
| Fall | Hours Spring | Hours |
| ASI 150 | 1 ASI 120 (CAP | 8 |
|  | Humanities <br> Commons) |  |
| ASI 110 (CAP Humanities Commons) | 7 HST 150 | 3 |
| CMM 100 (CAP Communication) | 3 Language | 4 |
|  | 141 |  |
| Language 101 | 4 | 15 |


| Second Year |  |  |
| :--- | :---: | ---: |
| Fall | Hours Spring | Hours |
| HST 251 or 252 | 3 HST 220, 260, | 3 |
| Literature | or 280 |  |
| INSS (CAP Natural Science w/lab) | 3 HST 301 | 3 |
|  | 4 INSS (CAP | 4 |
|  | Natural |  |
| SSC 200 (CAP Social Science) | Science w/ | lab) |
| Language 201 or contextual course | 3 CAP Arts | 3 |
|  | 3 Social | 3 |
|  | Science - |  |


| Third Year |  |  |
| :--- | :---: | ---: |
| Fall | Hours Spring | Hours |
| HST 300 | 1 HST Major | 3 |
| HST Major elective | elective |  |
|  | 3 MTH (CAP | 3 |
| CAP Faith Traditions | Mathematics) |  |
|  | 3 CAP | 3 |
|  | Advanced |  |
|  | Philosophy/ |  |
| INSS Natural Science | Religious |  |
|  | Studies | 3 |
| Creative \& Performing Arts | 3 Social |  |
|  | Science - |  |
| Social Science - elective | $300 / 400$ level |  |
|  | 3 General | 3 |

## Fourth Year

Fall
Hours Spring
Hours
3 HST 498 (Satisfies CAP Major Capstone)
HST Seminar
3 HST Major elective 3 CAP Inquiry

| CAP Integrative | 3 CAP Diversity <br> and Social <br> Justice |
| :--- | :--- |
| CAP Advanced Philosophy/Religious Studies | 3 General <br> elective |
| General elective | 16 |
| Total credit hours: 124 |  |
| CourSes |  |
| HST 103. The West \& the World. 3 Hours |  |
| Survey of key themes in world history including the social, economic, |  |
| cultural, political, and environmental forces that shaped the human past |  |
| throughout the globe. |  |

## HST 150. Introduction to the Historian's Craft. 3 Hours

Introduction for history majors to the fundamental aspects of professional history. Basic elements of this reading- and writing-intensive course include terminology, methods of critique, internal and external analysis, and interpretation. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 198. History Scholars' Seminar. 3 Hours

Study and seminar discussion of selected historical documents dealing with major events and trends in Western civilization since 1715. Open by permission only to first-year students in the Berry Scholars Program.

## HST 210. Making of Modern South Asia. 3 Hours

Historical survey and an anthropological exploration of the major political, economic, social, ecological, and cultural developments that have contributed to the making of region we now know as 'South Asia:' India, Pakistan, Bangladesh, Nepal, Sri Lanka, Bhutan, Maldives and Afghanistan. Prerequisite(s): HST 103 or equivalent.

## HST 220. Survey of Ancient History. 3 Hours

Survey of ancient Mediterranean, African, and Asian history (c. 3,000 BCE to 500 CE) with emphasis on social structures, intellectual cultures, cross-cultural interaction, and the overall character and impact of antiquity. Prerequisite(s): HST 103 or equivalent.

HST 251. American History to 1865. 3 Hours
Survey of the development of the American nation from colonial times to 1865; political trends, economic and social foundations of American institutions. Prerequisite(s): HST 103, ASI 110, or equivalent.
HST 252. American History Since 1865. 3 Hours
Survey of the development of the nation after the Civil War, stressing social, economic, and political problems. Prerequisite(s): HST 103 or ASI 110 or equivalent.
HST 260. History of Pre-Modern East Asia. 3 Hours
Historical survey of the cultures and states of East Asia, from the origins of agricultural civilization to the eighteenth century. Prerequisite(s): HST 103 or equivalent.
HST 280. Making of the Modern Middle East. 3 Hours
Examination of the forces that have shaped the making of the modern Middle East from the nineteenth century to the present: reformist movements; imperialism and colonialism; nationalism; the rise and formation of modern nation states; regional and global interactions and conflicts; religion and the rise of Islamism; and social, cultural, and economic transformations in the region. Prerequisite(s): HST 103 or ASI 110 or equivalent.

HST 299. Historical Background to Contemporary Issues. 3 Hours
Examination of the historical background of contemporary issues. The topics change from semester to semester according to our society's prevailing "headline" issues at the time of the course's offering. Focus on the methodology of history as a discipline and on the utility of historical analysis for understanding contemporary political, social and economic issues. Prerequisite(s): HST 103 or equivalent.
HST 300. Career Development in History. 1 Hour
Exploration of career opportunities open to History majors, with special emphasis on strategic planning for a career, creating a job portfolio, and mastering the practical mechanics of job searching. HST major. Prerequisite(s): HST 103 or equivalent.

## HST 301. Research Methods Seminar. 3 Hours

Historical methods, philosophy, and introductory historiography, the last based on the professor's field of specialization. Required for all history majors. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 302. Identity in Ancient Greece. 3 Hours

This course examines the history of ancient Greece from the 8th century BCE to the 5th century CE and traces the formation of a common identity among Greeks. Prerequisite(s): HST 103 or equivalent.

## HST 303. Roman Imperial Rule. 3 Hours

History of the Roman Empire from its establishment until its transformation in late antiquity. This course provides a long-term historical survey but also analyzes the nature, effects, and ideology of imperial rule, exploring the perspectives of both its beneficiaries and its subjects. Prerequisite(s): HST 103 or ASI 110 or equivalent.
HST 304. Ancient History \& Modern Ideology. 3 Hours
This course examines the ways in which classical antiquity continues to affect the modern world with a particular emphasis on its use to envision, create, sustain and evaluate national identities and other ideologies. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 305. Early Medieval Europe. 3 Hours

Study of the social, cultural, political, economic, and religious history of Europe from 400-1100. Prerequisite(s): HST 103 or equivalent.

## HST 306. High and Late Medieval Europe. 3 Hours

Study of the social, economic, political, cultural, and religious history of Europe from 1000 to 1500. Prerequisite(s): HST 103 or equivalent.

## HST 307. Renaissance \& Reformation. 3 Hours

Study of the development of European history from the fourteenth to the middle of the seventeenth century, with particular emphasis on the cultural, political, religious, scientific, and social aspects of the Renaissance, Protestant Revolution, and Catholic Reformation. Prerequisite(s): HST 103 and REL 103, or ASI 110 or equivalent.

## HST 308. Shakespeare's Worlds. 3 Hours

A concentrated analysis of the various worlds created in Shakespeare's plays and their interconnection with and depiction of the major elements of the historical world of early modern England. In the process of this integrated analysis, the Historical Study and Arts Study domains will be respected and taught as separate disciplines. This course is cross-listed with ENG 363. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 310. History of Spain. 3 Hours

Study of the political, social, and cultural history of the Iberian Peninsula from the ancient to the modern period. Prerequisite(s): HST 103 or ASI 110 or equivalent.

HST 31 1. Old Regime Europe. 3 Hours
From the later Reformation to the era of the French Revolution: intellectual and cultural development; political, economic, and social trends of the Old Regime. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 312. Age of Democratic Revolutions. 3 Hours

Historical analysis of the ideological, political, social and economic changes of the late eighteenth and early nineteenth centuries, emphasizing the interaction of revolutions and human rights norms. Prerequisite(s): HST 103 or equivalent.
HST 313. The Dual Revolution \& its Consequences - Europe 1815-1914. 3 Hours
Historical analysis of nineteenth century Europe emphasizing the ideological, political, economic and social consequences of the Industrial and French revolutions, commonly known as the Dual Revolution. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 314. Modern Europe in Decline 1900-1945. 3 Hours

This course examines the history of Europe from the eve of the First World War in 1900 until the end of the Second World War in 1945. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 315. Postwar Europe 1945-1990. 3 Hours

This course examines the history of Europe from the end of the Second World War in 1945 to the end of the Cold War in 1990. Prerequisite(s): HST 103, REL 103 or equivalent.

## HST 316. Beethoven \& His Era. 3 Hours

Survey of the music of Ludwig van Beethoven, including orchestral works and chamber music, opera, keyboard and sacred music; and a survey of the historical context in which Beethoven lived and worked - Europe and the Habsburg Empire of the late eighteenth and early nineteenth centuries, and especially Vienna, the Habsburg capital. Beethoven is the culmination of the High Classic style and also the first of a new generation of Romantic composers. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 319. The British Empire. 3 Hours

An examination of the origin, development, decline and continuing legacies of the British Empire in the 19th and 20th century.
Prerequisite(s): HST 103 and as mandated by CAP.

## HST 320. European Military History. 3 Hours

Survey of warfare on the European continent from classical Greece through World War II emphasizing military institutions, organization, weapons, and campaigns and the role of the military in society. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 321. Modern France. 3 Hours

French history from the Bourbon Restoration to the present. Emphasis on political, socio-economic, and cultural factors. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 322. History of England. 3 Hours

Major forces and trends in the history of England from the early medieval period to the present, including their influence on social history and literature. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 323. Modern Germany. 3 Hours

Analysis of the development of the German state from 1848 through the period of unification, Second Empire, Weimar Republic, Third Reich, the post-World War II Germanies, to the present. Prerequisite(s): HST 103 or ASI 110 or equivalent.

HST 324. Comparative Nationalism. 3 Hours
Comparative study of the origins and consequences of national movements throughout the world. Attention given to the historiography of nationalism and the fate of the nation-state idea in a number of temporal, geographic, political and cultural settings. Prerequisite(s): HST 103 or ASI 110 or equivalent.

HST 326. Russia, The Soviet Union \& Beyond 1860-Present. 3 Hours Social, political, and cultural history of Russia from the great reforms of the late empire, through the wars, revolutions, and reconstructions of the Soviet Period, to the present. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 328. Tolstoy's Russia. 3 Hours

Intensive examination of reform, reaction and the end of empire over Russia's long 19th century (c. 1796-1917), using the lens of Tolstoy's and other's literary works to pay particular attention to how modernity disrupts agrarian, multiethnic and multiconfessional polities. Prerequisite(s): HST 103 or equivalent.

## HST 329. American and Middle East. 3 Hours

Study of American involvement in the Middle East from the late 18th century until the present day. Topics include political, diplomatic and military events, as well as cultural, social, and religious debates that have defined the mutual interaction between Americans and Middle Easterners. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 330. History of East Asia to 1800. 3 Hours

Survey of East Asian history from the formation of ancient states to the establishment of the dynastic hegemonies of the seventeenth and eighteenth centuries. Analysis of social, political, and cultural change in East Asia through the intensive reading of Chinese, Japanese, and Korean primary sources in translation. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 331. India: Traditions and Encounters. 3 Hours

This course will examine how religion and politics have shaped, informed, and created identities, societies and the historical past in the Indian subcontinent. Prerequisite(s): HST 103 or ASI 110 or equivalent, REL 103 or equivalent.

## HST 332. History of Modern East Asia. 3 Hours

This course examines the processes that shaped the formation of modern East Asia. In particular, the course follows the consolidation of early modern states, the encounter with European imperialism, the subsequent transformation of East Asian states and economies in the late nineteenth and early twentieth centuries, and the impact of war and revolution in the twentieth century on the shaping of contemporary national identities. Prerequisite(s): HST 103 or equivalent.
HST 334. History of the Palestinian-Israeli Conflict. 3 Hours
Examination of the history of the Palestinian-Israeli conflict from its beginnings in the 19th century and into the early 21 st century. Prerequisite(s): HST 103 or equivalent.

## HST 335. History of South Asia. 3 Hours

Survey of the major political, religious, cultural and economic developments on the Indian subcontinent over the past 500 years. Prerequisite(s): HST 103 or ASI 110 or equivalent.
HST 336. History of Africa I: Pre-history to the 19th Century. 3 Hours This course examines the history of Africa from pre-history through the nineteenth century. It emphasizes major events which shaped that continent's history including prehistoric culture; agricultural revolution; and the ancient civilizations of Egypt, Kush, and Aksum, and Great Zimbabwe; Bantu migration; Islam; slavery; and colonialism. Prerequisite(s): HST 103 or ASI 110 or equivalent.

HST 337. History of Africa - 19th Century to the Present. 3 Hours
This course examines the history of Africa from the nineteenth century to the present. It emphasizes slavery, colonialism, nationalism, decolonization, racism, and the post-colonial state. It is interdisciplinary in its approach and focus. Prerequisite(s): HST 103.

## HST 338. State \& Secession in South Asia. 3 Hours

Survey of the failure of the nation-state and the rise of secessionist movements in South Asia since 1947. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 339. Gandhi's India. 3 Hours

An examination of the life and times of M.K. Gandhi, an iconic figure in South Asian History, and his legacies worldwide. Prerequisite(s): HST 103 and as mandated by CAP.

## HST 340. History of Science. 3 Hours

Survey of the development of science from its origins in the ancient world to the present. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 341. Historical Perspectives on Science, Technology \& Society. 3 Hours

Historical study with an institutional focus of how science and sciencebased technology have interacted with American society from the Colonial era to the present. Central to this course is the genesis of mass production, its coupling with mass distribution, and the rise of the industrial research laboratory. Primary topics include the Industrial Revolution, the revolution in transport, the introduction of new technologies in the electrical, aviation, automotive, nuclear, petrochemical, and pharmaceutical industries, and the relationship between these science-based technologies and society. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 342. Environmental History. 3 Hours

An historical exploration of the relationships between the natural environment and human society. Prerequisite(s): HST 103 or ASI 110 or equivalent.
HST 343. History of Civil Engineering. 3 Hours
Historical study of the development of civil engineering from the origins in the ancient world to the present. Prerequisite(s): HST 103 or equivalent.
HST 344. History of Science, Technology \& the Modern Corporation. 3 Hours
Historical study of the emergence of twentieth-century science-based industry. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 346. History of American Aviation. 3 Hours

Exploration of the technological, social, political, military and industrial history of American aviation. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 347. Sex, Race \& Science. 3 Hours

Examines the development of scientific research on sex, race, and human nature focusing especially on the biological and the human sciences. Topics will include race science, the study of sex and sexuality, evolutionary accounts of human development, and relations between science and society from 1700. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 348. Life \& Technology. 3 Hours

Study of how conceptions of life and technology have been tied together in key historical periods: from the early modern era, the industrial age, and the information age. Topics include life and mechanical philosophy; energy, work and life; cybernetics; reproductive technologies and genetic engineering; bioinformatics; and automata and robots. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 349. Technology \& the Culture of War. 3 Hours

Investigation of the role of invention and engineering as it has been related to defense and war throughout the ages, focusing on the interrelationship of policy, strategy, organization, and technology from a global perspective. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 350. Gay \& Lesbian U.S. History. 3 Hours

Upper level survey course which traces the history and trajectory of Gay and Lesbian communities in the U.S. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 351. American Gender \& Women's History. 3 Hours

A history class which takes into account how men's and women's lives have changed over the course of American history from the colonial period to the present. Gender, as an analytical tool and an historical construct, is incorporated to examine social, political, cultural, economic, environmental, ideological, and legal factors in time and place as well as to evaluate the racial, ethnic, class, and religious differences that shaped everyday experience and structural forces in history. Prerequisite(s): HST 103 or equivalent.

## HST 352. History of the American Family. 3 Hours

Survey of the historical development of American family life from the colonial period to the present. Prerequisite(s): HST 103 or ASI 110 or equivalent.
HST 353. History of Women in European Societies. 3 Hours
Study of the changing roles of women in European societies from the roots of industrialization to the present. Prerequisite(s): HST 103 or ASI 110 or equivalent.
HST 354. History of Women \& Gender in the Middle East. 3 Hours Study of the history of the evolving roles and status of women in Middle Eastern societies, from the early modern period to present. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 355. American Urban History. 3 Hours

An examination of the modern American city from the late 19th century to the present. The course addresses contemporary (as well as historic) social issues and problems; examines significant social issues or problems in a multidisciplinary or interdisciplinary framework; and, most importantly, brings together different disciplinary perspectives to enhance students' understanding of significant issues facing the modern American city. Prerequisite(s): HST 103; Junior Standing.

HST 356. Comparative History of Women in the Third World. 3 Hours Study of the comparative histories of women in Third World societies from a global perspective, using specific case studies of women in different societies around the world. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 357. Modern Latin America. 3 Hours

Intensive examination of revolution and reaction in today's Latin America and the implications for those who formulate U.S. foreign policy.
Prerequisite(s): HST 103 or equivalent.
HST 358. Social \& Cultural History of Latin America. 3 Hours
Survey of social and cultural history of Latin America and the Caribbean from the pre-Columbian era to the present. Emphasis on the interaction between European colonizers, the Amerindian peoples of the hemisphere, the African slave trade and American slave system. Prerequisite(s): HST 103 or equivalent.

HST 359. History of American City Planning. 3 Hours
Historical analysis of the efforts of both public and private sector actors in the United States to shape the urban environment, including a focus on the emergence of the profession of city planning, a detailed examination of the roles of race and class in shaping planning decisions and their consequence, as well as issues of energy and sustainability. Prerequisite(s): HST 103 or ASI 110 or equivalent.
HST 360. U.S. Legal \& Constitutional History I. 3 Hours
An analysis of the major developments in American legal and constitutional history from colonial beginnings through the Civil War. Emphasis on the relationship between the Constitution, the law, and lawyers, on the one hand, and America's economic, social and political developments, on the other. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 361. U.S. Legal \& Constitutional History II. 3 Hours

An analysis of the major developments in American legal and constitutional history from the Reconstruction era to the present. Emphasis on the relationship between the Constitution, the law, and lawyers, on the one hand, and America's economic, social, and political developments, on the other. Prerequisite(s): HST 103 or ASI 110 or equivalent.
HST 363. The Wealth of Nations: A History of Economic Thought. 3 Hours Survey of the history of economic thought from Adam Smith to the present based on a close reading of key primary texts and their connection to broader political, social and cultural events and trends that situates Catholic social teaching within this narrative. Prerequisite(s): HST 103 or equivalent.

## HST 365. American Films as History. 3 Hours

Survey of the history of film within U.S. history more broadly. Emphasis is on the connection and interaction of the film-production and content to changes in American society since 1900. Study of the development of American values, myths, institutions, and perspectives through the use of films as a primary source. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 368. The Soviet Experiment: From Lenin to Putin. 3 Hours

Survey of the history of the Soviet Union and the Russian Federation from roughly 1917 until the present offering an intensive examination of social, economic, political and cultural aspects of the Soviet project and the factors contributing to its end. Prerequisite(s): HST 103.

## HST 369. Civil War \& Reconstruction. 3 Hours

Remote and immediate causes of the Civil War; problems of North and South during the war; consequences of the war; efforts to create a new Union, 1865 to 1877; problems caused by those efforts. Prerequisite(s): HST 103 or ASI 110 or equivalent.
HST 370. Economic \& Business History of the United States. 3 Hours Survey and analysis of American economic history, 1600 to present, primarily through a study of American business institutions and leaders. Includes analysis of major economic theories of history as well as case studies of entrepreneurs. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 371. Labor and Working Class History. 3 Hours

Study of labor and working class history in the modern world (late 18th-21 st centuries) from comparative, global, and chronological persepctives. Prerequisite(s): HST 103 or ASI 110 or equivalent.

HST 372. History of Religion in the United States. 3 Hours
Survey of religion in the United States from the colonial era to the present. Particular attention to the interaction of religion with other aspects of American society and culture. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 373. American Military History. 3 Hours

Survey of American military affairs, including military, naval, and air campaigns, from early settlement to the present. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 374. Ireland \& America. 3 Hours

Study of the cultural-historical background of both Scotch-Irish and Celtic Irish immigrants to America and how they influenced the varying reactions of the dominant Anglo-Saxon Protestantism of America. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 375. History of US Foreign Relations Since 1750. 3 Hours

A case-study approach to the philosophical, economic, political, and religious foundations of US foreign relations since 1750, the expansion of foreign relations during the continental expansion of the nineteenth century and the beginning of the extra-continental empire in 1898. Special emphasis on the emergence of multifaceted and interconnected global foreign relations after 1898. Course meets Advanced Historical Studies and Crossing Boundaries: Inquiry components. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 376. Social \& Cultural History of the United States. 3 Hours

Examination of the social and cultural development in American history. It examines the daily life of people at work and play, while linking those experiences to the development of social structure, beliefs, and cultural rituals over time. Prerequisite(s): HST 103 or equivalent.

## HST 377. Contemporary American History. 3 Hours

The immediate background of contemporary political, social, and economic problems, beginning with the impact of World War II on the United States. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 378. Immigration History. 3 Hours

This course approaches immigration history from geographically and chronologically expansive perspectives which highlight transnationalism as a category of analysis and a lived historical reality. The course links the experience of immigrants from different sending and receiving countries and compares the ways that local, national, continental and global conditions shaped migration over time. Immigrants were pushed and pulled to find work, to escape religious persecution, to pursue political freedoms, to secure human rights, and to cope with forces of the industrial and post industrial eras that included slavery, capitalism, patriarchy, empire, and other structural forces of oppression. Prerequisite(s): HST 103 or equivalent.

## HST 379. The History of Food. 3 Hours

Study of the myriad ways that food has impacted history and the key role history plays in shaping food and food-related issues today. Prerequisite(s): HST 103 or the equivalent.

## HST 380. Native American History. 3 Hours

Historical and descriptive survey of the native peoples of North America. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 382. History of Mexico. 3 Hours

Survey of Mexican history from pre-Columbian civilization to the present. Prerequisite(s): HST 103 or equivalent.

HST 383. History of the Caribbean. 3 Hours
Study of the cultural, social, economic, and political history of the islands and the northern shore of South America through modern times, stressing areas that have gained independence or autonomy. Prerequisite(s): HST 103 or equivalent.

## HST 384. Economic History of Latin America. 3 Hours

Examination of the integration of Latin America into the world trading system and analysis of the twentieth century's successes and failures of export-led growth and industrialization. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 385. The Atlantic World, 1492-1800. 3 Hours

Comparative look at the people and cultures of Europe, Africa and the Americas who collaborated in the colonization of the Americas. Topics to be covered will include: slavery, missionary work, virgin soil epidemics, frontier wars, gender and the invention of racial categories. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 386. China in Revolution. 3 Hours

Study of the history of China's turbulent twentieth century, with a focus on the social, political and cultural impacts of the 1911 Revolution, the Communist Revolution in 1949, and the Cultural Revolution of the 1960s. Prerequisite(s): HST 103 or equivalent.
HST 391. American Architectural History \& Preservation. 3 Hours
Career-oriented course offering a theoretical background in historical preservation and techniques used in identification, research, and recording of historic landmarks worthy of preservation as part of the community heritage. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 397. History of Black Women. 3 Hours

Survey of the lived experiences of African American women and the interlocking themes of race, class, gender, sexuality, and religiosity that impacted their lives. This course examines their contributions in reform, activism, education, business, religion, law, literature, and politics. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 398. African American History before 1877. 3 Hours

This course examines the history and culture of African Americans from the great empires in Africa to the end of the United States Reconstruction era in 1877. Prerequisite(s): HST 103 or equivalent.
HST 399. History of Blacks in the United States Since 1900. 3 Hours Study of the saga of black people in the U.S. from 1900 to the present. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## HST 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## HST 485. Seminar in American History. 3 Hours

Reading seminar concentrating on one historical topic in American history for detailed analysis. May be repeated as topics change.
Prerequisite(s): HST 103 or ASI 110 or equivalent; HST 301 or permission of department chairperson.

## HST 486. Seminar in European History. 3 Hours

Reading seminar concentrating on one historical topic in European history for detailed analysis. May be repeated as topics change. Prerequisite(s): HST 103 or ASI 110 or equivalent; HST 301 or permission of department chairperson.

## HST 487. Seminar in Latin American History. 3 Hours

A reading seminar concentrating on one historical topic in Latin American history for detailed analysis. May be repeated as topics change.
Prerequisite(s):HST 103 or ASI 110 or equivalent; HST 301 or permission of department chairperson.

## HST 488. Seminar in African History. 3 Hours

Reading seminar concentrating on one historical topic in African history for detailed analysis. May be repeated as topics change. Prerequisite(s): HST 103 or ASI 110 or equivalent; HST 301 or permission of department chairperson.

## HST 490. Seminar in Histography. 3 Hours

Reading seminar concentrating on the various techniques and philosophies of history by which historians have done historical research. May be repeated as topics change. Prerequisite(s): HST 103 or ASI 110 or equivalent; HST 301 or permission of department chairperson.

## HST 491. Seminar in Ancient History. 3 Hours

Reading seminar concentrating on one historical topic in ancient history for detailed analysis. May be repeated as topics change.

## HST 492. Seminar in Asian History. 3 Hours

Reading seminar concentrating on one historical topic in Asian history for detailed analysis. May be repeated as topics change.

HST 493. Seminar in Middle Eastern History. 3 Hours
Reading seminar concentrating on one historical topic in Middle Eastern history for detailed analysis. May be repeated as topics change. Prerequisite(s): HST 103 or ASI 110 or equivalent; HST 301 or permission of department chairperson.

## HST 495. Internship. 3 Hours

Practical and professional experience through work with approved organizations such as historical societies, architectural preservation boards, and business firms. Prerequisite(s): HST 103 or ASI 110 or equivalent; permission of supervising instructor.
HST 496. Independent Study. 1-6 Hours
The study of a special topic to be mutually selected by the student and a history professor. Prerequisite(s): HST 103 or ASI 110 or equivalent; permission of department chairperson.

## HST 497. Honors Tutorial. 1-6 Hours

The study of a special topic to be selected by the instructor. Applicants will be admitted on the basis of academic record. May be repeated once. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## HST 498. History Capstone Seminar. 3 Hours

Capstone seminar course required for all senior history majors as the culmination of the Common Academic Program. Explores the perspective and practices of the professional historian. Students will demonstrate the ability to work critically with primary sources resulting in a scholarly project suited to their own professional goals. History majors only. Prerequisite(s): (HST 103 or ASI 110), HST 150, HST 301.

HST 499. Topics in History. 1-6 Hours
Specific subtitles and descriptions to be announced in the composite and posted in the History department office. Prerequisite(s): HST 103 or ASI 110 or equivalent.

## International Studies

- Bachelor of Arts, International Studies (p. 204)

Concentrations:

- Global Health and Environment (p. 205)
- Global Migration and Economic Development (p. 206)
- International Business (p. 206)
- International Education (p. 206)
- International Journalism and New Media (p. 206)
- Peace and Global Security (p. 206)

Minors:

- International Studies (p. 207)
- Asian Studies (p. 207)
- Middle East and Islamic Studies (p. 207)

The International Studies program is designed to provide students with a broad educational foundation for leadership and service in the complex global community. Providing our students with the tools necessary to understand complex international issues, the curriculum includes foundation courses in language arts, humanities, and social sciences, one of several thematic concentrations, and a senior capstone. The self-designed experiential learning component allows majors to expand their language skills and knowledge of other countries while gaining valuable on-site experience through the University's education abroad programs or by participating in one of several domestic internships with an international focus. Our graduates are employed by government agencies, humanitarian organizations, multi-national corporations, law enforcement agencies, educational institutions, and law firms throughout the United States and other parts of the world.

The minor in International Studies consists of 21 semester hours.
Minors in area studies consist of 15 hours and are open to all UD students (including INS majors) wishing to add regional specialization to their course of study.

## International Studies Committee

Christopher Agnew, Director
Bilocerkowycz (Political Science), Dasgupta (Anthropology), Hudson (Political Science), MacLachlan (Music), Roy (History)

## Bachelor of Arts, International Studies (INS) minimum 124 hours

## Common Academic Program (CAP) <br> *credit hours will vary depending on courses selected

First-Year Humanities Commons ${ }^{1} 12$

| HST 103 | The West \& the World |  |
| :--- | :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I $^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ | $0-3$ |  |


| ENG $200 \quad$ Writing Seminar II |  |
| :--- | :---: |
| Oral Communication | 3 |
| CMM 100 Principles of Oral Communication |  |
| Mathematics |  |
| Social Science | 3 |
| SSC $200 \quad$ Social Science Integrated | 3 |
| Arts | 3 |
| Natural Sciences ${ }^{4}$ | 7 |
| Crossing Boundaries | variab |
|  | credit |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |


| Advanced Study | variabl |
| :--- | :--- |
| credit |  |


| Philosophy and/or Religious Studies |  |
| :--- | ---: |
| Historical Studies ${ }^{5}$ | 3 |
| Diversity and Social Justice | $0-3$ |

Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

| Liberal Studies Curriculum |  |  |
| :---: | :---: | :---: |
| Creative and | orming Arts (May include CAP Arts) | 3 |
| Literature (M | clude CAP Components) | 3 |
| Mathematics | luding MTH 205 (Satisfies CAP Mathematics) | 3 |
| Natural Scien | (Satisfies CAP Natural Science) | 11 |
| Social Scienc | (ncludes CAP Social Science) | 3 |
| Major Requir | nts: Foundation Requirements ${ }^{1}$ | 48 |
| Includes CAP Components |  |  |
| ECO 204 | Principles of Macroeconomics | 3 |
| INS 499 | Senior Capstone Seminar (Satisfies CAP Major Capstone) | 3 |
| Select one course from: |  | 3 |
| HST 375 | History of US Foreign Relations Since 1750 |  |
| POL 335 | United States National Security Policy |  |
| Select one course from: |  | 3 |
| ENG 345 | Postcolonial Literature |  |
| MUS 303 | Introduction to Musics of the World |  |
| PHL 358 | Marxist Philosophy |  |
| PHL 370 | Political Philosophy |  |
| REL 363 | Faith \& Justice |  |
| REL 474 | Women \& the Global Church |  |
| Select one course from: |  | 3 |
| POL 202 | Introduction to Comparative Politics |  |
| POL 214 | Introduction to International Politics |  |
| Select one | from: | 3 |



## Select one concentration from: ${ }^{3}$

Concentration: Global Health and Environment ..... 15
Select two courses from: ..... 6

| ECO 435 | Economics of the Environment |  |
| :---: | :---: | :---: |
| ENG 342 | Literature and the Environment |  |
| ENG 366 | Health Literacy and Social Justice |  |
| HST 342 | Environmental History |  |
| PHL 315 | Medical Ethics |  |
| PHL 321 | Environmental Ethics |  |
| PHL 334 | Philosophy \& Ecology |  |
| POL 371 | Environmental Policy |  |
| REL 472 | Ecology \& Religion |  |
| SWK 335 | Social Work \& Environmental Justice |  |
| Select three cours | es from: | 9 |
| ASI 320 | Cities \& Energy |  |
| ASI 345 | Special Topics in Social Science |  |
| BIO 310 | Ecology |  |
| BIO 359 | Sustainability \& the Biosphere |  |
| BIO 395 | Global Environmental Biology |  |
| BIO 466 | Biology of Infectious Disease |  |
| CHM/GEO 234 | Energy Resources |  |
| CMM 411 | Health Communication |  |
| ENG 373 | Writing in the Health Professions |  |
| GEO 208 | Environmental Geology |  |
| GEO 450 | Applied Geographic Information Systems |  |
| GEO 455 | Envrionmental Remote Sensing |  |
| SEE 250 | Introduction to Sustainability, Energy \& the Environment |  |
| SEE 301 | Global Change \& Earth Systems |  |

Concentration: Global Migration and Economic Development 15
Select two courses from: 6

| ACC 200 | Introduction to Accounting |
| :--- | :--- |
| CMM 332 | Publication Design |
| ENG 370 | Report \& Proposal Writing |
| POL 361 | Leadership in Nongovernmental Organizations |
| MPA 561 | Nonprofit \& Community Leadership ${ }^{5}$ |
| MPA 562 | Strategic Planning for Nonprofit \& Community <br> Organizations 5 |

Select three courses from:
ANT/SOC 368 Immigration \& Immigrants
ECO 460 Economic Development \& Growth
ECO 461 International Economics
HST 378 Immigration History
POL 333 Politics of Human Rights
POL 334 Politics of Human Rights II
PHL 310 Social Philosophy
PHL 371 Philosophy \& Human Rights
REL 330 Faith of Immigrants
SOC 328 Racial \& Ethnic Relations
SOC 339 Social Inequality
SOC 371 Sociology of Human Rights
SOC 384 Food Justice
SWK 360 International Social Work

| Concentration: International Business | 15 |  |
| :--- | :--- | ---: |
| INB 302 | Survey of International Business | 3 |
| MGT 403 | Cross-Cultural Management | 3 |
| Select three courses from: | 9 |  |
| ACC 207 | Introduction to Financial Accounting |  |
| ECO 460 | Economic Development \& Growth |  |
| ECO 461 | International Economics |  |
| FIN 450 | International Business Finance |  |
| INB 350 | Doing Business in Emerging Markets |  |
| INB 351 | Doing Business in Latin America |  |
| INB 352 | Doing Business in Asia |  |
| INB 353 | Doing Business in Europe |  |
| INB 354 | Doing Business in Africa |  |
| INB 357 | Export Management |  |
| MKT 440 | Global Marketing |  |
| PHL 313 | Business Ethics |  |

Concentration: International Education ..... 15
EDT 437 Second Language Learning and Teaching 3
ENG 466 TESOL Methods for Teaching English Language 3Learners
ENG 472 The Structure of English 3
ENG/LNG 468 Introduction to Linguistics ..... 3
Select one course from: ..... 3

| ANT 315 | Language \& Culture |
| :--- | :--- |
| CMS 316 | Intercultural Communication |
| SWK 360 | International Social Work |

Concentration: International Journalism and New Media 15
Select five courses from: ..... 15

| CMM 331 | Feature Writing |
| :--- | :--- |
| CMM 332 | Publication Design |
| CMM 340 | Fundamentals of Broadcasting |
| CMM 344 | Multimedia Design \& Production I |
| CMM 350 | History and Analysis of Propaganda |
| CMM 355 | Rhetoric of Social Movements |
| CMM 431 | Public Affairs Reporting |
| CMM 432 | Media Law |
| CMS 414 | Global Communication |

Concentration: Peace and Global Security ..... 15
Select three courses form: ..... 9

| CJS 336 | Comparative Criminal Justice Systems |
| :--- | :--- |
| ECO 461 | International Economics |
| POL/INS 336 | United Nations System: Theory and Practice |
| POL 406 | International Law \& Organization |
| POL 408 | American Foreign Policy |
| POL 452 | Political Violence |

Select one course from: ..... 3

| HST 320 | European Military History |
| :--- | :--- |
| HST 349 | Technology \& the Culture of War |
| HST 373 | American Military History |


| Select one course from: |  |
| :--- | :--- |
| PHL 317 | Ethics of War |
| PHL 327 | Philosophy of Peace |
| PHL 371 | Philosophy \& Human Rights |

## Breadth

ASI $150 \quad$ Introduction to the University Experience 1

Total Hours to total at least
1 Courses taken for the major may also count toward completion of the Common Academic Program and the Liberal Studies Curriculum.
2 Must be at 300 level or above and exclusive of literature, film, or culture courses. There are currently no 300 level courses offered in Arabic or Mandarin Chinese. In these cases, students are required to complete the highest level course offered. Latin is not eligible for the INS language requirement. Completion satisfies the L2 requirement.
3 Students pursuing any concentration must take into account prerequisites or class standing restrictions.
4 This course counts for biology majors, but is accessible to nonmajors as well.
5 With permission of the director of the Nonprofit \& Community Leadership Certificate Program.
6 With permission of the INS director.

## Minor in International Studies (INS)

| International Studies |  |  |
| :--- | ---: | ---: |
| ECO 204 | Principles of Macroeconomics | 3 |
| POL 214 | Introduction to International Politics | 3 |
| Select one LNG course $(202$ level or above) | 3 |  |
| Select four INS courses (300/400 level) ${ }^{1}$ | 12 |  |
| Total Hours | 21 |  |

1 Must be from at least three different disciplines, taken from International Studies core curriculum or concentrations.

## Minor in Asian Studies (ANS)

Asian Studies
Select five courses from at least three different disciplines: ${ }^{1}$

| ANT 360 | Making of Modern South Asia |
| :--- | :--- |
| CHI 202 | Intermediate Mandarin Chinese II |
| CHI 345 | Chinese Civilization and Culture |
| CHI 391 | Directed Study |
| HND 202 | Intermediate Hindi II |
| HST 260 | History of Pre-Modern East Asia |
| HST 330 | History of East Asia to 1800 |
| HST 331 | India: Traditions and Encounters |
| HST 332 | History of Modern East Asia |
| HST 335 | Making of Modern South Asia |
| HST 338 | State \& Secession in South Asia |
| HST 339 | Gandhi's India |
| HST 386 | China in Revolution |
| HST 492 | Seminar in Asian History |
| INB 352 | Doing Business in Asia |
| PHL 346 | Chinese Philosophy |
| PHL 347 | Japanese Philosophy |


| PHL 348 | Comparative East-West Philosophy |
| :--- | :--- |
| PHL 355 | Asian Philosophy |
| REL 304 | Hinduism |
| REL 306 | Buddhism |
| VAH 330 | Arts of Asia |
| Total Hours | 15 |
|  |  |
| Additional courses may be approved by the Program Director. |  |
| Individual sections of courses may be approved for credit if the |  |
| content of the section is focused on Asia. |  |

## Minor in Middle East and Islamic Studies (MEI)

The Middle East and Islamic Studies Minor is designed for students interested in the language, history, culture, and philosophies of the Middle East and Islamic world. With a focus on the past, present, and evolving issues within this region, students will be exposed to interdisciplinary methodologies and comparative perspectives. The Minor is designed to allow students to plan a structured series of courses that will contribute to an intellectual engagement and appreciation of the diversity of the Middle East and Islamic world. The Minor consists of 15 credits selected from the following disciplines: Global Languages, History, Philosophy, and Religious Studies.

## Middle East and Islamic Studies

Select 15 semester hours of courses from at least three different disciplines:

| ARA 201 | Intermediate Arabic I |
| :--- | :--- |
| ARA 202 | Intermediate Arabic II |
| ARA 301 | Arabic Conversation and Composition I |
| ARA 302 | Arabic Conversation and Composition II |
| ARA 315 | Modern Arabic Culture |
| ARA 391 | Directed Study of Colloquial Arabic |
| HST 280 | Making of the Modern Middle East |
| HST 329 | Americans and the Middle East |
| HST 334 | History of the Palestinian-Israeli Conflict |
| HST 354 | History of Women \& Gender in the Middle East |
| PHL 351 | Jewish, Christian, and Islamic Philosophy |
| PHL 365 | Islamic Philosophy \& Culture |
| REL 208 | Faith Traditions: Islamic Religious Traditions |
| REL 307 | Judaism |
| REL 308 | Islam |

## First Year

Fall
ASI 150

| Hours Spring | Hours |
| :--- | ---: |
| 1 ENG 100 | 3,4 |
| (CAP |  |
| Humanities |  |
| Commons) |  |
| 3 PHL 103 |  |
| (CAP |  |
| Humanities |  |
| Commons) |  |
| 3 CMM 100 |  |
| (CAP |  |
| Communication) |  |
| 3 Language |  |
| 141 |  |


| MTH 114 or 207 (Satisfies CAP Mathematics) | 3 SCI 190 | 4 |
| :---: | :---: | :---: |
|  | \& 190L (CAP |  |
|  | Natural |  |
|  | Science) |  |
| Language 101 | 4 |  |
|  | 17 | 17-18 |
| Second Year |  |  |
| Fall | Hours Spring | Hours |
| ECO 204 | 3 ANT 306, POL | 3 |
|  | $331, \text { POL 340, }$ |  |
|  | or SOC 435 |  |
| ENG 200 (CAP Writing Seminar) | 3-4 ENG 345, | 3 |
|  | MUS 303, |  |
|  | PHL 358, PHL |  |
|  | 370, REL 363, |  |
|  | or REL 474 |  |
| SSC 200 (CAP Social Science) | 3 CAP Faith | 3 |
|  | Traditions |  |
| Language 201 | 3 Language | 3 |
|  | 202 |  |
| SCI 210 | 4 SCI 230 | 3 |
| \& 210L (CAP Natural Science) | (INSS Natural |  |
|  | Science) |  |
|  | 16-17 | 15 |
| Third Year |  |  |
| Fall | Hours Spring | Hours |
| HST 375 (CAP Advanced Historical Studies) | 3 Literature | 3 |
| Area Study | 3 Area Study | 3 |
| Concentration course | 3 Area Study | 3 |
| CAP Arts / Creative and Performing | 3 CAP Inquiry | 3 |
| Language 311 | 3 Language | 3 |
|  | 300 or |  |
|  | 400 level, |  |
|  | Literature |  |
|  | 15 | 15 |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| Concentration course | 3 INS 499 | 3 |
|  | (Satisfies |  |
|  | CAP Major |  |
|  | Capstone) |  |
| Concentration course | 3 Concentration course | 3 |
| CAP Practical Ethical Action | 3 Concentration course | 3 |
| CAP Integrative | 3 CAP | 3 |
|  | Advanced |  |
|  | Philosophy/ |  |
|  | Religious |  |
|  | Studies |  |
| CAP Advanced Philosophy/Religious Studies | 3 CAP Diversity | 3 |
|  | and Social |  |
|  | Justice |  |
|  | 15 | 15 |

Total credit hours: 125-127

## Courses

INS 336. United Nations System: Theory and Practice. 3 Hours Introduction to the United Nations system with detailed case studies of specific countries, issues, and policies. Course also serves to prepare students for participation in the National Model United Nations Conference. Prerequisite(s): SSC 200.

## INS 390. Model United Nations. 1 Hour

Examination of the work and procedures of the United Nations and its constituent bodies, study of various international issues and policies of member states, as well as of parliamentary diplomatic practices such as caucusing, resolution writing, and speech making in preparation for participation in Model United Nations simulations. Prerequisite(s): Permission of instructor.

## INS 395. International Experience. 1 Hour

Orientation for and evaluation of study abroad, internship, immersion, work, or service experience in a foreign country, organization involved in international activities, or a cross-cultural setting in the United States. Grading Option Two only.
INS 399. Independent Study. 1-3 Hours
Independent reading and research on an interdisciplinary topic in international studies chosen by the student in consultation with one or more faculty members. May be repeated. Prerequisite(s): Permission of program director.

## INS 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## INS 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two 3 separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## INS 495. International Studies Internship. 1-6 Hours

3 Practical, supervised experience with an approved organization dealing with international affairs. Repeatable up to six hours. Prerequisite(s): Permission of program director.

## INS 499. Senior Capstone Seminar. 3 Hours

Capstone seminar for International Studies Program. Students will demonstrate the ability to integrate the academic and experiential components of their multidisciplinary degree program in a capstone research project suited to their individual professional goals. International Studies program majors only. Prerequisite(s): Senior status; international experience completed; permission of program director.

## Marianist Social Transformation

The minor in Marianist social transformation offers an interdisciplinary approach to Catholic, Marianist, and Christian studies. The program allows the student to utilize the rich resources in service, teaching, and research at the University of Dayton in order to explore and investigate those topics and issues that lie at the heart of the University. Open to all, participants will benefit from the 200 year Marianist experiment in the professions and higher education. Through its courses and activities, the minor prepares distinctive graduates to carry out social transformation based upon an understanding of Catholic and Christian contributions to the arts, sciences, and the professions.

## Marianist Studies Committee

Danielle M. Poe (Office of the Dean), Coordinator
Cadegan (History), Ensalaco (Political Science), Fitz (Ferree Professor in
Social Justice), Inglis (Philosophy), Johnson (Religious Studies), Portier
(Spearin Chair), Trollinger (History), Zukowski (Institute for Pastoral Initiatives)

## Minor in Marianist Social Transformation <br> (MST)

Marianist Social Transformation

| MST 210 | Speakers on Catholic Social Tradition | 1 |
| :---: | :---: | :---: |
| MST 310 | Reading the Signs of the Times | 3 |
| or MST 311 | Reading the Signs of the Times |  |
| or MST 312 | Reading the Signs of the Times |  |
| Select one cours | from: | 3 |
| ASI 358 | Christianity, Citizenship \& Society |  |
| HST 372 | History of Religion in America |  |
| PHL 327 | Philosophy of Peace |  |
| PHL 356 | Christian Philosophy |  |
| REL 363 | Faith \& Justice |  |
| Select two cours | es from two different disciplines: | 6 |
| ASI 357 | Vocation \& the Arts |  |
| ASI 371 | Professional Ethics in a Global Community Business Administration |  |
| ASI 372 | Professional Ethics in a Global Community Education |  |
| ASI 373 | Professional Ethics in a Global Community Engineering |  |
| ASI 374 | Professional Ethics in a Global Community Philosophical |  |
| ASI 375 | Professional Ethics in a Global Community Religious |  |
| EGR 330 | Engineering Design \& Appropriate Technology |  |
| ENG 323 | Literature of the Christian Tradition |  |
| ENG 384 | Christianity \& Modern Poetry |  |
| HST 305 | Early Medieval Europe |  |
| HST 307 | Renaissance \& Reformation |  |
| HST 311 | Old Regime Europe |  |
| HST 313 | The Dual Revolution \& its Consequences - Europe 1815-1914 |  |
| HST 358 | Social \& Cultural History of Latin America |  |
| MUS 301 | Music History \& Literature I |  |
| MUS 305 | African-American Sacred Music |  |
| MUS 350 | Sacred Music History |  |
| MUS 452 | Contemporary Liturgical Music Repertoire |  |
| PHL 307 | Philosophy and Feminist Thought |  |
| PHL 311 | Philosophy of Religion |  |
| PHL 312 | Ethics |  |
| PHL 313 | Business Ethics |  |
| PHL 315 | Medical Ethics |  |
| PHL 316 | Engineering Ethics |  |
| PHL 319 | Information Ethics |  |
| PHL 351 | Jewish, Christian, and Islamic Philosophy |  |
| PHL 360 | Existentialism |  |


| POL 333 | Politics of Human Rights |
| :--- | :--- |
| POL 426 | Leadership in Building Communities |
| PSY 451 | Psychology of Religion |
| REL 323 | History of Early Christianity |
| REL 324 | History of Christianity II: Medieval |
| REL 358 | Liberation Theologies |
| REL 367 | Christian Ethics \& Health Care Issues |
| REL 368 | Christian Ethics \& the Business World |
| REL 369 | Christian Ethics and Engineering |
| REL 471 | Women \& Religion |
| REL 474 | Women \& the Global Church |
| SOC 334 | Religion \& Society |
| SOC 339 | Social Inequality |
| SOC 426 | Leadership in Building Communities |
| VAH 450 | Italian Renaissance Art |
| VAH 460 | Baroque Art |
| Total Hours |  |

## Courses

MST 210. Speakers on Catholic Social Tradition. 1 Hour
Introduction to contemporary Marianist, Catholic, and Christian social issues as reflected in presentations made on campus by significant outside speakers. Study and discussion of texts in order to meet and evaluate speakers.

## MST 310. Reading the Signs of the Times. 3 Hours

An integrated interdisciplinary exploration of local needs in light of Catholic social tradition and Marianist educational philosophy. In the process of this integrated analysis, the Historical Study domain will be emphasized. This course is cross-listed with MST 311 and MST 312 and is the capstone for the minor. Prerequisite(s): MST 210; three courses in minor.

## MST 311. Reading the Signs of the Times. 3 Hours

An integrated interdisciplinary exploration of local needs in light of Catholic social tradition and Marianist educational philosophy. In the process of this integrated analysis, the domain of Philosophy will be emphasized. This course is cross-listed with MST 310 and MST 312 and is the capstone for the minor. Prerequisite(s): MST 210; three courses in minor.

## MST 312. Reading the Signs of the Times. 3 Hours

An integrated interdisciplinary exploration of local needs in light of Catholic social tradition and Marianist educational philosophy. In the process of this integrated analysis, the domain of Religious Studies will be emphasized. This course is cross-listed with MST 310 and MST 311 and is the capstone for the minor. Prerequisite(s): MST 210; three courses in minor.

## Mathematics

Majors:

- Bachelor of Arts, Mathematics (p. 210)
- Bachelor of Science, Applied Mathematical Economics (p. 211)
- Bachelor of Science, Mathematics (p. 212)


## Minors:

- Actuarial Science (p. 212)
- Mathematics (p. 213)

The B.A. program in mathematics provides for a breadth of mathematical study within the context of a liberal arts degree. It may be chosen as a preparation for a professional career in business, education, law, or social science. It affords the student a significant distribution of courses in the humanities and social sciences so that he or she can develop a concentration in a field other than mathematics. The student's career goals will generally suggest desirable upper level mathematics electives. For example, prospective secondary mathematics teachers should participate in the licensure program and elect courses such as MTH 370, MTH 395, and MTH 466. Students with an interest in business, law, or social science should complete the probability and statistics sequence MTH 411 -MTH 412.

The B.S. program in mathematics provides a foundation for students who wish to pursue graduate studies in any area of the mathematical sciences, to enter the actuarial profession, or to enter careers where mathematics is used in an engineering or science setting. A preparation for graduate programs in a mathematical science should include electives such as MTH 342, MTH 404,and MTH 471. Those planning on pursuing an actuarial career should take the actuarial science minor described below. To prepare for using mathematics in an applied context, some useful elective courses are MTH 403, MTH 404, and the MTH 411 -MTH 412 sequence. All students pursuing a bachelor of science in mathematics are required to complete a minor in another subject.

The B.S. program in applied mathematical economics provides a foundation in economics, mathematics, and statistics needed for graduate study in economics or applied statistics, or for research and technical careers in business or government service. This degree is offered jointly by the Department of Mathematics and the Department of Economics and Finance in the School of Business Administration.

The basic courses are offered every term:

| MTH 168 | Analytic Geometry \& Calculus I | 4 |
| :--- | :--- | :--- |
| MTH 169 | Analytic Geometry \& Calculus II | 4 |
| MTH 218 | Analytic Geometry \& Calculus III | 4 |
| MTH 219 | Applied Differential Equations | 3 |
| MTH 308 | Foundations \& Discrete Mathematics | 3 |
| MTH 310 | Linear Algebra \& Matrices | 3 |

Most majors will take MTH 218 and MTH 308 in the same term.
The required core courses are offered at least once a year:

| MTH 330 | Intermediate Analysis | 3 |
| :--- | :--- | :--- |
| MTH 361 | Introduction to Abstract Algebra | 3 |
| MTH 411 | Probability \& Statistics I | 3 |
| MTH 412 | Probability \& Statistics II | 3 |
| MTH 430 | Real Analysis | 3 |

However, most of the other upper-level electives for the major are offered only once every two years; thus careful planning for a student's upper-level electives should be done in consultation with the advisor. In addition, the symbolic logic course, PHL 302, is a recommended Common Academic Program course for all mathematics majors.

A minor in mathematics consists of 12 semester hours (300-400 level).
A minor in actuarial science is offered through the Department of Mathematics. This consists of courses in calculus, statistics, theory
of interest, economics, and finance, and is designed to prepare the student to take the actuarial examinations in probability and financial mathematics.

## Faculty

Wiebke Diestelkamp, Chairperson
Distinguished Service Professor: Peterson
Professors Emeriti: Back, Friel, Gantner, Gorton, Kauflin, McCloskey, Mushenheim, Rice, Schleppi, Shaughnessy, R. Steinlage, Strange
Professors: Abueida, Diestelkamp, Driskell, Eloe, Higgins, Islam, Liu, Mashburn, Raffoul
Associate Professors: Busch, Hovey, Krakowski, Qumsiyeh, Usman, Yengulalp
Assistant Professors: Brown, Chen, Cordeiro, Kublik, Larrain-Hubach, Ren, Veliz-Cuba
Lecturers: Harrison, Ober, Saintignon, Simon

## Bachelor of Arts, Mathematics (MTH) minimum 124 hours



Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice
3
$\begin{array}{ll}\text { Major Capstone } & \text { 0-3 }\end{array}$

1
2
3

## Liberal Studies Curriculum

Creative and Performing Arts (May include CAP Arts)

| L2 Proficiency (Proficiency in a language other than English) |  | 0-11 |
| :---: | :---: | :---: |
| Literature (May include CAP Components) |  | 3 |
| Natural Sciences (Satisfies CAP Natural Science) |  | 1 |
| Social Sciences (Includes CAP Social Science) |  | 12 |
| Major Requirements |  | 34 |
| MTH 168 | Analytic Geometry \& Calculus I (Satisfies CAP Mathematics) | 4 |
| MTH 169 | Analytic Geometry \& Calculus II | 4 |
| MTH 218 | Analytic Geometry \& Calculus III | 4 |
| MTH 308 | Foundations \& Discrete Mathematics | 3 |
| MTH 310 | Linear Algebra \& Matrices | 3 |
| MTH 330 | Intermediate Analysis | 3 |
| MTH 361 | Introduction to Abstract Algebra | 3 |
| MTH 411 | Probability \& Statistics I | 3 |
| MTH 480 | Mathematics Capstone (Satisfies CAP Major Capstone) | 1 |

Select two MTH courses (300/400 level) 6
Breadth
ASI $150 \quad$ Introduction to the University Experience 1

Total Hours to total at least

## Bachelor of Science, Applied Mathematical Economics (MTE) minimum 120 hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |  |
| :---: | :---: | :---: |
| REL 103 | Introduction to Religious and Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| SSC 200 | Social Science Integrated |  |
| Arts |  | 3 |
| Natural Sciences ${ }^{4}$ |  | 7 |


| Crossing Boundaries |
| :--- | | varia |
| :--- |
| cred |

Advanced Stud

Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice
variab
credit

Major Capstone
Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.
Science Breadth Requirements
Satisfies CAP Natural Science
CPS 150 Algorithms \& Programming I 4

CPS 151 Algorithms \& Programming II 4
Select one natural sciences group from: 8
BIO 151 Concepts of Biology I: Cellular \& Molecular Biology
\& 151L and Concepts of Biology Laboratory I: Cellular \&
\& BIO 152 Molecular Biology
\& BIO 152L and Concepts of Biology II: Evolution \& Ecology and Concepts of Biology Laboratory II: Evolution \& Ecology
CHM 123 General Chemistry
\& 123L and General Chemistry Laboratory
\& CHM 124 and General Chemistry
\& CHM 124L and General Chemistry Laboratory
GEO 115 Physical Geology
\& 115L
\& GEO 116
\& GEO 116L
PHY 206
\& PHY 207
\& PHY 210L
\& PHY 211L
and Physical Geology Laboratory
and Geological History of the Earth and Geological History of the Earth Laboratory General Physics I-Mechanics and General Physics II - Electricity \& Magnetism and General Physics Laboratory I and General Physics Laboratory II

Major Requirements 46
Mathematics

| MTH 168 | Analytic Geometry \& Calculus I (Satisfies CAP <br> Mathematics) | 4 |
| :--- | :--- | :--- |
| MTH 169 | Analytic Geometry \& Calculus II | 4 |
| MTH 218 | Analytic Geometry \& Calculus III | 4 |
| MTH 308 | Foundations \& Discrete Mathematics | 3 |
| MTH 310 | Linear Algebra \& Matrices | 3 |
| MTH 330 | Intermediate Analysis | 3 |
| MTH 411 | Probability \& Statistics I | 3 |
| MTH 412 | Probability \& Statistics II | 3 |
| MTH 480 | Mathematics Capstone (Satisfies CAP Major | 1 | Capstone)

Economics
ECO 203
Principles of Microeconomics (Satisfies CAP 3
Crossing Boundaries: Inquiry)
ECO 204 Principles of Macroeconomics (Satisfies CAP 3
Crossing Boundaries: Inquiry)
ECO 346 Intermediate Microeconomic Analysis 3
ECO 347 Intermediate Macroeconomic Analysis 3
ECO 441 Econometrics 3
Select one ECO course (300/400 level)
3

| ASI 150 | Introduction to the University Experience | 1 |
| :--- | :---: | :---: |
| Social and Behavioral Sciences (Includes CAP Social Science) | 6 |  |
| Total Hours to total at least | 120 |  |

## Bachelor of Science, Mathematics (MTH) minimum 120 hours



Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice 3

Major Capstone
1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

## Science Breadth Requirements

| Computer Science (CPS 150 applies to CAP Natural Sciences) |  |
| :---: | :---: |
| CPS 132 or CPS 150 | Computer Programming for Engineering \& Science Algorithms \& Programming I |
| Select one natural sciences group from: (Applies to CAP Natural Science) |  |
| BIO 151 <br> \& 151L <br> \& BIO 152 <br> \& BIO 152L | Concepts of Biology I: Cellular \& Molecular Biology and Concepts of Biology Laboratory I: Cellular \& Molecular Biology <br> and Concepts of Biology II: Evolution \& Ecology and Concepts of Biology Laboratory II: Evolution \& Ecology |

credit

| CHM 123 | General Chemistry |
| :--- | :--- |
| \& 123L | and General Chemistry Laboratory |
| \& CHM 124 | and General Chemistry |
| \& CHM 124L | and General Chemistry Laboratory |
| GEO 115 | Physical Geology |
| \& 115L | and Physical Geology Laboratory |
| \& GEO 116 | and Geological History of the Earth |
| \& GEO 116L | and Geological History of the Earth Laboratory |
| PHY 206 | General Physics I - Mechanics |
| \& PHY 207 | and General Physics II - Electricity \& Magnetism |
| \& PHY 210L | and General Physics Laboratory I |
| \& PHY 211L | and General Physics Laboratory II |

Select two courses acceptable for science majors 6
Major Requirements 43
MTH 168 Analytic Geometry \& Calculus I (Satisfies CAP 4 Mathematics)
MTH 169 Analytic Geometry \& Calculus II 4
MTH 218 Analytic Geometry \& Calculus III 4
MTH 219 Applied Differential Equations 3
MTH 308 Foundations \& Discrete Mathematics 3
MTH 310 Linear Algebra \& Matrices 3
MTH 330 Intermediate Analysis 3
MTH 361 Introduction to Abstract Algebra 3
MTH 430 Real Analysis 3
MTH $480 \quad$ Mathematics Capstone (Satisfies CAP Major 1
Capstone)
Select four MTH courses (300/400 level) ${ }^{1} 12$

Breadth
ASI $150 \quad$ Introduction to the University Experience 1
social and Behavioral Sciences (Includes CAP Social Science) 6
$\begin{array}{ll}\text { Total Hours to total at least } & 120\end{array}$
1 Departmental approval required.

## Minor in Actuarial Science (ACS)

The Minor in Actuarial Science is designed to prepare students to pass the $P$ and $F M$ actuarial tests. It is also designed to supply students with VEE (Validation by Educational Experience) credit in economics, corporate finance, and applied statistics.

The minor contains eight courses in mathematics for a total of 22 semester hours. One of these is a course in the theory of interest and one is a seminar which prepares students to take the P test. Mathematics majors will take all but two of the mathematics requirements for the minor as part of their major requirements.

The minor also contains eight courses in accounting, economics, and finance for a total of twenty-four semester hours. Economics and finance majors will take all of these courses as part of their major requirements. They will be able to substitute two of the mathematics courses for those that they are required to take for their major.

A total of 46 semester hours are required for the minor.
Actuarial Science

| ACC 207 | Introduction to Financial Accounting | 3 |
| :--- | :--- | :--- |
| ECO 203 | Principles of Microeconomics ${ }^{1}$ | 3 |


| ECO 204 | ${\text { Principles of Macroeconomics }{ }^{1}}{ }^{2}{ }^{2}$ | 3 |
| :--- | :--- | ---: |
| ECO 410 | Business \& Economic Forecasting $^{2}$ | 3 |
| FIN 300 | Survey of Financial Management $^{3,4}$ | 3 |
| FIN 360 | Investments | 3 |
| FIN 470 | Fixed Income Securities | 3 |
| FIN 480 | Options \& Futures Markets | 3 |
| MTH 168 | Analytic Geometry \& Calculus I | 4 |
| MTH 169 | Analytic Geometry \& Calculus II | 4 |
| MTH 218 | Analytic Geometry \& Calculus III | 4 |
| MTH 229 | Theory of Interest | 3 |
| MTH 328 | Actuarial Probability Seminar | 1 |
| MTH 411 | Probability \& Statistics I | 3 |
| MTH 412 | Probability \& Statistics II | 3 |
| Total Hours |  | 46 |

1 ECO 203 and ECO 204 together qualify for VEE Economics credit in Economics.
2 VEE credit in Applied Statistics.
3 This course counts as VEE credit in Corporate Finance.
4 May substitute FIN 301.

## Minor in Mathematics (MTH)

\section*{| Mathematics |
| :--- |
| Select four MTH courses (300/400 level) |
| Total Hours |
| - Bachelor of Arts, Mathematics |
| - Bachelor of Science, Applied Mathematical Econo |
| - Bachelor of Science, Mathematics |
| Bachelor of Arts, Mathematics |}


| First Year |  |  |
| :---: | :---: | :---: |
| Fall | Hours Spring | Hours |
| ASI 150 | 1 MTH 169 | 4 |
| MTH 168 (Satisfies CAP Mathematics) | 4 CAP Natural Science w/ lab | 4 |
| CAP Natural Science w/lab | 4 REL 103, PHL <br> 103, or HST <br> 103 (CAP <br> Humanities <br> Commons) | 3 |
| ENG 100 (CAP Humanities Commons) | 3,4 REL 103, PHL <br> 103, or HST <br> 103 (CAP <br> Humanities <br> Commons) | 3 |
| REL 103, PHL 103, or HST 103 (CAP Humanities Commons) | 3 Social <br> Science intro level | 3 |
|  | 15-16 | 17 |
| Second Year |  |  |
| Fall | Hours Spring | Hours |
| MTH 218 | 4 MTH 310 | 3 |
| MTH 308 | $\begin{aligned} & 3 \text { SSC } 200 \\ & \text { (CAP Social } \\ & \text { Science) } \end{aligned}$ | 3 |
| CMM 100 (CAP Communication) | 3 CAP Arts / Creative and Performing | 3 |


| ENG 200 (CAP Writing Seminar) | 3-4 Literature | 3 |
| :---: | :---: | :---: |
| Natural Science | 3 Language $101$ | 4 |
|  | 16-17 | 16 |
| Third Year |  |  |
| Fall | Hours Spring | Hours |
| MTH 411 | 3 MTH 361 | 3 |
| MTH elective | 3 MTH elective | 3 |
| Social Science - elective | 3 CAP Inquiry | 3 |
| CAP Faith Traditions | 3 CAP Integrative | 3 |
| Language 141 | 4 Language 201 or contextual course | 3 |
|  | 16 | 15 |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| MTH 330 | 3 MTH 480 <br> (Satisfies CAP Major Capstone) | 1 |
| Social Science - 300/400 level | 3 MTH elective | 3 |
| CAP Advanced Philosophy/Religious Studies | 3 CAP <br> Advanced Philosophy/ Religious Studies | 3 |
| CAP Advanced Historical Studies | 3 CAP Diversity and Social Justice | 3 |
| CAP Practical Ethical Action | 3 General Elective | 4 |
|  | 15 | 14 |

Total credit hours: 124-126

## Bachelor of Science, Applied Mathematical Economics

## First Year

| Fall | Hours Spring | Hours |
| :--- | :---: | ---: |
| ASI 150 | 1 MTH 169 | 4 |
| MTH 168 (Satisfies CAP Mathematics) | 4 ECO 204 | 3 |
| ECO 203 | 3,4 REL 103, PHL | 3 |

(
ENG 100 (CAP Humanities Commons) 3,4 REL 103, PHL
3
103, or HST
103 (CAP
Humanities
Commons)
4 CAP Natural 4
Science w/
lab

|  | lab |  |
| :--- | :---: | ---: |
| Second Year | $15-17$ | 17 |
| Fall | Hours Spring | Hours |
| MTH 218 | 4 MTH 310 | 3 |
| MTH 308 | 3 CMM 100 | 3 |
|  | (CAP |  |
|  | Communication) |  |
| ECO 346 | 3 SSC 200 | 3 |
|  | (CAP Social |  |
| ENG 200 (CAP Writing Seminar) | Science) |  |
|  | $3-4$ CAP Arts | 3 |


| REL 103, PHL 103, or HST 103 (CAP Humanities Commons) | 3 CAP Faith Traditions | 3 |
| :---: | :---: | :---: |
|  | 16-17 | 15 |
| Third Year |  |  |
| Fall | Hours Spring | Hours |
| MTH 411 | 3 MTH 412 | 3 |
| CPS 150 | 4 CPS 151 | 4 |
| ECO 347 | $3 \mathrm{CAP}$ <br> Integrative | 3 |
| CAP Inquiry | 3 CAP Practical Ethical Action | 3 |
| CAP Advanced Philosophy/Religious Studies | 3 General Elective | 3 |
|  | 16 | 16 |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| MTH 330 | 3 MTH 480 <br> (Satisfies CAP Major Capstone) | 1 |
| ECO 441 | 3 ECO elective | 3 |
| CAP Advanced Philosophy/Religious Studies | 3 CAP Diversity and Social Justice | 3 |
| CAP Advanced Historical Studies | 3 General Elective (optional) | 3 |
| General Elective | 1 General Elective (optional) | 3 |
| General Elective | 3 |  |
|  | 16 | 13 |

Total credit hours: 124-127

## Bachelor of Science, Mathematics

| First Year |  |  |
| :---: | :---: | :---: |
| Fall | Hours Spring | Hours |
| ASI 150 | 1 MTH 169 | 4 |
| MTH 168 (Satisfies CAP Mathematics) | 4 REL 103, PHL | 3 |
|  | 103, or HST |  |
|  | 103 (CAP |  |
|  | Humanities |  |
|  | Commons) |  |
| ENG 100 (CAP Humanities Commons) | 3,4 REL 103, PHL | 3 |
|  | 103, or HST |  |
|  | 103 (CAP |  |
|  | Humanities |  |
|  | Commons) |  |
| REL 103, PHL 103, or HST 103 (CAP Humanities | 3 CAP Natural | 4 |
| Commons) | Science w/ |  |
|  | lab |  |
| CAP Natural Science w/lab | 4 Social | 3 |
|  | Science elective |  |
|  | 15-16 | 17 |
| Second Year |  |  |
| Fall | Hours Spring | Hours |
| MTH 218 | 4 MTH 219 | 3 |
| MTH 308 | 3 Natural | 3 |
|  | Science |  |
| ENG 200 (CAP Writing Seminar) | 3-4 MTH 310 | 3 |
| CMM 100 (CAP Communication) | 3 SSC 200 | 3 |
|  | (CAP Social |  |
|  | Science) |  |
| Natural Science | 3 CAP Arts | 3 |
|  | 16-17 | 15 |


| Third Year |  |  |
| :---: | :---: | :---: |
| Fall | Hours Spring | Hours |
| MTH 330 | 3 MTH 361 | 3 |
| MTH elective | 3 MTH elective | 3 |
| CPS 132 or 150 | 3-4 CAP Inquiry | 3 |
| CAP Adv. Philosophy/Religious Studies (Practical | 3 CAP | 3 |
| Ethical Action/Faith Traditions) | Integrative |  |
| Minor elective | 3 Minor elective | 3 |
|  | 15-16 | 15 |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| MTH 430 | 3 MTH 480 <br> (Satisfies CAP Major Capstone) | 1 |
| MTH elective | 3 MTH elective | 3 |
| CAP Adv. Philosophy/Religious Studies (Practical | 3 CAP | 3 |
| Ethical Action/Faith Traditions) | Advanced <br> Historical <br> Studies |  |
| Minor elective | 3 CAP Diversity and Social Justice | 3 |
| Minor elective | 3 Minor elective | 3 |
|  | 15 | 13 |
| Total credit hours: 121-124 |  |  |

## MTH 102. Fundamentals of Math. 3 Hours

Sets, functions and graphs, exponents, polynomials and algebraic equations, systems of equations. Prerequisite(s): One year of high school algebra.

## MTH 114. Contemporary Mathematics. 3 Hours

Study of contemporary mathematical topics and their applications.
Topics may include management science, statistics, social choice, size and shape, and computer mathematics. Prerequisite(s): Two years of high school algebra.

## MTH 116. Precalculus Math. 4 Hours

Review of topics from algebra and trigonometry including polynomials, functions and graphs, exponential and logarithmic functions, trigonometric functions and identities. Prerequisite(s): Two years of high school algebra.

## MTH 128. Finite Mathematics. 3 Hours

Topics from mathematics used in business including systems of equations, inequalities, matrix algebra, linear programming and logarithms; applications to compound interest, annuities and other finance problems. Prerequisite(s): MTH 102 or sufficient college preparatory mathematics.

## MTH 129. Calculus for Business. 3 Hours

Topics from differential and integral calculus used in business; applications to optimizing financial functions, marginal functions in economics, and consumer or producer surplus. Prerequisite(s): MTH 128 or sufficient college preparatory mathematics.

## MTH 137. Calculus I with Review. 4 Hours

Introduction to the differential and integral calculus with an extensive review of algebra and trigonometry; differentiation and integration of algebraic and transcendental functions with applications. Prerequisite(s): Two years of high school algebra.

## MTH 138. Calculus I with Review. 4 Hours

Introduction to the differential and integral calculus with an extensive review of algebra and trigonometry; differentiation and integration of algebraic and transcendental functions with applications. Prerequisite(s): MTH 137.

## MTH 148. Introductory Calculus I. 3 Hours

Introduction to the differential and integral calculus; differentiation and integration of algebraic and transcendental functions with applications to the life and social sciences. Prerequisite(s): MTH 116 or equivalent.

## MTH 149. Introductory Calculus II. 3 Hours

Continuation of MTH 148. Multivariable calculus, matrices, difference equations, probability, discrete and continuous random variables, and differential equations with applications to the life and social sciences. Prerequisite(s): MTH 138 or MTH 148.

## MTH 168. Analytic Geometry \& Calculus I. 4 Hours

Introduction to the differential and integral calculus; differentiation and integration of algebraic and transcendental functions with applications to science and engineering. Prerequisite(s): MTH 116 or equivalent.

MTH 169. Analytic Geometry \& Calculus II. 4 Hours
Continuation of MTH 168. Conic sections, techniques of integration with applications to science and engineering, infinite series, indeterminate forms, Taylor's theorem. Prerequisite(s): MTH 138 or MTH 168.

## MTH 204. Mathematical Concepts I. 3 Hours

First course of a two-semester sequence designed for pre-service teachers. Concepts necessary for an understanding of the structure of arithmetic and its algorithms, number patterns, sets, problem solving, percent, relation and proportion, use of calculators. Prerequisite(s): One year of high school algebra; one year of high school geometry.

## MTH 205. Mathematical Concepts II. 3 Hours

Continuation of MTH 204- a two semester sequence designed for preservice teachers. Topics include probability, representing and interpreting data, the metric system, elementary geometry, geometric patterns, coordinate geometry, algebra and geometry, transformations, computer literacy. Prerequisite(s): MTH 204.

## MTH 207. Introduction to Statistics. 3 Hours

Introduction to the concepts of statistical thinking for students whose majors do not require calculus. Methods of presenting data, including graphical methods. Using data to make decisions and draw conclusions. Basic ideas of drawing a sample and interpreting the information that it contains. Prerequisite(s): Two years of high school algebra.
MTH 214. Mathematical Concepts for Middle School Teachers. 3 Hours Concepts necessary for an understanding of the arithmetic taught in both elementary and middle grades. Includes a study of the structure of arithmetic and its algorithms; problem solving; reasoning and proof; proportional reasoning; use of computers and calculators to solve problems. Prerequisite(s): Two years of high school algebra.

## MTH 215. Algebra, Functions \& Graphs. 3 Hours

Development of the algebra of various families of functions including polynomial, exponential, logarithmic, and trigonometric functions; factoring and roots; interpretation of graphs; use of calculators and data collection devices to solve problems. Prerequisite(s): MTH 214.

MTH 216. Calculus Concepts \& Applications. 3 Hours
Develop conceptual understanding of basic calculus concepts; introduction to the notion of limit; rates of change; slopes and area computations; use of calculators and data collection devices to make predictions, estimations, and solve problems. Prerequisite(s): MTH 215.

## MTH 218. Analytic Geometry \& Calculus III. 4 Hours

Continuation of MTH 169. Solid analytic geometry, vectors and vector functions, multivariable calculus, partial derivatives, multiple integrals. Prerequisite(s): MTH 169.

## MTH 219. Applied Differential Equations. 3 Hours

First order equations, linear equations with constant coefficients, systems of equations, the Laplace transform, numerical methods, applications. Prerequisite(s): MTH 218.

## MTH 229. Theory of Interest. 3 Hours

Rigorous, calculus-based treatment of the Theory of Interest. Topics covered include interest, compounding, discounting, annuities, sinking funds, amortization, bonds, yield rates, and applications of these ideas and processes to problems in finance. Prerequisite(s): MTH 169.

## MTH 250. Advanced Technical Mathematics. 3 Hours

Appropriate analytical techniques for students of engineering technology; topics include integration by parts, multivariable calculus, complex numbers, matrices and system of linear equations, and first and second order differential equations. Applications are appropriate for the engineering technology programs (circuits, vibrations, and heat transfer). Prerequisite(s): MTH 138 or MTH 168.

## MTH 266. Discrete \& Finite Mathematics for Middle School Teachers. 3

 HoursTopics in finite and discrete mathematics; linear programming; applications in finance; graph theory; mathematics of social choice; logic; use of computers and calculators to model and solve problems. Prerequisite(s): MTH 214.

## MTH 270. Geometry Concepts \& Applications. 3 Hours

Introduction to the geometry of two- and three-dimensional space; patterns in geometry; measurement systems; transformations and similarity; coordinate geometry; the algebra of geometry; trigonometry; use of dynamic computer software to explore geometric concepts. Prerequisite(s): MTH 214.

## MTH 290. Topics in Mathematics. 1-3 Hours

Exploration of varying topics appropriate for the needs of the pre-service training of teachers of mathematics. May be repeated as topics change. Prerequisite(s): One mathematics course beyond MTH 102; permission of department chairperson and/or instructor.

## MTH 295. Historical Roots of Elementary Mathematics. 3 Hours

Fundamental historical development of modern arithmetic, algebra, geometry, and number systems from early Egyptian, Babylonian, and Greek sources. Students may not receive credit for both this course and MTH 395. Prerequisite(s): MTH 214.

## MTH 301. Matrix Theory and Applications. 3 Hours

Investigation of systems of linear equations and matrices. Matrix operations, inverse matrix, partitioned matrices, matrix factorizations. Vector space and subspace of $R^{\wedge} n$. Null and Column spaces of matrices. Eigenvalues and eigenspaces of matrices. Orthogonal vectors, LeastSquares problems, Diagonaliztion, Quadratic forms, Singular value decompositions. Applications such as Markov chains, computer graphics, electric circuits, and image processing. Mathematics majors should take MTH 310 rather than MTH 301. Students cannot receive credit for both MTH 301 and MTH 310. Prerequisite(s): MTH 218.

## MTH 308. Foundations \& Discrete Mathematics. 3 Hours

An introduction to proof using topics in foundational and discrete mathematics; propositional logic; number theory; sequences and recursion; set theory; relations; combinatorics; linear programming. Prerequisite(s): MTH 169.

## MTH 310. Linear Algebra \& Matrices. 3 Hours

Fundamental concepts of vector spaces, determinants, linear transformations, matrices, inner product spaces, and eigen-vectors. Offered each term. Students cannot receive credit for both MTH 301 and MTH 310. Prerequisite(s): MTH 218, MTH 308.

## MTH 328. Actuarial Probability Seminar. 1 Hour

Problem solving seminar to develop and improve skills in applied probability. This seminar will focus on actuarial applications of probability theory. Prerequisite(s): MTH 411.

## MTH 329. Actuarial Finance Seminar. 1 Hour

Problem solving seminar to develop and improve skills in applied mathematical finance. This seminar will focus on integrating the mathematical presentation of the Theory of Interest to the field of finance. Prerequisite(s): FIN 470; MTH 229.

## MTH 330. Intermediate Analysis. 3 Hours

Theoretical development of the calculus of a real-valued function of a real variable. Topics include the algebraic and topological properties of the real line, limits of sequences and functions, continuity, differentiability, and integration. Prerequisite(s): MTH 310.

## MTH 342. Set Theory. 3 Hours

Elementary set theory including relations, functions, indexed families, denumerable and nondenumerable sets, cardinal and ordinal arithmetic, Zorn's Lemma, the well-ordering principle and transfinite induction. Prerequisite(s): MTH 218, MTH 308.

MTH 343. Mathematics for Electrical \& Computer Engineers. 3 Hours
Linear algebra and matrices, complex variables, mathematical transforms and their inter-relations. Focus on mathematical theories as well as applications and an extensive use of MATLAB. Prerequisite(s): MTH 219.

## MTH 361. Introduction to Abstract Algebra. 3 Hours

Fundamental concepts of groups, rings, integral domains and fields. Prerequisite(s): MTH 218, MTH 308.

## MTH 367. Statistical Methods I. 3 Hours

Probability distributions including binomial, hypergeometric, Poisson, and normal. Estimation of population mean and standard deviation: Confidence intervals and tests of hypotheses using t -, Chi-square, and Fstatistics. Mathematics majors enroll in MTH 411 instead of MTH 367. Prerequisite(s): MTH 149 or MTH 169.

## MTH 368. Statistical Methods II. 3 Hours

Distribution-free methods including rank tests, sign tests, and Kolmogorov-Smirnov test. Method of least squares, correlation, linear regression, analysis of variance. Design of experiments and computer applications. Mathematics majors enroll in MTH 412 instead of 368. Prerequisite(s): MTH 367.

## MTH 370. Introduction to Higher Geometry. 3 Hours

Projective, affine, and hyperbolic geometries using synthetic and/or analytic techniques. Prerequisite(s): MTH 218, MTH 308.

## MTH 376. Number Theory. 3 Hours

Topics include Diophantine equations, Chinese Remainder theorem, Mobius inversion formula, quadratic residues and the Law of Quadratic Reciprocity, Gaussian integers, and integral quaternions. Prerequisite(s): MTH 218, MTH 308.

## MTH 395. Development of Mathematical Ideas. 3 Hours

The evolution of mathematical ideas and techniques from ancient times to the present with emphasis on the Greek era. Famous people and famous problems. Chronological outline of mathematics in each of its branches along with applications. Prerequisite(s): MTH 218, MTH 308.

## MTH 403. Boundary Value Problems. 3 Hours

Introduction to the Sturm-Liouville problem. Fourier trigonometric series, Fourier integrals, Bessel functions, and Legendre polynomials. The heat equation, wave equation, and Laplace's equation with applications. Solutions by the product method. Prerequisite(s): MTH 219, MTH 310.

## MTH 404. Complex Variables. 3 Hours

Functions of a complex variable, conformal mapping, integration in the complex plane. Laurent series and residue theory. Prerequisite(s): MTH 219.

## MTH 411. Probability \& Statistics I. 3 Hours

Mathematical probability, random variables, Bayes' Theorem, Chebyshev's Inequality, Binomial, Poisson, and Normal probability laws, moment generating functions, limit theorems, descriptive statistics, large sample statistical inference. MTH 308 is recommended as preparation for this course. Prerequisite(s): MTH 218.

## MTH 412. Probability \& Statistics II. 3 Hours

Multivariate distributions, transformations of random variables, sampling distribution theory, estimation of parameters including maximum likelihood, confidence intervals, the Neyman-Pearson lemma, tests of hypotheses, likelihood ratio tests. Prerequisite(s): MTH 411.

## MTH 430. Real Analysis. 3 Hours

Continuation of MTH 330. Topics include the theory of convergence of sequences and series of functions in the context of metric spaces, uniform continuity, uniform convergence, and integration. Prerequisite(s): MTH 330 .

## MTH 435. Advanced Multivariate Calculus. 3 Hours

Topics include directional derivatives, chain rule, Lagrange multipliers, Taylor's formula, the mean value theorem, inverse mapping theorem, implicit function theorem, integration, Fubini's theorem, change of variables, line integrals, Green's theorem and Stoke's theorem. Prerequisite(s): MTH 310.

MTH 440. Introduction to Mathematical Modeling. 3 Hours
Introduction to the use of mathematical techniques and results in constructing and modifying models designed to solve problems encountered in everyday life. Computer simulation and limitations thereof, dimensional analysis, scaling and approximations at various levels are discussed. Prerequisite(s): MTH 219, MTH 310.

## MTH 441. Mathematics Clinic. 1 Hour

Student teams will be responsible for the development and/or modification and testing of a mathematical model designed for a particular purpose. Faculty guidance. Prerequisite(s): MTH 440; permission of department chairperson.

## MTH 445. Special Topics in Mathematics. 1-3 Hours

Lectures in specialized areas such as abstract algebra, applied mathematics, complex variables, differential forms, functional analysis, Galois theory, game theory, general topology, normed linear spaces, probability theory, real variables, topological groups. May be taken more than once. Prerequisite(s): Permission of department chairperson.

## MTH 458. Mathematical Models in Finance. 3 Hours

Mathematical models in finance which include discrete and continuous models for stock price, interest rate model, bond pricing model, and option pricing model. Quantitative methods are introduced and employed. The methods include Black-Scholes formula, Monte-Carlo simulation, and binomial tree. Markowitz's optimal portfolio selection method is introduced and employed. Prerequisite(s): MTH 310.

## MTH 465. Linear Algebra. 3 Hours

Vector spaces, linear transformations and matrices, determinants, inner product spaces, invariant direct-sum decomposition and the Jordan canonical form. Prerequisite(s): MTH 310.

## MTH 466. Graph Theory \& Combinatorics. 3 Hours

Graphs as algebraic structures; Eulerian, Hamiltonian, complete, connected and planar graphs. Applications include scheduling and routing problems. Discussion of algorithms for optimal or nearoptimal solutions. Combinatorial topics could include generating functions, recurrence relations, Polya's theorem and Ramsey Theory. Prerequisite(s): MTH 308 or MTH 310.

## MTH 467. Combinatorial Design Theory. 3 Hours

Topic include discussion of Latin squares, mutually orthogonal Latin squares, orthogonal and perpendicular arrays, Steiner triple systems, block designs, difference sets, and finite geometries. Prerequisite(s): MTH 308.

## MTH 471. Topology. 3 Hours

Introduction to topological spaces and continuous functions including a study of separation and countability axioms and elementary properties of metric spaces, connected spaces, and compact spaces. Prerequisite(s): MTH 308.

## MTH 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## MTH 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## MTH 480. Mathematics Capstone. 1 Hour

Students will prepare a presentation or a paper appropriate for a general audience on an advanced mathematical topic that builds on the foundation laid by previous mathematics courses. This course fulfills the Major Capstone component of the Common Academic Program for MTA, MTH and MTE majors. Junior or senior standing. Prerequisite(s): MTH 308.

## MTH 490. Readings in Mathematics. 1-3 Hours

Individual study in specialized areas carried out under the supervision of a staff member. May be taken more than once. Prerequisite(s): Permission of department chairperson.

## Military Science ROTC

The Department of Military Science offers the Reserve Officers Training Corps (ROTC) program on the campus, providing instruction in general military subjects applicable to all branches of the Army. The purpose of the Reserve Officers Training Corps is to develop selected college-
educated men and women for positions of responsibility as officers in the active Army, the Army Reserve, and the Army National Guard.

The military science program is designed to develop a high degree of personal honor, self-reliance, and leadership and to provide the means of becoming better informed on matters of national defense. The program provides men and women who are working toward a baccalaureate degree the opportunity to become officers in the United States Army.

The four-year program is divided into a basic course ${ }^{1}$ (normally first and second years) and an advanced course (normally third and fourth years), and it is offered to all students for academic credit. The advance course classes require permission of the Professor of Military Science for noncadets and is restricted to classroom activities only.

The basic course emphasizes practical leadership techniques and management concepts that apply equally in both military organizations and private industry. While in this phase of the program, students, other than contracted ROTC scholarship students, have no military obligation and are simply taking ROTC courses, like any other college courses, for credit. Students who receive credit for the basic course and demonstrate a potential for becoming effective officers may continue to pursue a commission by enrolling in the advanced course.

The advanced course is designed to prepare students to be Army lieutenants by including practical work in tactics, training, management, leadership techniques, and the exercise of command. Advanced course students are paid $\$ 450$ (juniors) and $\$ 500$ (seniors) a month during the school year. During the summer between the junior and senior years, cadets enroll in a thirty day Cadet Leadership Course (CLC), which allows them to apply the leadership and technical training learned in the classroom. While at CLC, students are paid half a second lieutenant's monthly salary or about \$1200.

In addition to ROTC instruction, a student must attain an equal level of professional military education. Army officers, like other professionals, cannot be satisfied with a collection of knowledge found only in their academic field. In order to be prepared to become officers, students are required to complete a course in military history.

The minor in military science provides students with the opportunity to study the theory and practice of the military profession. The minor consists of twelve semester hours of upper-level courses.

Students desiring to minor in military science should notify their respective deans and the Department of Military Science.

The ROTC program is also available to students with three or two years remaining on campus, including graduate students. Special programs, such as ROTC summer Cadet Initial Entry Training (CIET), have been established to allow second-semester sophomores and juniors or seniors who will be going on to graduate school (Lateral Entry cadets) to participate in the military science program. This training is currently being expanded and will include all committed cadets either between the first year and second year, or between the second year and third year, as well as the Lateral Entry cadets mentioned above.
There are optional paid summer opportunities for contracted and/or committed cadets to attend a four week Cultural Understanding and Language Program (CULP) to certain countries in South America, Africa, Eastern Europe, and Asia. Also following the Cadet Leadership Course (CLC) cadets can attend a Cadet Training Leadership Training (CTLT) for three weeks at an active duty military installation and work with a second lieutenant on active duty, or possibly a four week CTKT in Korea or Europe. Other optional training includes a three week Airborne training
at Ft. Benning, GA, or a ten day Air Assault School at several different installations in the United States.

There is also a special program whereby veterans and JROTC students can receive advanced placement credit in Army ROTC. Veterans and students with high school JROTC training, with the approval of the chairperson of the Department of Military Science, may receive placement credit for part or all of the basic course. Each case will be judged individually so that the best interests of both the student and the military may be served.

Army ROTC scholarships are available to students. These scholarships cover four, three, and two-year periods and provide for full tuition and charges, \$1200 a year for books, and a tax-free subsistence allowance of $\$ 300$ a month for first year cadets, \$350 a month for sophomore cadets, $\$ 450$ a month during the junior year, and $\$ 500$ a month in the senior year for up to ten months. Scholarships, which are highly competitive, are awarded to those who demonstrate outstanding scholarly, athletic, and leadership ability.
$\overline{1}$ At Sinclair Community College.
MIL 122, MIL 123
Complete UD requirements for:

| MIL 101 | Military Leadership I |
| :--- | :--- |
| MIL 102 | Leadership II |
| MIL 222, MIL 223 |  |
| Complete UD requirements for: <br> MIL 201$\quad$ Map Reading \& Small Unit Tactics |  |
| MIL 202 | Military Leadership |

## Faculty

MAJ Jeffrey Rosenberg, U.S. Army, Chairperson
Professor: Rosenberg,
Assistant Professor: Robinson
Instructors: Baker, Bingley, Gates, Quade

## Minor in Military Science (MIL)

| Military Science, ROTC |  |  |
| :--- | :--- | ---: |
| MIL 301 | Leading Small Organizations I | 3 |
| MIL 302 | Leading Small Organizations II | 3 |
| MIL 401 | Leadership Management \& Staff | 3 |
| MIL 402 | Applied Leadership \& Management | 3 |
| Total Hours |  | 12 |

## Courses

MIL 101. Military Leadership I. 1 Hour
ROTC programs and opportunities; rappelling, leadership, communications and management skills, and rifle marksmanship. Optional field trips, field exercises, physical training, leadership laboratory and social events.

## MIL 102. Leadership II. 1 Hour

Rifle marksmanship, fundamentals and principles of leadership, management techniques for individual, group behavior and leadership dimensions. Optional physical training, leadership laboratory, and social events.

MIL 201. Map Reading \& Small Unit Tactics. 2 Hours
Study of basic map reading skills, small unit tactics, movement techniques, weapons marksmanship orientation, and survival skills. Participation in leadership laboratory and two field training exercises. Optional physical training and social events.

## MIL 202. Military Leadership. 2 Hours

Interactive study of the fundamentals of military leadership, ethical decision-making, effective counseling techniques, and conflict resolution. Study of the role and branches of the US Army and the role of the commissioned, warrant, and noncommissioned officer. Optional participation in leadership laboratories, field training exercises, physical fitness training, and social events.

## MIL 299. Military Science Leadership Lab. 0 Hours

This is an academically challenging course were you will study, practice, and apply the fundamentals of the Leadership, Officer Skills, Army Values and Ethics, Personal Development, and Tactics at the small unit level. This course includes reading assignments, homework assignments, small group assignments, briefings, case studies, and practical exercises.

## MIL 301. Leading Small Organizations I. 3 Hours

Study of the methodology, qualities, and the development of leaders through a series of practical opportunities to lead small groups, receive personal assessments, encouragement, and lead again in situations of increasing complexity. Physical training, leadership laboratory, historical field trip, social events, and field training exercises are mandatory.

## MIL 302. Leading Small Organizations II. 3 Hours

Study of emplacement of communications equipment and weapons system. Application of small unit tactics, land navigation-terrain association, operations orders and roles of various branches of the Army. Physical training, leadership laboratory, social events, and field training exercises are mandatory.

## MIL 401. Leadership Management \& Staff. 3 Hours

Study of military staff functions; how to conduct meetings, briefing, and training; how to conduct various types of counseling; and effective and ineffective leadership techniques. Physical training, leadership laboratory, historical field trip, social events, and field training exercises are mandatory.

MIL 402. Applied Leadership \& Management. 3 Hours
Leadership and management studies in professionalism, ethics, and military justice. Various types of military correspondence and the responsibilities of an officer. Physical training, leadership laboratory, field training exercises, and social events are mandatory.

## MIL 411. Limited War/Low Intensity Conflict. 2 Hours

This course will identify and discuss the roles and mission of the branches found within the U.S. Army as they relate to limited war and low intensity conflicts. Historical examples of leadership in limited war/ low intensity conflicts are identified and discussed. Incorporates the background and experience of resident instructors and presentations by visiting service representatives.

## MIL 412. United States Military Today. 2 Hours

This course will identify and discuss the roles, missions, organizational structure and equipment, tactical and strategic employment, and future trends of the Armed Services. Incorporates the background and experience of resident instructors and presentations by visiting service representatives.

## MIL 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and departmental chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## MIL 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and departmental chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved MIL 477 and approval of University Honors Program.

## Music

Majors:

- Bachelor of Arts, Music-Ethnomusicology Concentration (p. 220)
- Bachelor of Arts, Music-Jazz Studies Concentration (p. 221)
- Bachelor of Arts, Music-Music Studies Concentration (p. 222)
- Bachelor of Music, Music Composition (p. 223)
- Bachelor of Music, Music Education-Instrumental Concentration (p. 224)
- Bachelor of Music, Music Education-Vocal Concentration (p. 225)
- Bachelor of Music, Music Performance (p. 226)
- Bachelor of Music, Music Therapy (p. 227)

Certificate:

- Church Music (p. 228)

Minor:

- Music (p. 228)
- Music Technology (p. 229)

Music is our passion. We help each student discover the transformative power of music and develop musical interests, talents, and skills that they will use to change the world. The Department's goals include:

- To help students develop their unique musical potential as performer, composer, scholar, teacher, therapist, listener or advocate
- To provide abundant and diverse opportunities for group and individualized music learning
- To connect students and faculty with local and global resources
- To develop musical partnerships that reflect the University's motto: Learn, Lead, and Serve
- To cultivate a safe, respectful, inter-culturally responsive, and stimulating environment that supports student and faculty development (College of Arts and Sciences Diversity Vision Statement, October 2009)
- To prepare students through music with essential $21^{\text {st }}$ century skills to meet the changing needs of a global society

The Department of Music offers an outstanding and diverse undergraduate curriculum for music majors and non-music majors in a strong liberal arts setting. Faculty are engaged in the process of evaluating and revising existing courses and developing new ones to meet the general education requirements of the Common Academic Program (CAP) that is based on interdisciplinary content and teaching. Foundational ideas of the CAP include learner-centered teaching, education in the Catholic Marianist tradition, and integrative learning. The CAP student learning outcomes are based on UD's Habits of Inquiry, including scholarship, faith traditions, diversity, community, practical wisdom, critical evaluation of our times, and vocation.

The Department of Music is a member of the National Association of Schools of Music, which accredits its degree programs and curricula. In addition, the music education degree program is approved by the State of Ohio and the music therapy degree program by the American Music Therapy Association.

The Department of Music has numerous performing ensembles open to all students:

- University Chorale
- Choral Union
- Opera Workshop
- Ebony Heritage Singers
- World Music Choir
- Hands in Harmony Signing Choir
- University Orchestra
- Symphonic Wind Ensemble
- University Concert Band
- "Pride of Dayton" Marching Band
- Flyer Pep Band
- Percussion Ensemble
- Javanese Gamelan
- Early Music Ensemble
- Dayton Jazz Ensemble
- University Jazz Band
- Flyer Jazz Lab Band
- Winter Drum Line
- Chamber music groups
- Jazz Combo

The Department of Music offers five degree programs.

- Bachelor of Arts with a major in Music (MUS) - Concentration options in Ethnomusicology, Jazz Studies or Music Studies
- Bachelor of Music with a major in Music Composition (MUC)
- Bachelor of Music with a major in Music Education (MUE) Concentration options in Instrumental or Vocal
- Bachelor of Music with a major in Music Performance (MUP)
- Bachelor of Music with a major in Music Therapy (MUT)

All prospective music students must be admitted to the University of Dayton by the Office of Admission and accepted through an audition process that includes:

1. Submission to the Department of Music two letters of recommendation from their high school music teachers and/or performance teachers
2. Successful completion of a performance audition in person. Specific information regarding audition requirements and dates is available by calling the department office or visiting the department website (http://www.udayton.edu/artssciences/music).

The Department of Music offers a minor in music, a minor in music technology for non-music majors, and a church music certificate for all students.

Transfer students pursuing a major in MUC, MUP, or MUT must complete at least 24 of the required semester hours in the Department of Music while in residence at the University of Dayton. Transfer students pursuing a major in MUE must complete at least 20 of the required semester hours in the Department of Music while in residence at the University of Dayton. Transfer students pursuing a music minor must complete at least 12 of the required semester hours in the Department of Music while in residence.

## Faculty

Julia Randel, Chairperson
Professors Emeriti: Chenoweth, Benedum, Jones, Sandness, Snyder Professors: Cox, Gardstrom, Gratto, Hartley, Magnuson, Street Associate Professors: MacLachlan, Morris, Randel, Reynolds, Rush Assistant Professors: Arnow, Daniel-Cox, Dorf, Hiller
Lecturers: Kim, Leach, Raponi, Will
Artists-in-Residence: Benjamin, Knorr, Leslie, McCutcheon, Sievers, Wells, Wolfe

## Bachelor of Arts, Music-Ethnomusicology Concentration (MUS) minimum 124 hours

The Bachelor of Arts with a major in Music (MUS) with a concentration in Ethnomusicology focuses on the diversity of the world's musical traditions. Students will participate in both the Western European classical music tradition (in private lessons and in choral or instrumental ensembles) and in musics from across the globe, including Black gospel, Javanese gamelan, American jazz and African choral singing. They will study European music theory in addition to transcription of unwritten musics. They will learn to analyze music in culture by studying anthropology as well, and will ultimately complete a minor in Anthropology. Students will conduct ethnographic fieldwork in order to become conversant with the essential research methods of ethnomusicology and anthropology, and during their senior year will complete a capstone project based on their fieldwork. To take advantage of the diverse academic environment at the University of Dayton, students are encouraged to complete a second major within another discipline.

| Common Academic Program (CAP) |  |  |
| :---: | :---: | :---: |
| *credit hours will vary depending on courses selected |  |  |
| First-Year Hu | ities Commons | 12 |
| HST 103 | The West \& th |  |
| REL 103 | Introduction t |  |
| PHL 103 | Introduction |  |
| ENG 100 | Writing Semin |  |
| Second-Year | ng Seminar ${ }^{3}$ | 0-3 |
| ENG 200 | Writing Semin |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of |  |
| Mathematics |  | 3 |


| Social Science | 3 |
| :---: | :---: |
| SSC 200 Social Science Integrated |  |
| Arts | 3 |
| Natural Sciences ${ }^{4}$ | 7 |
| Crossing Boundaries | variable credit |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |
| Advanced Study | variable credit |
| Philosophy and/or Religious Studies |  |
| Historical Studies ${ }^{5}$ |  |
| Diversity and Social Justice | 3 |
| Major Capstone | 0-3 |
| 1 Completed with ASI 110 and ASI 120. |  |
| 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement. |  |
| 3 Completed with ENG 200 H or ASI 120. |  |
| 4 Must include two different disciplines and accompanying lab. <br> 5 <br> U.S. History AP credit will not satisfy this requirement. |  |

## Liberal Studies Curriculum

Creative and Performing Arts, including Music (May include CAP 3
Arts)
L2 Proficiency (Proficiency in a lanuage other than Englsih) 0-11
Literature ( May include CAP Components) 3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) 3
Natural Sciences (Satisfies CAP Natural Science) 11
Social Sciences 12

| ANT 150 | Cultural Anthropology |
| :--- | :--- |
| ANT 306 | Culture \& Power |
| SOC 101 | Principles of Sociology |
| SOC 394 | Popular Culture |

Major Requirements 45

| MUS 200 | Recital Attendance (7 semesters) | 0 |
| :--- | :--- | ---: |
| MUS 241 | Keyboard Competency I | 0 |
| MUS 242 | Keyboard Competency II | 0 |
| MUS 250 | Second Year Review | 0 |
| MUS 481 $^{\text {Ensembles }}{ }^{1}$ | Capstone Project \& Presentation | 1 |
|  |  | $8-9$ |

MUS 390 Ensembles
MUS $491 \quad$ University Orchestra
or MUS 492 Symphonic Wind Ensemble
or MUS 493 University Chorale
Music History and Literature 9
MUS $300 \quad$ Understanding World Musics (Satisfies CAP Diversity and Social Justice)
MUS 301 Music History \& Literature I (Satisfies CAP Faith Traditions, Advanced Religious Studies)
MUS $302 \quad$ Music History \& Literature II (Satisfies CAP Integrative, Advanced Historical Studies)

| Music Theory and Aural Skills |  | 18 |
| :---: | :---: | :---: |
| MUS 111 | Theory of Music I |  |
| MUS 112 | Theory of Music II |  |
| MUS 113 | Aural Skills I |  |
| MUS 114 | Aural Skills II |  |
| MUS 211 | Theory of Music III |  |
| MUS 212 | Theory of Music IV |  |
| MUS 213 | Aural Skills III |  |
| MUS 214 | Aural Skills IV |  |
| MUS 217 | Listening \& Transcription Skills |  |
| Performance studies ${ }^{2}$ |  | 8-9 |
| MUS 399 | Performance Studies |  |
| or MUS 499 | Performance Studies |  |
| Breadth |  |  |
| ASI 150 | Introduction to the University Experience | 1 |
| Supporting Social | Science | 9 |
| ANT 352 | Cultures of Latin America |  |
| ANT 356 | Cultures of Africa |  |
| ANT 360 | Making of Modern South Asia |  |
| Academic electives to total at least |  | 124 |
| 1 Must include at least one semester of Ebony Heritage Singers (1), World Music Choir (.5), Gamelan (.5), Choral Union (1), Marching Band (1), and University Jazz Bands (1), for a total of 6 credits. Must also include two semesters of MUS 491 University Orchestra (1) or MUS 492 Symphonic Wind Ensemble (1) or MUS 493 University Chorale (1); MUS 390-level ensembles may be substituted for MUS 491, 492, or 493 if necessary, with the approval of the student's academic advisor. |  |  |
| May include M | MUS 296-297 as needed. |  |

## Bachelor of Arts, Music-Jazz Studies Concentration (MUS) minimum 124 hours

The Bachelor of Arts (BA) with a concentration in Jazz Studies focuses on the musical and historical elements of jazz. Students will study:

- Jazz improvisation
- Jazz performance
- Jazz theory
- Jazz history
- Jazz composition and arranging.

Students also participate in both large and small jazz ensembles, which provide the opportunity to become skilled in the art of practice and performance of jazz. To take advantage of the diverse academic environment at the University of Dayton, students are encouraged to earn a minor or to complete a second major within another discipline.

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |


| Second-Year Writing Seminar ${ }^{3}$ |  |
| :--- | :---: |
| ENG $200 \quad$ Writing Seminar II | $0-3$ |
| Oral Communication | 3 |
| CMM $100 \quad$ Principles of Oral Communication |  |
| Mathematics |  |
| Social Science | 3 |
| SSC $200 \quad$ Social Science Integrated | 3 |
| Arts | 7 |
| Natural Sciences ${ }^{4}$ | variable <br> credit |
| Crossing Boundaries |  |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry | variable |
| Integrative | credit |

Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice 3
Major Capstone 0-3
Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

## Liberal Studies Curriculum

Creative and Performing Arts, including MUS (May include CAP Arts) 3
L2 Profiency (Proficiency in a language other than English) 0-11
Literature (May include CAP Components) 3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) 3
Natural Sciences (Satisfies CAP Natural Science) 11
Social Sciences (Includes CAP Social Science) 12
Major Requirements 45

| MUS 200 | Recital Attendance (7 semesters) | 0 |
| :--- | :--- | ---: |
| MUS 241 | Keyboard Competency I | 0 |
| MUS 242 | Keyboard Competency II | 0 |
| MUS 250 | Second Year Review | 0 |
| MUS 481 | Capstone Project \& Presentation | 1 |
| Ensembles |  | $6-7$ |
| MUS 390 | Ensembles ${ }^{1}$ |  |
| MUS 494 | Dayton Jazz Ensemble |  |

Music History and Literature 9
(MUS 301 satisfies CAP Faith Traditions and Advanced Religious
Studies; MUS 302 satisfies CAP Integrative and Advanced Historical Studies.)

| MUS 300 | Understanding World Musics (Satisfies CAP <br>  <br> Diversity and Social Justice) |
| :---: | :--- |
| MUS 301 | Music History \& Literature I |
| or MUS 302 | Music History \& Literature II |
| MUS 306 | History of American Jazz |


| Music Theory and Aural Skills |  |  |
| :--- | :--- | :--- |
| MUS 111 | Theory of Music I | 14 |
| MUS 112 | Theory of Music II | Div |
| MUS 113 | Aural Skills I | 2 |
| MUS 114 | Aural Skills II | 3 |
| MUS 211 | Theory of Music III | 4 |
| MUS 212 | Theory of Music IV | 5 |
| MUS 218 | Popular Jazz Theory |  |


| Jazz Performance studies | 4 |  |
| :--- | :--- | :--- |
| MUS 391 | Jazz Improvisation I |  |
| MUS 392 | Jazz Improvisation II |  |
| MUS 396 | Jazz Keyboard Harmony I |  |
| MUS 397 | Jazz Keyboard Harmony II |  |

MUS $399 \quad$ Performance Studies

Breadth
ASI 150 Introduction to the University Experience 1
Total Hours to total at least 124

1 Choose from any MUS 390. See course descriptions.
2 May include MUS 296-297 as needed
3 Must include MUS 391, 396, 397

## Bachelor of Arts, Music-Music Studies Concentration (MUS) minimum 124 hours



Faith Traditions
Practical Ethical Action
Inquiry
Integrative
Advanced Study

Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$

Diversity and Social Justice 3
Major Capstone 0-3
Completed with ASI 110 and ASI 120.
Or ENG 100A and ENG 100B, or ENG 200H, by placement.
Completed with ENG 200H or ASI 120.
Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

## Liberal Studies Curriculum

Creative and Performing Arts, including Music (May include CAP 3 Arts)
L2 Proficiency (Proficiency in a language other than English) 0-11
Literature (May include CAP Components) 3
10-11 Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) 3
Natural Sciences (Satisfies CAP Natural Science) 11
Social Sciences (Includes CAP Social Science) 12

Major Requirements 45

| MUS 200 | Recital Attendance (7 semesters) | 0 |
| :--- | :--- | ---: |
| MUS 240 | Fundamentals of Conducting | 2 |
| MUS 241 | Keyboard Competency I | 0 |
| MUS 242 | Keyboard Competency II | 0 |
| MUS 250 | Second Year Review | 0 |
| MUS 481 | Capstone Project \& Presentation | 1 |
| Ensembles |  | $4-5$ |
| MUS 390 | Ensembles ${ }^{1}$ |  |

or MUS 491 University Orchestra
or MUS 492 Symphonic Wind Ensemble
or MUS 493 University Chorale
Music History and Literature 9
MUS $300 \quad$ Understanding World Musics (Satisfies CAP Diversity and Social Justice)
MUS 301 Music History \& Literature I (Satisfies CAP Faith Traditions, Advanced Religious Studies)
MUS 302 Music History \& Literature II (Satisfies CAP Integrative, Advanced Historical Studies)
Music Theory and Aural Skills 16
MUS 111 Theory of Music I
MUS 112 Theory of Music II
MUS 113 Aural Skills I
MUS 114 Aural Skills II
MUS 211 Theory of Music III
MUS 212 Theory of Music IV
MUS 213 Aural Skills III
MUS 214 Aural Skills IV
Performance studies ${ }^{2}$
MUS $399 \quad$ Performance Studies
or MUS 499 Performance Studies

## Breadth

variab|

2

## Bachelor of Music, Music Composition (MUC) minimum 137 hours

Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |  |
| :---: | :---: | :---: |
| REL 103 | Introduction to Religious and Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| SSC 200 | Social Science Integrated |  |
| Arts |  | 3 |
| Natural Sciences ${ }^{4}$ |  | 7 |
| Crossing Boundaries |  | var |

Faith Traditions
Practical Ethical Action
Inquiry
Integrative
$\begin{array}{ll}\text { Advanced Study } & \text { variab } \\ \text { credit }\end{array}$
Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice 3

Major Capstone 0-3
Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

## BM Requirements

$\left.\begin{array}{lc}\hline \text { Mathematics, excluding MTH } 205 \text { (Satisfies CAP Mathematics) } & 3 \\ \hline \text { Natural Sciences (Satisfies CAP Natural Science) } & 7 \\ \hline \text { Social Sciences (Includes CAP Social Science) } & 6 \\ \hline & \\ \hline \text { Major Requirements } & 87 \\ \hline \text { MUS 200 } & \text { Recital Attendance (7 semesters) } \\ \text { MUS 202 } & \text { Professional Development Workshop (7 } \\ & \text { semesters) }\end{array}\right] 0$

| MUS 450 | Degree Recital (2 required. Satisfies CAP Major Capstone.) | 0 |
| :---: | :---: | :---: |
| Composition ${ }^{1}$ |  | 12 |
| MUS 121 | Composition I |  |
| MUS 122 | Composition I |  |
| MUS 221 | Composition II |  |
| MUS 222 | Composition II |  |
| MUS 321 | Composition III |  |
| MUS 322 | Composition III |  |
| MUS 421 | Composition IV |  |
| MUS 422 | Composition IV |  |
| Conducting |  | 4 |
| MUS 240 | Fundamentals of Conducting |  |
| MUS 345 or MUS 346 | Choral Conducting Instrumental Conducting |  |
| Ensembles |  | 8 |
| MUS 491 <br> or MUS 492 <br> or MUS 493 | University Orchestra ${ }^{2}$ <br> Symphonic Wind Ensemble <br> University Chorale |  |
| Music History and | Literature | 9 |
| MUS 300 | Understanding World Musics (Satisfies CAP Diversity \& Social Justice) |  |
| MUS 301 | Music History \& Literature I (Satisfies CAP Faith Traditions, Advanced Religious Studies) |  |
| MUS 302 | Music History \& Literature II (Satisfies CAP Integrative, Advanced Historical Studies) |  |
| Music Theory and | Aural Skills | 16 |
| MUS 111 | Theory of Music I |  |
| MUS 112 | Theory of Music II |  |
| MUS 113 | Aural Skills I |  |
| MUS 114 | Aural Skills II |  |
| MUS 211 | Theory of Music III |  |
| MUS 212 | Theory of Music IV |  |
| MUS 213 | Aural Skills III |  |
| MUS 214 | Aural Skills IV |  |
| Orchestration or arranging |  | 4 |
| MUS 316 or MUS 318 | Fundamentals of Orchestration Fundamentals of Arranging |  |
| MUS 416 | Advanced Orcestration |  |
| Performance Studies ${ }^{3}$ |  | 12 |
| MUS 296 | Functional Keyboard Skills I |  |
| MUS 297 | Functional Keyboard Skills II |  |
| MUS 298 | Functional Keyboard Skills III |  |
| MUS 299 | Functional Keyboard Skills IV |  |
| MUS 399 or MUS 499 | Performance Studies Performance Studies |  |
| MUS electives |  | 10 |
| Theory and/or composition electives |  | 10 |
| Breadth |  |  |
| ASI 150 | Introduction to the University Experience | 1 |
| Non-music electives |  | 9 |
| Total Hours to total at least |  | 137 |

1 Each composition major must present one and a half recitals of original work by the senior year.
2 May substitute MUS 390 with permission.
3 Functional Keyboard Skills or equivalent is required.

## Bachelor of Music, Music EducationInstrumental Concentration (MUE) minimum 139 hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |

Second-Year Writing Seminar ${ }^{3}$ 0-3
ENG $200 \quad$ Writing Seminar II
Oral Communication 3
$\begin{array}{cl}\text { CMM } 100 \quad \text { Principles of Oral Communication } \\ \text { Mathematics } & 3\end{array}$
Social Science 3

| SSC 200 | Social Science Integrated |  |
| :--- | :--- | :--- |
| Arts |  |  |

Natural Sciences ${ }^{4} \quad 7$

| Crossing Boundaries | variab |
| :--- | :--- |
| credit |  |


| Faith Traditions |  |
| :--- | :--- |
| Practical Ethical Action |  |
| Inquiry | variabl |
| Integrative | credit |


| Philosophy and/or Religious Studies |  |
| :--- | ---: |
| Historical Studies ${ }^{5}$ |  |
| Diversity and Social Justice | 3 |
| Major Capstone | $0-3$ |

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement. 3 Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5
U.S. History AP credit will not satisfy this requirement.

| BM Requirements |  |  |
| :---: | :---: | :---: |
| Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) |  | 3 |
| Natural Sciences (Satisfies CAP Natural Science) |  | 7 |
| Social Sciences (Includes CAP Social Science) |  | 3 |
| Major Requirements ${ }^{1}$ |  | 80 |
| MUS 200 | Recital Attendance (7 semesters) | 0 |
| MUS 202 | Professional Development Workshop | 0 |
| MUS 231 | Introduction to Music Education | 2 |
| MUS 240 | Fundamentals of Conducting | 2 |


| MUS 241 | Keyboard Competency I | 0 |
| :---: | :---: | :---: |
| MUS 242 | Keyboard Competency II | 0 |
| MUS 250 | Second Year Review | 0 |
| MUS 318 | Fundamentals of Arranging | 2 |
| MUS 331 | Choral Music Methods | 3 |
| MUS 332 | Instrumental Music Methods | 3 |
| MUS 335 | Classroom Music Methods | 3 |
| MUS 340 | Music Education for Diverse Student Populations in Inclusive Settings | 3 |
| MUS 450 | Degree Recital (Satisfies CAP Major Capstone) | 0 |
| Performance Studies (7 semesters) ${ }^{2}$ |  | 14 |
| MUS 399 | Performance Studies |  |
| Ensembles |  | 6 |
| MUS 390 | Ensembles (1 semester) |  |
| Select five semesters from: |  |  |
| MUS 491 or MUS 492 or MUS 493 | University Orchestra Symphonic Wind Ensemble University Chorale |  |
| Music History and | Literature | 9 |
| MUS 300 | Understanding World Musics |  |
| MUS 301 | Music History \& Literature I (Satisfies CAP Faith Traditions, Advanced Religious Studies) |  |
| MUS 302 | Music History \& Literature II (Satisfies CAP Integrative, Advanced Historical Studies) |  |
| Music Theory and | Aural Skills | 16 |
| MUS 111 | Theory of Music I |  |
| MUS 112 | Theory of Music II |  |
| MUS 113 | Aural Skills I |  |
| MUS 114 | Aural Skills II |  |
| MUS 211 | Theory of Music III |  |
| MUS 212 | Theory of Music IV |  |
| MUS 213 | Aural Skills III |  |
| MUS 214 | Aural Skills IV |  |
| Additional Requirements for Instrumental Concentration ${ }^{3}$ |  |  |
| Ensembles |  | 3 |
| MUS 390 | Ensembles (choral) |  |
| Small Ensembles (4 semesters, 0.5 semester hours each) |  |  |
| Music Education |  | 9 |
| MUS 195 | Beginning Guitar Class I |  |
| MUS 236 | Voice Laboratory |  |
| MUS 336 | Woodwind Pedagogy (2 semesters) |  |
| MUS 337 | Brass Pedagogy (2 semesters) |  |
| MUS 338 | Percussion Pedagogy |  |
| MUS 339 | String Pedagogy (2 semesters) |  |
| Select a minimum of 6 elective semester hours from: |  | 6 |
| MUS 233 | Eurhythmics |  |
| MUS 295 | Beginning Guitar Class II |  |
| MUS 338 | Percussion Pedagogy |  |
| MUS 345 | Choral Conducting |  |
| MUS 346 | Instrumental Conducting |  |
| MUS 381 | Clinical \& Educational Music Improvisation I |  |
| MUS 399 | Performance Studies (may be repeated) |  |
| MUS 408 | Diction \& Literature for Singers |  |


| MUS 430 | Jazz Pedagogy |
| :---: | :--- |
| MUS 431 | Marching Band Pedagogy |
| Teacher Education | 21 |
| EDT 110 | The Profession of Teaching |
| EDT 110L | The Profession of Teaching Laboratory |
| EDT 207 | Child and Adolescent in Education |
| EDT 207L | Child and Adolescent in Education Laboratory |
| EDT 305 | Philosophy and History of American Education <br> (Satisfies CAP Practical Ethical Action, and |
|  | Advanced Study in Philosophy) |
| EDT 479 | Student Teaching- Music P-12 |

## Breadth

| ASI 150 | Introduction to the University Experience |
| :--- | :---: |
| Total Hours to total at least | 139 |

1 Students in the music education program are required to maintain a 2.5 cumulative grade point average prior to taking EDT $110 ; \geq 2.75$ cumulative grade point average after completing EDT 110; and $\geq 3.0$ after completing EDT 207. GPA in professional education (EDT) must be $\geq 2.75$ after completing EDT 110; $\geq 3.0$ after completing EDT 207. Students must earn a grade of a C - or higher in all EDT courses, and a grade of $S$ in all EDT labs prior to entry into clinical experience. Students must earn a grade of C - or higher in the following core music education courses: MUS 331, MUS 332 and MUS 335; and a 2.5 cumulative grade point average in all music courses.

2 On principal instrument.
3 Students will select one of two concentration areas (instrumental or vocal). Upon successful completion of the degree and the required Ohio Assessment for Educators exams, candidates will receive a Resident Educator License (Four Year, Multi-age, P-12) from the State of Ohio to teach music from pre-kindergarten through senior high school.

## Bachelor of Music, Music Education-Vocal Concentration (MUE) minimum 139 hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |

Second-Year Writing Seminar ${ }^{3}$ 0-3
ENG 200 Writing Seminar II
Oral Communication 3

CMM $100 \quad$ Principles of Oral Communication

| Mathematics | 3 |
| :--- | :--- |
| Social Science | 3 |


| SSC 200 | Social Science Integrated |  |
| :--- | :--- | :--- |
| Arts | 4 | 7 |

Natural Sciences ${ }^{4} \quad 7$
$\begin{array}{ll}\text { Crossing Boundaries } & \text { variab } \\ & \text { credit }\end{array}$
Faith Traditions

| Practical Ethical Action |  |
| :--- | :--- |
| Inquiry |  |
| Integrative | variable <br> Advanced Study |

Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice 3
Major Capstone 0-3
1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

## BM Requirements

Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) 3
Natural Sciences (Satisfies CAP Natural Science) 7
Social Sciences (May include CAP Social Science) 3
Major Requirements ${ }^{1} \quad 80$
MUS 200 Recital Attendance (7 semesters) 0
MUS $202 \quad$ Professional Development Workshop (7 0
semesters)
MUS 231 Introduction to Music Education 2
MUS $240 \quad$ Fundamentals of Conducting 2
MUS 241 Keyboard Competency I 0
MUS 242 Keyboard Competency II 0
MUS 250 Second Year Review 0
MUS 318 Fundamentals of Arranging 2
MUS 331 Choral Music Methods 3
MUS 332 Instrumental Music Methods 3
MUS 335 Classroom Music Methods 3
MUS 340 Music Education for Diverse Student Populations 3 in Inclusive Settings
MUS $450 \quad$ Degree Recital (Satisfies CAP Major Capstone) 0
Performance Studies (7 semesters) ${ }^{2} 14$
MUS $399 \quad$ Performance Studies (7 semesters) ${ }^{2}$
Ensembles 6
MUS 390 Ensembles (1 semester)
Select five semesters from:
MUS $491 \quad$ University Orchestra
or MUS 492 Symphonic Wind Ensemble
or MUS 493 University Chorale
Music History and Literature 9
MUS $300 \quad$ Understanding World Musics
MUS 301 Music History \& Literature I (Satisfies CAP Faith Traditions, Advanced Religious Studies)
MUS 302 Music History \& Literature II (Satisfies CAP Integrative, Advanced Historical Studies)
variablMusic Theory and Aural Skills
MUS 111 Theory of Music I
MUS 112 Theory of Music II

| MUS 113 | Aural Skills I |
| :---: | :---: |
| MUS 114 | Aural Skills II |
| MUS 211 | Theory of Music III |
| MUS 212 | Theory of Music IV |
| MUS 213 | Aural Skills III |
| MUS 214 | Aural Skills IV |
| Additional requirements for Vocal Concentration ${ }^{3}$ |  |
| MUS 408 | Diction \& Literature for Singers |
| Ensembles | 1 |
| MUS 390 | Ensembles (instrumental) |
| Music Education | 7 |
| MUS 195 | Beginning Guitar Class I |
| MUS 295 | Beginning Guitar Class II |
| MUS 235 | Voice Pedagogy |
| or MUS 236 | Voice Laboratory |
| MUS 237 | Brass Instrument Laboratory |
| MUS 238 | Woodwind Instrument Laboratory |
| MUS 338 | Percussion Pedagogy |
| MUS 339 | String Pedagogy |
| Select a minimum | of 8 elective semester hours from: |
| MUS 233 | Eurhythmics |
| MUS 338 | Percussion Pedagogy |
| MUS 345 | Choral Conducting |
| MUS 346 | Instrumental Conducting |
| MUS 381 | Clinical \& Educational Music Improvisation I |
| MUS 399 | Performance Studies (on secondary instrument, may be repeated) |
| MUS 408 | Diction \& Literature for Singers |
| MUS 430 | Jazz Pedagogy |
| MUS 431 | Marching Band Pedagogy |
| Teacher Education | n 21 |
| EDT 110 | The Profession of Teaching |
| EDT 110L | The Profession of Teaching Laboratory |
| EDT 207 | Child and Adolescent in Education |
| EDT 207L | Child and Adolescent in Education Laboratory |
| EDT 305 | Philosophy and History of American Education (Satisfies CAP Practical Ethical Action, and Advanced Study in Philosophy) |
| EDT 479 | Student Teaching- Music P-12 |
| Breadth |  |
| ASI 150 | Introduction to the University Experience |
| Total Hours to tot | al at least 139 |
| Students in the music education program are required to maintain a 2.5 cumulative grade point average prior to taking EDT 110; $\geq 2.75$ cumulative grade point average after completing EDT 110; and $\geq 3.0$ after completing EDT 207. GPA in professional education (EDT) must be $\geq 2.75$ after completing EDT 110; $\geq 3.0$ after completing EDT 207. Students must earn a grade of a C- or higher in all EDT courses, and a grade of $S$ in all EDT labs prior to entry into clinical experience. Students must earn a grade of C- or higher in the following core music education courses: MUS 331, MUS 332 and MUS 335; and a 2.5 cumulative grade point average in all music courses. On principal instrument. |  |

Students will select one of two concentration areas (instrumental or vocal). Upon successful completion of the degree and the required Ohio Assessment for Educators exams, candidates will receive a Resident Educator License (Four Year, Multi-age, P-12) from the State of Ohio to teach music from pre-kindergarten through senior high school.

## Bachelor of Music, Music Performance (MUP) minimum 137 hours

Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |

Second-Year Writing Seminar ${ }^{3}$ ..... 0-3
ENG $200 \quad$ Writing Seminar II
Oral Communication ..... 3
CMM 100 Principles of Oral Communication
Mathematics ..... 3
Social Science ..... 3
SSC 200 Social Science Integrated
Arts ..... 3
Natural Sciences ${ }^{4}$ ..... 7
variablecreditFaith TraditionsPractical Ethical Action
Inquiry
Integrative
Advanced Study variable
Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice ..... 3
Major Capstone ..... 0-3
Completed with ASI 110 and ASI 120.Or ENG 100A and ENG 100B, or ENG 200H, by placement.Completed with ENG 200 H or ASI 120.Must include two different disciplines and accompanying lab.
U.S. History AP credit will not satisfy this requirement.
BM Requirements
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) ..... 3
Natural Sciences (Satisfies CAP Natural Science) ..... 7
Social Sciences (Includes CAP Social Science) ..... 6
Major Requirements ..... 87

| MUS 200 | Recital Attendance (7 semesters) | 0 |
| :--- | :--- | :--- |
| MUS 202 | Professional Development Workshop (7 <br> semesters) | 0 |
| MUS 241 | Keyboard Competency I | 0 |


| MUS 242 | Keyboard Competency II | 0 |
| :---: | :---: | :---: |
| MUS 250 | Second Year Review | 0 |
| MUS 450 | Degree Recital (2 required. Satisfies CAP Major Capstone.) | 0 |
| Conducting |  | 4 |
| MUS 240 | Fundamentals of Conducting |  |
| MUS 318 | Fundamentals of Arranging |  |
| Ensembles |  | 8 |
| MUS 491 <br> or MUS 492 <br> or MUS 493 | University Orchestra <br> Symphonic Wind Ensemble <br> University Chorale |  |
| Music History and | Literature | 9 |
| MUS 300 | Understanding World Musics |  |
| MUS 301 | Music History \& Literature I (Satisfies CAP Faith Traditions, Advanced Religious Studies) |  |
| MUS 302 | Music History \& Literature II (Satisfies CAP Integrative, Advanced Historical Studies) |  |
| Music Theory and | Aural Skills | 16 |
| MUS 111 | Theory of Music I |  |
| MUS 112 | Theory of Music II |  |
| MUS 113 | Aural Skills I |  |
| MUS 114 | Aural Skills II |  |
| MUS 211 | Theory of Music III |  |
| MUS 212 | Theory of Music IV |  |
| MUS 213 | Aural Skills III |  |
| MUS 214 | Aural Skills IV |  |
| Performance Studies ${ }^{1}$ |  | 36 |
| Major area of specialization (24-32 hours) |  |  |
| Minor area of specialization (4-12 hours) |  |  |
| MUS electives ${ }^{2}$ |  | 14 |

## Breadth

| ASI 150 | Introduction to the University Experience | 1 |
| :--- | ---: | ---: |
| Non-music electives ${ }^{3}$ | 3 |  |

## Total Hours to total at least

1371 Performance study in major area must lead to a half junior solo recital and a full senior solo recital.
2 Voice majors must take MUS 235 and MUS 408; piano majors must include MUS 405 and MUS 435; instrumental majors must take a pedagogy course in their area of specialization. Wind, string, brass and percussion majors should register for the appropriate pedagogy course in their area of performance (MUS 336-MUS 339). Majors are strongly urged to register for a Special Topics class with their performance instructor chosen to complement other performance studies.
Voice majors must include two semesters of foreign language study.

## Bachelor of Music, Music Therapy (MUT) minimum 131 hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$
HST 103 The West \& the World

| REL 103 | Introduction to Religious and Theological Studies |  |
| :---: | :---: | :---: |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writ | ing Seminar ${ }^{3}$ | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communica |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| SSC 200 | Social Science Integrated |  |
| Arts |  | 3 |
| Natural Sciences |  | 7 |
| Crossing Bounda |  | variable <br> credit |
| Faith Tradition |  |  |
| Practical Ethic | al Action |  |
| Inquiry |  |  |
| Integrative |  |  |
| Advanced Study |  | variable <br> credit |

Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice 3
Major Capstone 0-3
1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

## BM Requirements

Mathematics (Satisfies CAP Mathematics) ${ }^{1} 3$
Natural Sciences, includes: 7
HSS 305 Human Anatomy
Lecture with Lab
Social Scineces (Includes CAP Social Science) 3
Major Requirements 78
MUS $200 \quad$ Recital Attendance (7 semesters) 0
MUS 202 Professional Development Workshop (7 0 semesters)
MUS 241 Keyboard Competency I 0
MUS 242 Keyboard Competency II 0
MUS 250 Second Year Review 0
MUS 450 Degree Recital (Satisfies CAP Major Capstone) 0
MUS 489 Music Therapy Internship ${ }^{2}$ 2
Conducting and Arranging 4

| MUS 240 | Fundamentals of Conducting |
| ---: | :--- |
| MUS 318 | Fundamentals of Arranging |
| Ensembles | 6 |

Ensembles 6
MUS 491 University Orchestra
or MUS 492 Symphonic Wind Ensemble
or MUS 493 University Chorale

| Music History and Literature |  | 9 |
| :---: | :---: | :---: |
| MUS 300 | Understanding World Musics |  |
| MUS 301 | Music History \& Literature I (Satisfies CAP Faith Traditions, Advanced Religious Studies) |  |
| MUS 302 | Music History \& Literature II (Satisfies CAP Integrative, Advanced Historical Studies) |  |
| Music Theory and | Aural Skills | 16 |
| MUS 111 | Theory of Music I |  |
| MUS 112 | Theory of Music II |  |
| MUS 113 | Aural Skills I |  |
| MUS 114 | Aural Skills II |  |
| MUS 211 | Theory of Music III |  |
| MUS 212 | Theory of Music IV |  |
| MUS 213 | Aural Skills III |  |
| MUS 214 | Aural Skills IV |  |
| Music Therapy, including core courses and practica |  | 28 |
| MUS 233 | Eurhythmics |  |
| MUS 282 | Functional Music Therapy Skills |  |
| MUS 285 | Introduction to Music Therapy |  |
| MUS 286 | Music Therapy Methods |  |
| MUS 287 | Practicum in Music Therapy I |  |
| MUS 288 | Practicum in Music Therapy II |  |
| MUS 289 | Practicum in Music Therapy III |  |
| MUS 290 | Music Therapy Treatment Processes |  |
| MUS 381 | Clinical \& Educational Music Improvisation I |  |
| MUS 382 | Clinical \& Educational Music Improvisation II |  |
| MUS 385 | Music Therapy Principles |  |
| MUS 386 | Music \& Psychotherapy |  |
| MUS 387 | Practicum in Music Therapy IV |  |
| MUS 388 | Practicum in Music Therapy V |  |
| MUS 486 | Research in Music Therapy |  |
| Performance Studies ${ }^{3}$ |  | 10 |
| MUS 399 | Performance Studies |  |
| Vocal and instrumental methods, including accompanying instruments of piano and guitar: |  | 3 |
| MUS 195 | Beginning Guitar Class I |  |
| MUS 295 | Beginning Guitar Class II |  |
| MUS 338 | Percussion Pedagogy ${ }^{4}$ |  |

## Breadth

| ASI 150 | Introduction to the University Experience | 1 |
| :--- | :--- | ---: |
| PSY 101 | Introductory Psychology | 3 |
| PSY 351 | Child Psychology | 3 |
| PSY 355 | Developmental Psychopathology | 3 |
| PSY 363 | Abnormal Psychology | 3 |
| Total Hours to total at least | 131 |  |

1 MTH 207 recommended.

2 This internship of a minimum of 900 hours is taken after student completes all other course requirements. In order to be recommended for an internship, the student must 1) demonstrate certain skills, characteristics, and dispositions required in the music therapy profession, 2) earn a grade of C - or better in each music therapy course, and 3) have an overall grade point average of at least 2.00 and a grade point average of at least 2.50 in music, music therapy, and psychology coursework. Upon earning a grade of Cor better in an internship, the graduate is eligible to take a national certification examination to become a Music Therapist - Board Certified.
3 Performance studies on the student's principal instrument leading to a minimum of a half-recital during the junior or senior year.
One semester of MUS 338 must be completed for a total of one semester hour.

## Certificate in Church Music (MCH)

| Church Music |  |  |
| :--- | :--- | ---: |
| MUS 110 | Fundamentals of Music ${ }^{1}$ | 2 |
| MUS 350 | Sacred Music History | 3 |
| MUS 351 | Church Music Administration | 2 |
| MUS 390 | Ensembles | 1 |
| MUS 399 | Performance Studies | $1-2$ |
| MUS 452 | Contemporary Liturgical Music Repertoire | 2 |
| MUS 459 | Church Music Internship $^{2}$ | 2 |
| REL 446 | Christian Liturgy ${ }^{2}$ | 3 |
| Select one course from: | 2 |  |


| MUS 240 | Fundamentals of Conducting |
| :---: | :--- | ---: |
| MUS 545 | Advanced Choral Conducting \& Rehearsal <br> Techniques |
| Select six semester hours from: | 6 |
| MUS 318 | Fundamentals of Arranging |

1 May substitute additional credits in performance studies or church music workshops for MUS 110.
2
Or two to three semester hours of a suitable religious studies course.

## Minor in Music (MUS)

## Music

Select one music theory option from: 4
Option A:
MUS 115 Music in Theory \& Practice I
Select MUS electives (1 hours)
Option B:
MUS 111 Theory of Music I
MUS 113 Aural Skills I
Select two courses from:

| MUS 301 | Music History \& Literature I |
| :--- | :--- |
| MUS 302 | Music History \& Literature II |
| MUS 303 | Introduction to Musics of the World |


| or MUS 300 Understanding World Musics |  |  |
| :---: | :---: | :---: |
| Ensembles ${ }^{1}$ |  | 2 |
| MUS 390 | Ensembles ${ }^{2}$ |  |
| MUS 491 | University Orchestra |  |
| MUS 492 | Symphonic Wind Ensemble |  |
| MUS 493 | University Chorale |  |
| MUS 494 | Dayton Jazz Ensemble |  |
| Electives |  | 3 |
| Select MUS electives (3 hours) |  |  |
| Total Hours |  | 15 |
| 1 Take a total of two semester hours from any combina courses. <br> ${ }^{2}$ Choose from any MUS 390. See course descriptions. |  |  |
| Music Technology |  |  |
| Select one music theory option from: |  | 4 |
| Option A |  |  |
| MUS 115 | Music in Theory \& Practice I |  |
| Select MUS electives (1 hour) |  |  |
| Option B |  |  |
| MUS 111 | Theory of Music I |  |
| MUS 113 | Aural Skills I |  |
| Applied Studies ${ }^{1}$ |  | 2 |
| MUS 399 | Performance Studies |  |
| MUS 499 | Performance Studies |  |
| Select one course from: |  | 3 |
| MUS 301 | Music History \& Literature I |  |
| MUS 302 | Music History \& Literature II |  |
| MUS 303 | Introduction to Musics of the World |  |
| Music Technology |  | 5 |
| MUS 223 | Introduction to Music Technology |  |
| MUS 323 | Experiments in Digital Sound and Media |  |
| Electives |  | 3 |
| Select MUS electives (3 hours) |  |  |
| Total Hours |  | 17 |
| 1 Take a to courses. <br> - Bachelor <br> - Bachelor <br> - Bachelor <br> - Bachelor <br> - Bachelor (p. 232) <br> - Bachelor <br> - Bachelor <br> - Bachelor | two semester hours from any combination of these <br> ts, Music- Ethnomusicology Concentration (p. 229) <br> ts, Music - Jazz Studies Concentration (p. 230) <br> ts, Music - Music Studies Concentration (p. 230) <br> usic, Music Composition (p. 231) <br> usic, Music Education - Instrumental Concentration <br> usic, Music Education - Vocal Concentration (p. 233) <br> usic, Music Performance (p. 233) <br> usic, Music Therapy (p. 234) |  |

## Bachelor of Arts, Music- Ethnomusicology Concentration

\begin{tabular}{|c|c|c|}
\hline \multicolumn{3}{|l|}{First Year} \\
\hline Fall \& Hours Spring \& Hours \\
\hline ASI 150 \& \begin{tabular}{l}
1 ENG 100 \\
(CAP \\
Humanities Commons)
\end{tabular} \& 3,4 \\
\hline HST 103, PHL 103, or REL 103 (CAP Humanities Commons) \& 3 HST 103, PHL 103, or REL 103 (CAP Humanities Commons) \& 3 \\
\hline HST 103, PHL 103, or REL 103 (CAP Humanities Commons) \& 3 MUS 112 \& 2 \\
\hline MUS 111 \& 2 MUS 114 \& 2 \\
\hline MUS 113 \& 2 MUS 200 \& 0 \\
\hline MUS 200 \& \begin{tabular}{l}
0 MUS 303 \\
(CAP Arts)
\end{tabular} \& 3 \\
\hline MUS 241 \& \[
\begin{aligned}
\& 0 \text { MUS 390, } \\
\& 491,492 \text {, or } \\
\& 493
\end{aligned}
\] \& 1 \\
\hline MUS 390, 491, 492, or 493 \& 1 MUS 399 \& 1 \\
\hline MUS 399 \& 1 \& \\
\hline CMM 100 (CAP Communication) \& 3 \& \\
\hline \& 16 \& 15-16 \\
\hline \multicolumn{3}{|l|}{Second Year} \\
\hline Fall \& Hours Spring \& Hours \\
\hline ENG 200 (CAP Writing Seminar) \& 3-4 MUS 200 \& 0 \\
\hline MUS 200 \& 0 MUS 212 \& 2 \\
\hline MUS 211 \& 2 MUS 214 \& 2 \\
\hline MUS 213 \& 2 MUS 250 \& 0 \\
\hline MUS 301 (CAP Faith Traditions, Adv. Religious Studies) \& \begin{tabular}{l}
3 MUS 302 \\
(CAP \\
Integrative, \\
Adv. \\
Historical Study)
\end{tabular} \& 3 \\
\hline MUS 390, 491, 492, or 493 \& \[
\begin{aligned}
\& 1 \text { MUS 390, } \\
\& 491,492 \text {, or } \\
\& 493
\end{aligned}
\] \& 1 \\
\hline MUS 399 \& 2 MUS 399 \& 1 \\
\hline ANT 150 (CAP Inquiry, Diversity and Social Justice; Social Science - intro level) \& \begin{tabular}{l}
3 ANT 306 \\
(CAP \\
Diversity and Social Justice) \\
ANT 356 \\
(Social \\
Science - \\
300/400 level)
\end{tabular} \& 3

3 <br>
\hline \& 16-17 \& 15 <br>
\hline \multicolumn{3}{|l|}{Third Year} <br>
\hline Fall \& Hours Spring \& Hours <br>
\hline MUS 200 \& 0 MUS 200 \& 0 <br>
\hline MUS 217 \& 2 MUS 242 \& 0 <br>
\hline MUS 390, 491, 492, or 493 \& 1 MUS 399 \& 2 <br>

\hline MUS 399 \& $$
\begin{aligned}
& 1 \text { MUS 390, } \\
& 491,492 \text {, or } \\
& 493
\end{aligned}
$$ \& 1 <br>

\hline ANT 360 (Social Science - elective) \& 3 SOC 394 \& 3 <br>
\hline SOC 101 \& 3,4 ANT 449 \& 3 <br>
\hline
\end{tabular}





| MUS 399 | 2 CAP Diversity | 3 | MUE elective | 1 EDT 207L | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | and Social |  | 19-20 | 19-20 | $\overline{17}$ |
|  | Justice |  | Third Year |  |  |
| EDT 305 (CAP Practical Ethical Action, Advanced | 3 |  |  | Hours Spring | Hours |
| Philosophy) |  |  | PHL 103 (CAP Humanities Commons) | Hours Spring | Hours |
|  | 20 | 19 |  | 3 MUS 200 | 0 |
| Fourth Year |  |  | MUS 200 | 0 MUS 202 | 0 |
| Fall | Hours Spring | Hours | MUS 202 | 0 MUS 332 | 3 |
|  |  |  | MUS 240 | 2 MUS 339 | 1 |
| MUS 200 | 0 EDT 479 | 12 |  | 2 MUS 399 |  |
| MUS 202 | 0 |  | MUS 335 |  | 2 1 |
| MUS 331 | 3 |  |  | 3 MUS 390 (Instrumental | 1 |
| MUS 390 (Chamber Ensemble) | 0.5 |  | Ensemble) |  |  |
| MUS 390 (Marching Band) | 1 |  | MUS 238 | 1 MUE elective | 2 |
| MUS 399 | 2 |  | MUS 340 | 3 MUE elective | 1 |
| MUS 431 | 2 |  | MUS 399 | 2 CAP Natural | 3 |
| MUS 450 (Satisfies CAP Major Capstone) | 0 |  |  | Science |  |
| SSC 200 (CAP Social Science) | 3 |  | EDT 305 (CAP Practical Ethical Action, Advanced | 3 CAP Inquiry | 3 |
| CAP Mathematics | 3 |  | Philosophy ) |  |  |
| CAP Natural Science w/lab | 4 |  | MUS 493 | 1 CAP Diversity and Social Justice | 3 |
|  | 18.5 | 12 |  |  |  |
| Total credit hours: 142-144 |  |  |  | 20 | 19 |
| Bachelor of Music, Music Education- |  |  | Fourth Year |  |  |
|  |  |  | Fall | Hours Spring | Hours |
| Vocal Concentration |  |  | MUS 200 | 0 EDT 479 | 12 |
|  |  |  | MUS 202 | 0 |  |
| First Year |  |  | MUS 331 | 3 |  |
| Fall | Hours Spring | Hours | MUS 390 (Vocal Ensemble) | 1 |  |
| ASI 150 | 1 ENG 100 <br> (CAP <br> Humanities Commons) | 3,4 | MUS 450 (Satisfies CAP Major Capstone) | 0 |  |
|  |  |  | MUE elective | 2 |  |
|  |  |  | SSC 200 (CAP Social Science) | 3 |  |
| HST 103 (CAP Humanities Commons) | 3 MUS 112 | 2 | MTH (CAP Mathematics) | 3 |  |
| REL 103 (CAP Humanities Commons) | 3 MUS 114 | 2 | CAP Natural Science w/lab | 4 |  |
| MUS 111 | 2 MUS 200 | 0 | General elective | 1 |  |
| MUS 113 | 2 MUS 202 | 0 |  | 17 | 12 |
| MUS 200 | 0 MUS 235 | 1 | Total credit hours: 140-142 |  |  |
| MUS 202 | 0 MUS 295 | 1 |  |  |  |
| MUS 241 | 0 MUS 303 <br> (CAP Arts ) | 3 | Bachelor of Music, Music Performance |  |  |
| MUS 399 | 2 MUS 399 | 2 | First Year |  |  |
| MUS 195 | 1 MUS 493 | 1 | Fall | Hours Spring | Hours |
| MUS 493 | 1 EDT 110 | 3 | ASI 150 | 1 ENG 100 <br> (CAP <br> Humanities Commons) | 3,4 |
| CMM 100 (CAP Communication) | 3 EDT 110L | 0 |  |  |  |
|  | 18 | 18-19 |  | Commons) |  |
| Second Year |  |  | HST 103, PHL 103, or REL 103 (CAP Humanities | 3 HST 103, PHL | 3 |
| Fall | Hours Spring | Hours | Commons) | 103, or REL |  |
| ENG 200 (CAP Writing Seminar) | 3-4 MUS 200 | 0 |  | 103 (CAP |  |
| MUS 200 | 0 MUS 202 | 0 |  | Commons) |  |
| MUS 202 | 0 MUS 212 | 2 | T 103, PHL 103, or REL 103 (CAP Human | 3 MUS 112 | 2 |
| MUS 211 | 2 MUS 214 | 2 | Commons) |  |  |
| MUS 213 | 2 MUS 242 | 0 | CMM 100 (CAP Communication) | 3 MUS 114 | 2 |
| MUS 231 | 2 MUS 250 | 0 | MUS 111 | 2 MUS 200 | 0 |
| MUS 237 | 1 MUS 302 <br> (CAP <br> Integrative, <br> Advanced Historical Study) | 3 | MUS 113 MUS 200 | 2 MUS 202 |  |
|  |  |  |  | 0 MUS 303 (CAP Arts) | 3 |
|  |  |  |  |  |  |
|  |  |  | MUS 202 | 0 MUS 399 or MUS 499 | 4 |
|  |  |  |  |  |  |
| MUS 301 (CAP Faith Traditions, Advanced Religious | 3 MUS 408 | 2 | MUS 241 | 0 MUS 491, 492, or 493 | 1 |
| Studies) |  |  |  |  |  |
| MUS 338 | 1 MUS 399 | 2 | MUS 399 or MUS 499 | 4 |  |
| MUS 390 | 1 MUS 493 | 1 | MUS 491, 492, or 493 | 1 |  |
| MUS 399 | 2 MUE elective | 2 |  | 19 | 18-19 |
| MUS 493 | 1 EDT 207 | 3 |  |  |  |


| Second Year |  |  |
| :---: | :---: | :---: |
| Fall | Hours Spring | Hours |
| MUS 200 | 0 ENG 200 (CAP Writing Seminar) | 3-4 |
| MUS 202 | 0 MUS 200 | 0 |
| MUS 211 | 2 MUS 202 | 0 |
| MUS 213 | 2 MUS 212 | 2 |
| MUS 240 | 2 MUS 214 | 2 |
| MUS 301 (CAP Faith Traditions, Advanced Religious Studies) | 3 MUS 242 | 0 |
| MUS 399 or MUS 499 | 4 MUS 250 | 0 |
| MUS 491, 492, or 493 | 1 MUS 302 <br> (CAP <br> Integrative, <br> Advanced <br> Historical <br> Studies) | 3 |
| SSC 200 (CAP Social Science) | 3 MUS 318 | 2 |
|  | MUS 399 or MUS 499 | 4 |
|  | MUS 491, <br> 492, or 493 | 1 |
|  | 17 | 17-18 |
| Third Year |  |  |
| Fall | Hours Spring | Hours |
| MUS 200 | 0 MUS 200 | 0 |
| MUS 202 | 0 MUS 202 | 0 |
| MUS 399 and/or MUS 499 | 6 MUS 399 and/or MUS 499 | 6 |
| MUS 491, 492, or 493 | 1 MUS 491, 492, or 493 | 1 |
| Music elective | 1 Music elective | 2 |
| CAP Natural Science w/lab | 4 Music elective | 1 |
| CAP Inquiry | 3 CAP Natural Science | 3 |
| General elective | 3 Social <br> Science | 3 |
|  | 18 | 16 |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| MUS 200 | 0 MUS 399 or MUS 499 | 4 |
| MUS 202 | 0 MUS 450 <br> (Satisfies <br> CAP Major Capstone) | 0 |
| MUS 304 (CAP Practical Ethical Action, Diversity and Social Justice) | 3 MUS 491, 492, or 493 | 1 |
| MUS 399 or MUS 499 | 4 Music elective | 2 |
| MUS 450 | 0 Music elective | 2 |
| MUS 491, 492, or 493 | 1 Music elective | 2 |
| Music elective | 2 CAP <br> Advanced Philosophy | 3 |
| Music elective | 2 General elective | 3 |
| MTH (CAP Mathematics) | 3 |  |
|  | 15 | 17 |

Total credit hours: 137-139

Bachelor of Music, Music Therapy
First Year

| Fall | Hours Spring | Hours |
| :---: | :---: | :---: |
| ASI 150 | 1 ENG 100 <br> (CAP <br> Humanities Commons) | 3,4 |
| HST 103 (CAP Humanities Commons) | 3 MUS 112 | 2 |
| REL 103 (CAP Humanities Commons) | 3 MUS 114 | 2 |
| PSY 101 | 3 MUS 195 | 1 |
| MUS 111 | 2 MUS 200 | 0 |
| MUS 113 | 2 MUS 202 | 0 |
| MUS 200 | 0 MUS 233 | 1 |
| MUS 202 | 0 MUS 285 | 3 |
| MUS 241 | $\begin{aligned} & 0 \text { MUS } 303 \\ & \text { (CAP Arts ) } \end{aligned}$ | 3 |
| MUS 399 | 2 MUS 399 | 2 |
| MUS 491, 492, or 493 | 1 MUS 491, 492, or 493 | 1 |
|  | 17 | 18-19 |
| Second Year |  |  |
| Fall | Hours Spring | Hours |
| ENG 200 (CAP Writing Seminar) | 3-4 MTH 207 <br> (CAP <br> Mathematics, Inquiry) | 3 |
| PHL 103 (CAP Humanities Commons) | 3 PSY 351 | 3 |
| MUS 200 | 0 MUS 200 | 0 |
| MUS 202 | 0 MUS 202 | 0 |
| MUS 211 | 2 MUS 212 | 2 |
| MUS 213 | 2 MUS 214 | 2 |
| MUS 282 | 2 MUS 242 | 0 |
| MUS 290 | 1 MUS 250 | 0 |
| MUS 301 (CAP Faith Traditions, Advanced Religious Studies) | 3 MUS 287 | 1 |
| MUS 399 | 2 MUS 295 | 1 |
| MUS 491, 492, or 493 | 1 MUS 302 | 3 |


|  | (CAP |  |
| :--- | :--- | :--- |
| Integrative, |  |  |
|  | Advanced |  |
|  | Historical |  |
|  | Study) |  |
|  | MUS 338 | 1 |
|  | MUS 399 | 2 |
|  | MUS 491, | 1 |
|  | 492, or 493 | 19 |

Third Year
Fall Hours Spring Hours
MUS 2000 MUS 200
MUS 2020 MUS 202
0
MUS 286 3 MUS $289 \quad 1$
MUS 288 1 MUS 491,
MUS $381 \quad 2$ MUS 486
MUS $399 \quad 2$ MUS 450 0
(Satisfies
CAP Major
Capstone)
1 Music
elective
3 CMM 100
(CAP
Communication)
4 HSS 305

|  | CAP Natural Science | 3 |
| :---: | :---: | :---: |
|  | 16 | 15 |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| MUS 200 | 0 MUS 304 <br> (CAP <br> Practical <br> Ethical <br> Action, <br> Diversity <br> and Social <br> Justice) | 3 |
| MUS 202 | 0 MUS 382 | 2 |
| MUS 240 | 2 MUS 386 | 3 |
| MUS 318 | 2 MUS 388 | 2 |
| MUS 385 | 3 Music electives | 1 |
| MUS 387 | 2 CAP <br> Advanced Philosophy | 3 |
| SSC 200 (CAP Social Science) | 3 |  |
| PSY 355 | 3 |  |
|  | 15 | 14 |


| Fifth Year |  |
| :--- | ---: |
| Fall | Hours |
| MUS 489 (completed after all other coursework) | $0-2$ |

Total credit hours: 133-137

## Courses

## MUS 110. Fundamentals of Music. 2 Hours

For the student with no previous experience with theory of music. Notation of music, key and time signatures, fundamental harmonic progression, and introduction to the piano keyboard. Elementary ear training and dictation. Open to all University students.

## MUS 111. Theory of Music I. 2 Hours

Basic vocabulary and grammar of music: fundamentals (intervals, scales, modes, keys, triads), and counterpoint studies. Assignments are done with computer notation programs, and portions of the course use webbased texts.

## MUS 112. Theory of Music II. 2 Hours

Basic diatonic and chromatic harmonic vocabulary studies, emphasizing both writing and analysis skills. Assignments are done with computer notation programs, and portions of the course use web-based texts. Prerequisite(s): (MUS 111 with a grade of C - or better) or permission of instructor.

## MUS 113. Aural Skills I. 2 Hours

The hearing of musical structure is developed through active listening to representative pieces from music literature. Emphasis on formal relations, musical development and historical styles. Introduction to solfege singing and music transcription.

## MUS 114. Aural Skills II. 2 Hours

Further developing the ability to hear musical structure through transcription of intervals, melody, rhythm and harmonic patterns and short musical compositions of music in representative stylistic categories. Use of solfege singing to represent students' internalization of melodic structure. Prerequisite(s): (MUS 113 with a grade of C - or better) or permission of instructor.

## MUS 115. Music in Theory \& Practice I. 3 Hours

Music theory studies, appropriate for minors and non-music majors.
Fundamentals of music and diatonic vocabulary: connections to classical and contemporary literature. Aural skills incorporated into daily classes. Open to all University students.

## MUS 116. Music in Theory \& Practice. 3 Hours

Continuation of MUS 115: music between 1600-1900, harmony and analysis. Aural skills incorporated into daily classes. Prerequisite(s): MUS 115. Corequisite(s): Current performance studies or active participation in a music ensemble which requires note-reading skills.

## MUS 121. Composition I. 1 Hour

2Supplemental explorations for majors in music composition, to accompany work in MUS 111-112. Basic notational practices and application of traditional techniques to the creative process. Prerequisite(s): MUS 111 (may be taken as a corequisite).

MUS 122. Composition I. 1 Hour
Supplemental explorations for majors in music composition, to accompany work in MUS 111-112. Basic notational practices and application of traditional techniques to the creative process. Prerequisite(s): MUS 112 (may be taken as a corequisite). Corequisite(s): MUS 121.

## MUS 191. Voice Class. 2 Hours

Basic principles of good singing; development of the voice; vocal literature. Open to all students, but especially designed for non-music majors.

## MUS 195. Beginning Guitar Class I. 1 Hour

Experience the performing arts by learning to play the guitar. Emphasis is on chord playing and accompaniment, improvisation, and application of the guitar in community music making endeavors.

## MUS 196. Group Piano I. 1 Hour

Group study of piano study for the student with no previous experience. Rudiments of music reading, performance of simple folk and popular music, basic knowledge of scales, key signatures, and chords. Open to all University students.

## MUS 200. Recital Attendance. 0 Hours

All music majors are required to attend professional and student concerts and recitals, to develop critical listening experience and knowledge of repertoire.

## MUS 202. Professional Development Workshop. 0 Hours

All Bachelor of Music majors are required to attend a weekly professional workshop in their degree area. Course format is didactic and/or experiential according to degree program needs. Course material includes a variety of professional, pedagogical, and technological topics. May be repeated.

## MUS 205. Music, Technology and Culture. 3 Hours

Through interactive and creative activities, students will explore the intersections of music technology and culture historically and in our current rapidly changing media and musical communities at UD and beyond. The course will also consider the ways technology has altered our approach and access to music making and listening.

## MUS 211. Theory of Music III. 2 Hours

Advanced diatonic and chromatic harmonic vocabulary studies and Schenkerian analysis, emphasizing both writing and analysis skills. Assignments are done with computer notation programs, and portions of the course use web-based texts. Prerequisite(s): (MUS 112 with grade of C - or better) or permission of instructor.

## MUS 212. Theory of Music IV. 2 Hours

Music of the twentieth century, emphasizing both writing and analysis skills. Assignments are done with computer notation programs, and portions of the course use web-based texts. Prerequisite(s): (MUS 211 with a grade of C - or better) or permission of instructor.

## MUS 213. Aural Skills III. 2 Hours

Explores more advanced musical hearing and transcription techniques through later harmonic, melodic and rhythmic styles. More advanced melodic, harmonic and rhythmic materials as well as the continuing use of solfege singing to represent students' internalization of melodic structure. Prerequisite(s): (MUS 114 with grade of C - or better) or permission of instructor.

## MUS 214. Aural Skills IV. 2 Hours

Late nineteenth, twentieth and twenty-first century musical structures of harmony, melody, rhythm and compositional development/form explored through listening, transcription and performance. Prerequisite(s):
(MUS 213 with a grade of C - or better) or permission of instructor.

## MUS 217. Listening \& Transcription Skills. 2 Hours

Skills in hearing and notating music of representative and diverse styles through use of digital recording, sequencing, and computer notation software. Prerequisite(s): (MUS 112, 114) or permission of instructor.

## MUS 218. Popular Jazz Theory. 2 Hours

Skills in the composition and arranging of popular and jazz styles in music including harmonic progression, melodic forms and the structure of voices and instruments in arrangements. Emphasis on creative applications of technology on the facility of music production. Culminating project is an arrangement, produced and recorded by the student. Prerequisite(s): (MUS 111, 112) or (MUS 115, 116) or permission of instructor.

## MUS 221. Composition II. 1 Hour

Supplemental explorations for majors in music composition, to accompany work in MUS 211-212. Style analysis and synthesis, extension of traditional techniques, and basic instrumental applications. Prerequisite(s): MUS 211 (may be taken as a corequisite).
MUS 222. Composition II. 1 Hour
Supplemental explorations for majors in music composition, to accompany work in MUS 211-212. Style analysis and synthesis, extension of traditional techniques, and basic instrumental applications. Prerequisite(s): MUS 212, 221, (may be taken as corequisites).
MUS 223. Introduction to Music Technology. 3 Hours
Provides students with an introduction to the notation and recording of music with a computer. Students will learn to compile and print music, record digital instruments with MIDI, and record and mix music with portable digital audio workstations.

## MUS 231. Introduction to Music Education. 2 Hours

An introduction to a wide variety of pedagogical and philosophical aspects of teaching the arts. Topics will include technology, national and state standards, history, and professional organizations. Prerequisite(s): EDT 110.
MUS 232. Integrating Music into the Curriculum. 3 Hours
Primarily for Teacher Education majors. Development of knowledge, skills, values, and attitudes in music for integration into a classroom setting in which other classroom subjects are taught. Prerequisite(s): EDT 110.

## MUS 233. Eurhythmics. 1 Hour

Exploration of time, space, and energy through individual and collaborative structured and creative movement for musicianship skill development.

## MUS 235. Voice Pedagogy. 1 Hour

Techniques for teaching singing. Prerequisite(s): Voice major or permission of instructor.

## MUS 236. Voice Laboratory. 1 Hour

Introduction to the performance and pedagogical techniques for voice. Prerequisite(s): Instrumental music major or permission of department chairperson.

## MUS 237. Brass Instrument Laboratory. 1 Hour

Introduction to the performance and pedagogical techniques for the brass instrument family.

## MUS 238. Woodwind Instrument Laboratory. 1 Hour

Introduction to the performance and pedagogical techniques for the woodwind instrument family.

## MUS 240. Fundamentals of Conducting. 2 Hours

Introductory-level course discussing basic conducting techniques, musical styles, interpretation, score study and analysis, transposition, and literature. Dual emphasis of choral and instrumental techniques.

## MUS 241. Keyboard Competency I. 0 Hours

Successful mastery of keyboard competency skills required for the first year music major. Prerequisite(s): Permission of department chairperson.

## MUS 242. Keyboard Competency II. 0 Hours

Successful mastery of keyboard competency skills required for the second year music major. Prerequisite(s): MUS 241; permission of department chairperson.

## MUS 250. Second Year Review. 0 Hours

Required mid-point evaluation of all music majors typically completed in the second semester of the second year of study toward the degree. Students must earn a satisfactory grade (S) in this course in order to enroll in upper-level coursework in their respective degree programs. Prerequisite(s): Permission of department chairperson.

## MUS 282. Functional Music Therapy Skills. 2 Hours

Aids music therapy majors in the development of functional competencies on keyboard, guitar, and voice, as well as the ability to learn, memorize, and perform a broad repertoire of American popular song. Prerequisite(s): MUS 195, MUS 241.
MUS 285. Introduction to Music Therapy. 3 Hours
History and development of music therapy profession; survey of theoretical bases, current trends, and music therapy applications with varied clientele. Prerequisite(s): PSY 101.

## MUS 286. Music Therapy Methods. 3 Hours

Introduction to four methods of music therapy: re-creative, receptive, composition, and improvisation. Emphasis on assessment, planning, facilitation, and evaluation of music therapy experiences within each method. Prerequisite(s): MUS 285. Prerequisite(s): MUS 285.

## MUS 287. Practicum in Music Therapy I. 1 Hour

Supervised pre-internship field experiences with children and/or adults with special needs. Weekly lab required. Prerequisite(s): MUS 282; permission of department chairperson.
MUS 288. Practicum in Music Therapy II. 1 Hour
Supervised pre-internship field experiences with children and/or adults with special needs. Weekly lab required. Prerequisite(s): MUS 250, 287.

## MUS 289. Practicum in Music Therapy III. 1 Hour

Supervised pre-internship field experiences with children and/or adults with special needs. Weekly lab required. Prerequisite(s): MUS 288.

MUS 290. Music Therapy Treatment Processes. 1 Hour
Addresses the development of established competencies in the areas of music therapy referral, assessment, treatment planning, evaluation, supervision, and documentation of these processes. Prerequisite(s): MUS 285.

## MUS 293. Organ Class. 1 Hour

Introduction to the organ, including basic performance techniques, registration, beginning literature, and hymn playing.

MUS 294. Harpsichord Class. 1 Hour
Beginning course in harpsichord performance, including basic technique, stylistic considerations, and simple maintenance and tuning of the instrument.

## MUS 295. Beginning Guitar Class II. 1 Hour

Experience the performing arts by engaging in an intermediate level of learning to play the guitar. Emphasis is on note reading in first position; advanced chord voicing (e.g., 4 note chords and extensions), introduction to chord solo playing, improvisation with major scales, and application of the guitar in community music making endeavors. Prerequisite(s): MUS 195 or equivalent.
MUS 296. Functional Keyboard Skills I. 1 Hour
Instruction in development of basic performance technique, sight reading, accompanying, transposing, playing by ear, improvising, and score reading.

## MUS 297. Functional Keyboard Skills II. 1 Hour

Further development of techniques introduced in MUS 296.
Prerequisite(s): MUS 296.
MUS 298. Functional Keyboard Skills III. 1 Hour
Continuation of MUS 297 with emphasis on improvisation and harmonization techniques.

MUS 299. Functional Keyboard Skills IV. 1 Hour
Continuation of MUS 298 with emphasis on advanced chord work and modulation techniques. Prerequisite(s): MUS 298.

MUS 300. Understanding World Musics. 3 Hours
Exploration of a variety of musical traditions from around the world and the social justice challenges which intersect with these traditions. Required for all music majors. Prerequisite(s): Open to Music majors (MUP, MUC, MUT, MUE and B.A. Mus.) and Music minors (MUS and MTC) only.

## MUS 301. Music History \& Literature I. 3 Hours

Survey of Western music history and literature from the earliest notations through the 18th century, with a particular emphasis on the religious, political, and social dimensions of the production, purposes, and reception of Western Art Music. Prerequisite(s): REL 103, MUS 300, MUS 111, or permission of department chairperson.

## MUS 302. Music History \& Literature II. 3 Hours

Survey of Western music history and literature from Beethoven to the present. Important composers, masterworks of music literature, music historiography, and compositional styles. Prerequisite(s): HST 103, MUS 300, AND MUS 111, or permission of department chairperson.

MUS 303. Introduction to Musics of the World. 3 Hours
Survey of music from around the world, and its role and function in society.

## MUS 304. The Practice of American Music. 3 Hours

An exploration of American musical practices and traditions in relation to America's political, social and racial history. This course is a theme-based course. Open to all University students.

MUS 305. African-American Sacred Music. 3 Hours
Historical survey of African-American sacred music from its African roots to the present with an emphasis on developments in recent decades. Examines spirituals, the ring-shout, civil rights songs, the various forms of Gospel music, traditional hymnody of the African-American church, and the musical aspects of black preaching. Open to all University students.

## MUS 306. History of American Jazz. 3 Hours

Survey of the literature and performance practices from 1890 to the present. Includes blues, Dixieland, ragtime, boogie-woogie, swing, bop, cool, funky, and current techniques. Open to all University students.

## MUS 307. Development of American Popular Song. 3 Hours

Survey of American popular music from the days of the colonies, the war years, the ballad opera, minstrel, vaudeville, operetta, early film music, through Tin Pan Alley to Broadway, including European influences. Open to all University students.
MUS 309. Opera as Philosophy, Music, Drama, and Film. 3 Hours Exploration of the interactions between opera, philosophy, drama and film and its history from its seventeenth-century beginnings to the present. Readings will engage with current literature in opera studies, aesthetics, and explore interpretive strategies from film, performance studies, philosophy (in terms of aesthetics and/or ethics), and media studies. Open to all University students.

## MUS 314. Score Reading. 2 Hours

Training in reading music at the piano from open score. Drill in transposition, improvisation, and reading of various clefs, leading to the realization of full vocal and orchestral scores.

## MUS 315. Music and Gender. 3 Hours

Survey of issues concerning music, gender and sexuality across cultures and time periods. Open to all University students.

## MUS 316. Fundamentals of Orchestration. 2 Hours

Instrumentation studies of the four main orchestral families: woodwinds, brass, percussion, strings. Some work in combining families.
Prerequisite(s): MUS 212.

## MUS 318. Fundamentals of Arranging. 2 Hours

Arranging studies for woodwinds, brass, percussion, strings, and choir. Individual examination of instruments; projects. Prerequisite(s): MUS 212.

## MUS 321. Composition III. 2 Hours

Explorations of original composition, which utilize equally the concepts of pitch, temporal elements, timbres, and dynamics. Prerequisite(s): MUS 214, 250.
MUS 322. Composition III. 2 Hours
Explorations of original composition, which utilize equally the concepts of pitch, temporal elements, timbres, and dynamics. Prerequisite(s): MUS 250, 321.

## MUS 323. Experiments in Digital Sound and Media. 3 Hours

Comprehensive overview of digital audio and digital visual media. Develops skills in creation and manipulation of digital media, media software, and their applications in contemporary media cultures. A personal laptop computer is required for this course.

## MUS 327. Music in Film. 3 Hours

Survey of the styles, aesthetics, and techniques of film music, emphasizing the interaction of music and visual image in film. Consideration of the changes in both film and film music, and their relationship to culture, society, and students' own lives.

## MUS 328. History of the American Musical. 3 Hours

Survey of the history and literature of the American musical from its nineteenth century predecessors to the present day. The course will focus on major representative works, major composers, and other artistic innovators. Open to all University students.

## MUS 331. Choral Music Methods. 3 Hours

Pedagogical techniques for choral ensembles. Topics include the singing voice, the changing voice, organization, artistic development, literature, and rehearsal techniques. National standards are emphasized as they relate to specific objectives. Current related practices in technology are incorporated in specific assignments. Field experience required. Prerequisite(s): MUS 250.

## MUS 332. Instrumental Music Methods. 3 Hours

Pedagogical techniques for band and orchestra. Topics include teaching and rehearsal techniques, organization, assessment, learning theories, philosophy, literature, and programming. National standards are emphasized as they relate to specific objectives. Current related practices in technology are incorporated in specific assignments. Field experience required. Prerequisite(s): MUS 250.
MUS 335. Classroom Music Methods. 3 Hours
Pedagogical techniques for classroom music in grades preK through 8. Topics include the pedagogical methods of Orff, Kodaly, Suzuki, and Dalcroze; lesson-plan design, implementation, and assessment. Special emphasis on the exceptional learner. National Standards are emphasized as they relate to specific objectives. Current related practices in technology are incorporated in specific assignments. Field experience required. Prerequisite(s): MUS 250.

## MUS 336. Woodwind Pedagogy. 1 Hour

Course in woodwind pedagogy offered in two semester-long sections: (1) pedagogical techniques for clarinet and flute; (2) pedagogical techniques for saxophone, oboe, and bassoon. Repeatable up to two semester hours.

## MUS 337. Brass Pedagogy. 1 Hour

Course in brass pedagogy offered in two semester-long sections (1) pedagogical techniques for trumpet and horn; (2) pedagogical techniques for trombone, euphonium, and tuba. Repeatable up to two semester hours.

## MUS 338. Percussion Pedagogy. 0.5-1 Hours

Course in percussion pedagogy offered in two semester-long sections: (1) Pedagogical techniques for the percussion instruments; (2) performance study on snare drum, mallets and timpani; teaching techniques for accessory instruments; minor repairs: method book analysis. Repeatable up to one and a half semester hours.

MUS 339. String Pedagogy. 1 Hour
Pedagogical techniques for the string instruments. Separate sections for upper strings and lower strings. Each section is a full-term course.

MUS 340. Music Education for Diverse Student Populations in Inclusive Settings. 3 Hours
Introduction to issues in music education with and among a broad range of diverse student populations. Special needs students in music education settings will include but not be limited to those with physical, intellectual, cognitive, emotional, and sensory challenges that can impact the learning process. Other categories of students in music education settings will also be addressed in the course, including those from varied backgrounds such as racial and cultural origins, language groups, sexual identity, religion, gender, and economic and situational family units. Specific musical characteristics and needs of multiple types of learners will be examined, along with varied teaching methods and strategies to use in inclusive settings. Information and guidelines regarding state and federal regulatory issues related to education and music education will form the foundation for the topics included in this class. Field experience required. Prerequisite(s): MUS 231.

## MUS 345. Choral Conducting. 2 Hours

Continuation of techniques introduced in MUS 240, dealing specifically with techniques for choral ensembles. Prerequisite(s): MUS 240.

## MUS 346. Instrumental Conducting. 2 Hours

Continuation of techniques introduced in MUS 240, dealing specifically with techniques for band and orchestra. Prerequisite(s): MUS 240.

## MUS 350. Sacred Music History. 3 Hours

Survey of the development of Christian Music and its function in worship. The focus will be on historical styles, including both their impact on and their application within liturgical settings, as well as on the religious reflections engendered by specific works.

## MUS 351. Church Music Administration. 2 Hours

Examination of the process, organization, administration, planning, and presentation of church music in various Christian traditions. Attention is given to concepts of worship planning, the organization of a comprehensive music program, program development and the relationship between the music ministry and various other church entities.
MUS 352. Understanding Sacred Music \& Worship in the Local Church. 3 Hours
Study of the important relationship between music and worship in the life of the individual and in the life of the corporate Christian church with an emphasis on developments in recent decades. Studies the distinction and interconnectedness of the local church (congregation) and the Institutional Church. An historical overview of music and worship with Biblical foundations is provided. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## MUS 354. Gospel Music: Instrument of Social Change. 3 Hours

Study of gospel music as social, political, cultural, religious and historical commentary on and a vehicle for discussing and addressing issues of justice and race in America.

## MUS 360. Special Topics in Music. 1-3 Hours

Studies in specialized areas of music. May be repeated as topics change, up to six semester hours. Prerequisite(s): Permission of instructor.
MUS 362. Music and Buddhism in Southeast Asia. 3 Hours
Investigation of classical and contemporary music traditions in Southeast Asia, and their connections to Buddhism. Open to all majors. Prerequisite(s): REL 103 or ASI 110.

## MUS 363. Music and Faith on Stage. 3 Hours

Examination of the influence that faith traditions have had on music through the lens of staged works (may include opera, oratorio, musical theatre, art song, and popular vocal music/culture). Prerequisite(s): REL 103 or ASI 110.

## MUS 365. Music In Society. 3 Hours

Study of how music and musicians affect, and are affected by, the human societies in which they live. May be repeated for additional credit as topics change.

## MUS 381. Clinical \& Educational Music Improvisation I. 2 Hours

Music improvisation techniques and procedures using piano, percussion, voice, guitar, and student's major instrument. Emphasis on the acquisition of clinical and educational music improvisational skills to be applied in the medical, rehabilitation, clinical and/or school music education setting. Prerequisite(s): MUS 212, 214.

MUS 382. Clinical \& Educational Music Improvisation II. 2 Hours Intermediate skill development in clinical and educational music improvisation. Emphasis on assessment, implementation, and evaluation of individual, dyadic, and group improvisatory experiences. Acquisition of expressive movement repertoire to improvised music. Prerequisite(s): MUS 381.

## MUS 385. Music Therapy Principles. 3 Hours

Principles and processes underlying the applications of music in therapy, including philosophical approaches, assessment procedures, goals and objectives, evaluation and documentation techniques, and professional ethics and standards of clinical practice. Prerequisite(s): MUS 289.
MUS 386. Music \& Psychotherapy. 3 Hours
Overview of concepts, methods, and materials in the clinical practice of various forms of music psychotherapy. Exploration of the role and function of music within other therapeutic approaches (e.g., cognitive, humanistic, etc.). Identification of factors and issues affecting the helping process. Prerequisite(s): MUS 385 or permission of instructor.
MUS 387. Practicum in Music Therapy IV. 2 Hours
Supervised pre-internship experiences with children and/or adults with special needs. One-hour weekly lab required. Corequisite(s): MUS 385.

## MUS 388. Practicum in Music Therapy V. 2 Hours

Supervised pre-internship experiences with children and/or adults with special needs. One-hour weekly lab required. Corequisite(s): MUS 386.

## MUS 390. Ensembles. 0.5-1 Hours

Experience the performing arts in instrumental or choral/vocal ensembles of the student's choice. Prerequisite(s): While there are no prerequisites, certain ensembles may require an audition as criteria for enrollment, permission of the instructor or auditions for seating or sectional placement.

## MUS 391. Jazz Improvisation I. 1 Hour

Study and performance of the musical elements that define the various styles of jazz improvisation from the beginning to the intermediate level. Prerequisite(s): MUS 114 or permission of department chairperson.
MUS 392. Jazz Improvisation II. 1 Hour
Study of the musical elements that define the various styles of jazz improvisation from the intermediate to the advanced level. Prerequisite(s): MUS 391 or permission of department chairperson.

MUS 396. Jazz Keyboard Harmony I. 1 Hour
Practical and theoretical course of study achieved through in-depth analyses at an introductory level of chords and chord voicings, repertoire, manuscripts, videos and recordings of great jazz pianists. Students identify and perform harmonic techniques of jazz piano used by twentieth century jazz pianists. Prerequisite(s): MUS 297 or permission of department chairperson.

## MUS 397. Jazz Keyboard Harmony II. 1 Hour

Practical and theoretical course of study achieved through in-depth analyses at an intermediate level of chords and chord voicings, repertoire, manuscripts, videos and recordings of great jazz pianists. Students identify and perform harmonic techniques of jazz piano used by twentieth century jazz pianists. Prerequisite(s): MUS 396 or permission of department chairperson.

## MUS 398. Instrumental Jazz Improvisation. 1 Hour

Individualized instruction in instrumental jazz improvisation. Study of jazz theory, aural development, stylistic considerations, and repertoire. Prerequisite(s): Participation in Jazz Ensemble and/or Jazz Combo.

## MUS 399. Performance Studies. 1-2 Hours

Private instruction (one thirty to forty-five minute lesson each week) in piano, voice, organ, violin, viola, cello, bass, flute, oboe, clarinet, bassoon, saxophone, trumpet-cornet, French horn, trombone, baritone, tuba, percussion, harp, harpsichord, classical and pick-style guitar, and jazz lessons in piano, guitar, bass, drums, brass, and woodwinds. Prerequisite(s): Permission of instructor.

## MUS 405. Piano Literature. 2 Hours

Comprehensive survey of literature for the piano. Required of piano performance majors.

## MUS 408. Diction \& Literature for Singers. 2 Hours

Course in foreign language diction with an associated survey of significant and representative works from the vocal solo repertoire. Course alternates its content: German and English; and French and Italian. Course may be repeated as content changes. Prerequisite(s): MUS 399 or 499.

## MUS 416. Advanced Orcestration. 2 Hours

Continuation of MUS 316. Intensive instrumentation studies and detailed analysis of orchestral work. Prerequisite(s): MUS 316.

## MUS 421. Composition IV. 2 Hours

Advanced work in musical composition, writing multi-movement forms of both vocal and instrumental music. Prerequisite(s): MUS 250, 321, 322.

## MUS 422. Composition IV. 2 Hours

Advanced work in musical composition, writing multi-movement forms of both vocal and instrumental music. Prerequisite(s): MUS 250, 321, 322.

## MUS 423. Composition for Large Ensembles. 2 Hours

Preparation and execution of an extended work for large instrumental or vocal ensemble. All aspects of score and part preparation, notation, orchestration, correction, rehearsal, and performance will be considered.

## MUS 424. Advanced Notational Techniques. 2 Hours

Study of special problems in contemporary notation and calligraphy. Work will be done through analysis of twentieth-century techniques and creative solutions to individual problems.

## MUS 425. Electronic Music Composition. 2 Hours

Study of musical electronic techniques, ranging from tape recorders and musique concrete through synthesizer and computer-generated and organized sound.

MUS 426. Improvisational Music Composition. 2 Hours
Discussion, study, and performance of improvisational musical techniques, including historical overview of classical extemporization, stream of consciousness, jazz, and aleatory and indeterminism.

## MUS 430. Jazz Pedagogy. 2 Hours

Methods and materials for the organization and teaching of jazz performance classes. Topics include teaching improvisation, the rhythm section, and repertoire for the school jazz band. Field experience required. Corequisite(s): Participation in the jazz program.

## MUS 431. Marching Band Pedagogy. 2 Hours

Methods and materials for the organization and teaching of the high school marching band. Topics include teaching and rehearsal techniques, drill design, and philosophy. Field experience required. Corequisite(s): Participation in the marching band.
MUS 435. Piano Pedagogy. 2 Hours
Systematic preparation for the development of piano technique and tone; survey and study of graded teaching material of grades I and II. Prerequisite(s): Four terms of piano study or equivalent.

MUS 440. Advanced Instrumental Conducting. 2 Hours
Individualized instruction dealing with advanced analysis, interpretation, aural skills, repertoire study, and conducting. Prerequisite(s): MUS 346.

## MUS 450. Degree Recital. 0 Hours

Required performance for all MUC, MUE, MUP, and MUT majors. Prerequisite(s): MUS 250; permission of department chairperson.
MUS 452. Contemporary Liturgical Music Repertoire. 2 Hours
Examination of ways in which contemporary musical resources are utilized in the worship of Christian churches. Choral, congregational, cantoral, and instrumental material will be considered in the context of both the liturgical seasons and specific services. REL 446 recommended.

## MUS 459. Church Music Internship. 2 Hours

Minimum of one semester's supervised service as organist and/or choral director in an approved parish setting. Prerequisite(s): Completion of half of certificate requirements; permission of department chairperson.

MUS 460. Special Studies in Music. 1-9 Hours
Studies in specialized areas of music, including music therapy and music education. May be repeated as topics change, up to nine semester hours. Prerequisite(s): Senior standing in music or permission of instructor.
MUS 461. Special Topics in Church Music. 1-8 Hours
Studies in specialized areas of music, including music therapy and music education. May be repeated as topics change, up to eight semester hours. Prerequisite(s): Senior standing in music or permission of instructor.

## MUS 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## MUS 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## MUS 480. Capstone Project Seminar. 1 Hour

The first in a sequence of two capstone courses. To be taken in the first semester of the senior year. This course is required for all Bachelor of Arts with a major in Music degrees. Students select a faculty mentor and work with the mentor to establish a capstone project topic, goals, outcomes, and timeline associated with the project. Prerequisite(s): MUS 250; senior standing; MUS major or permission of department chairperson.

## MUS 481. Capstone Project \& Presentation. 1 Hour

Capstone course to be taken in the student's final year of study, a graduation requirement for all B.A. in Music concentrations. Students design, implement and present an independent project within their area of concentration to be reviewed by faculty and peers. Faculty approval of project and presentation is required for graduation. Prerequisite(s): MUS 250 and permission of degree program coordinator.

## MUS 486. Research in Music Therapy. 2 Hours

Introduction to research methods; review of literature on experimental studies. Research project.

## MUS 489. Music Therapy Internship. 0-2 Hours

Minimum of 900 hours supervised clinical training through resident internship in an AMTA roster or university-affiliate internship. This requirement precedes the granting of the music therapy degree. Prerequisite(s): Senior standing in music therapy; permission.

## MUS 491. University Orchestra. 1 Hour

Performing arts experience in ensemble of string, wind, brass and percussion players; preparing literature for orchestra and chamber orchestra. Open to all University community members by audition.
MUS 492. Symphonic Wind Ensemble. 1 Hour
Performing arts experience in select band performing the finest in wind literature. Presents regular concerts during fall and winter terms. Auditions required.

## MUS 493. University Chorale. 1 Hour

Arts experience in mixed vocal ensemble performing music from all style periods in regular concert appearances. Open to all University students. Auditions required.

## MUS 494. Dayton Jazz Ensemble. 1 Hour

Performing arts experience in the interpretation and performance of traditional and contemporary big band jazz, including the art of improvisation. Audition required.

## MUS 498. Internship in Music. 1-3 Hours

Supervised administrative music experience with an approved organization. Prerequisite(s): Permission of Department Chair.

## MUS 499. Performance Studies. 4 Hours

Private instruction (one-hour lessons weekly) in the same subjects as MUS 399. Prerequisite(s): Permission of instructor.

## Philosophy

Major

- Bachelor of Arts, Philosophy (p. 241)

Minor:

- Philosophy (p. 241)

The objective of the philosophy major program is to provide students with the opportunity to understand contemporary philosophy in view of the history of philosophy. Students majoring in philosophy must successfully complete a minimum of 37 semester hours. The philosophy major program is also offered in India in conjunction with the Marianists. Consult the department chairperson for further information.

A minor in philosophy consists of 18 semester hours.

## Faculty

Rebecca S. Whisnant, Chairperson
Distinguished Service Professor: Johnson
Professors Emeriti: Fischer, Fouke, Johnson, Kunkel, Quinn, Richards, Ulrich, Zembaty
Professors: Benson, DesAutels, Inglis, Kebede, Poe, Tibbetts, Whisnant Associate Professors: Gabbe, James, Mosser, Paslaru, Payne, Velasquez Assistant Professors: Bein, Bresnahan, Cheung, Meisami
Lecturers: Ahern, Dunham, Florek, Marvin

## Bachelor of Arts, Philosophy (PHL) minimum 124 hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1} 12$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |

Second-Year Writing Seminar ${ }^{3} \quad 0-3$

ENG $200 \quad$ Writing Seminar II
Oral Communication 3

| CMM $100 \quad$ Principles of Oral Communication | 3 |
| :---: | :---: |
| Mathematics |  |

Social Science 3

| SSC $200 \quad$ Social Science Integrated |  |
| :--- | :--- |
| Arts | 3 |


| Natural Sciences ${ }^{4}$ | 3 |
| :--- | :--- |

Crossing Boundaries variab

| Faith Traditions |
| :--- |
| Practical Ethical Action |
| Inquiry |
| Integrative |
| Advanced Study |


| Philosophy and/or Religious Studies | credit |
| :--- | :---: |
| Historical Studies ${ }^{5}$ |  |
| Diversity and Social Justice | 3 |

Major Capstone 0-3

Completed with ASI 110 and ASI 120.

Or ENG 100A and ENG 100B, or ENG 200H, by placement.

Completed with ENG 200 H or ASI 120.

Must include two different disciplines and accompanying lab.

U.S. History AP credit will not satisfy this requirement.

## Liberal Studies Curriculum

Creative and Performing Arts (May include CAP Arts) 3
L2 Proficiency (Proficiency in a language other than English) 0-11
Literature (May include CAP Components) 3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) 3
Natural Sciences (Satisfies CAP Natural Science) 11
Social Sciences (Includes CAP Social Science) 12
Major Requirements ${ }^{1,2} 37$
PHL 103 Introduction to Philosophy 3-7
or ASI 120 The Development of Western Culture in a Global Context
PHL 240 Research Methodologies \& Technologies 1
PHL 301 Practical Logic ${ }^{2} 3$
or PHL 302 Symbolic Logic
PHL 350 Classical Greek Philosophy 3
PHL 352 Modern Philosophy 3
PHL 375 Ethical Theory 3
PHL 480 Senior Capstone (Satisfies CAP Major Capstone) 0
Select one course from: 3

| PHL 347 | Japanese Philosophy |
| :--- | :--- |
| PHL 351 | Jewish, Christian, and Islamic Philosophy |
| PHL 355 | Asian Philosophy |
| PHL 363 | African Philosophy |
| PHL 365 | Islamic Philosophy \& Culture |
| PHL 379 | Latin American Philosophy |

Select two seminars from: 6

| PHL 440 | Seminar - Advanced Problems in Philosophy |  |
| :---: | :--- | :--- |
| PHL 451 | Seminar - Individual Philosophers |  |
| PHL 461 | Seminar - Contemporary Epistemology |  |
| PHL 462 | Seminar - Contemporary Ethics |  |
| PHL 463 | Seminar - Contemporary Metaphysics | 12 |

## Breadth

ASI $150 \quad$ Introduction to the University Experience 1
$\begin{array}{ll}\text { Ťotal Hours to total at least } & 124\end{array}$
1 Includes CAP Components
2 Students who anticipate graduate work in philosophy are advised to take PHL 302.

## Minor in Philosophy (PHL)

Philosophy
PHL 103 Introduction to Philosophy 3
PHL 301 Practical Logic 3


| Second Year |  |  |
| :--- | ---: | ---: |
| Fall | Hours Spring | Hours |
| SSC 200 (CAP Social Science) | 3 PHL 375 | 3 |
| PHL 301 or 302 | 3 PHL 350 | 3 |
| Literature | 3 PHL 352 | 3 |
|  | (Satisfies |  |
|  | CAP Faith |  |
|  | Traditions) | 3 |
| INSS (CAP Natural Science w/lab) | 4 INSS (CAP |  |
|  | Natural | 3 |
| Language 201 or contextual course | Science) | 3 |
|  | 3 CAP Arts |  |
|  | Social |  |
|  | Science - | intro level |


| Third Year |  |  |
| :--- | :---: | ---: |
| Fall | Hours Spring | Hours |
| PHL 240 | 1 PHL Elective | 3 |
| Global Philosophies Course | 3 PHL Elective | 3 |
| Creative \& Performing Arts | 3 CAP | 3 |
|  | Advanced |  |
|  | Religious |  |
|  | Studies | 3 |
| INSS Natural Science w/lab | 4 CAP |  |
|  | Advanced |  |
|  | Historical | 3 |
| Social Science - elective | Studies |  |
|  | 3 Social |  |
|  | Science - |  |
|  | $300 / 400$ level |  |


| Fourth Year |  |  |
| :--- | :---: | ---: |
| Fall | Hours Spring | Hours |
| PHL Seminar | 3 PHL 480 | 0 |
|  | (Satisfies |  |
|  | CAP Major |  |
|  | Capstone) |  |
| PHL Elective | 3 PHL Seminar | 3 |
| CAP Practical Ethical Action | 3 PHL Elective | 3 |
| CAP Integrative | 3 CAP Inquiry | 3 |


| CAP Advanced Religious Studies | 3 CAP Diversity <br> and Social <br> Justice | 3 |
| :---: | :---: | :---: |
| General elective | 1 General elective | 3 |
|  | 16 | 15 |

Total credit hours: 124

## Courses

## PHL 103. Introduction to Philosophy. 3 Hours

Introduction to philosophical reflection and study of some central philosophical questions in the Western intellectual tradition, including questions of ethics, human knowledge, and metaphysics. Readings from major figures in the history of philosophy such as Plato, Aristotle, Augustine, Aquinas, Descartes, Hume, and Kant.
PHL 240. Research Methodologies \& Technologies. 1 Hour
Development of research skills appropriate for the major. Students submit papers carefully selected from written work required for major classes. Required for all Philosophy majors. Prerequisite(s): PHL 103 or ASI 120 or equivalent.
PHL 301. Practical Logic. 3 Hours
Study of reasoning, judgment, and decision making in everyday-life as well as in the professional contexts of academia, the natural and social sciences, politics, and business. Students will be introduced to the principles of correct reasoning; techniques for the evaluation of arguments; common fallacies in argumentation (including self-deception, emotional bias, ambiguity, and groupthink); and applications to current issues in ethics and other areas. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 302. Symbolic Logic. 3 Hours

Concentrated study of the valid forms of deductive argument and proof in propositional logic and in predicate logic; study of formal systems and of logic and language. Prerequisite(s): PHL 103 or ASI 120 or equivalent.
PHL 304. Philosophy of Human Nature. 3 Hours
Examination of humanist, religious and scientific perspectives regarding what defines our 'human nature?' These perspectives include: Western and non-Western philosophical and spiritual traditions, social psychology, cultural anthropology, and evolutionary biology. Throughout the focus is on primary-source texts rather than on summaries and surveys. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.
PHL 306. Philosophy of Knowledge. 3 Hours
Various criteria, origins, and definitions of knowledge proposed by common sense, science, philosophy, and mysticism; questions of evidence, consistency, and validity pertaining to the problem of truth and belief. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.
PHL 307. Philosophy and Feminist Thought. 3 Hours
Philosophical examination of major concepts and selected issues in feminist thought. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 308. Metaphysics. 3 Hours

Issues and problems under such topics as appearance and reality; universals; relations of mind and matter; the nature of persons and personal identity; causality; freedom and determination. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.
PHL 309. Philosophy of Mind. 3 Hours
An analysis of the concept of mind and related issues such as Descartes' mind-body dualism and various responses; the nature of human agency, self-deception; and the rationality of emotions. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

## PHL 310. Social Philosophy. 3 Hours

The concepts of liberty, justice, and equality as they relate to social problems such as autonomy, responsibility, privacy, common good, power, economic justice, and discrimination. This course also addresses how the obstacles to justice can be overcome. Prerequisite(s): PHL 103 or equivalent.

## PHL 311. Philosophy of Religion. 3 Hours

Philosophical examination of religious belief and practices, including the nature of religion; concepts of God; arguments concerning God's existence; faith and reason; revelation and miracles; science and religion; the problem of evil; and religious pluralism. Prerequisite(s): PHL 103 or ASI 120 or equivalent; REL 103.

## PHL 312. Ethics. 3 Hours

Ethics is a stand-alone branch of philosophic inquiry that examines the internal coherency of various ethical systems as well as their applicability to solving personal dilemmas, social injustices and real-world problems. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 313. Business Ethics. 3 Hours

Review of major ethical theories and concepts such as justice, human flourishing, rights, virtues, common good, and examination of their implications for today's business world. Prerequisite(s): PHL 103 or equivalent.

## PHL 314. Philosophy of Law. 3 Hours

This is a course in the philosophy of law and jurisprudence that is designed for upper-level work in law, philosophy and law-related fields. The course includes the topics of rule of law, natural law theory, critical approaches to law, international law and human rights, distributive justice and material equality, privacy and sexual equality, and the function and limits of punishment. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

## PHL 315. Medical Ethics. 3 Hours

Introduction to ethics in general and inquiry into the main ethical problems tied to medical practice and research, and the moral approaches for resolving them. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

## PHL 316. Engineering Ethics. 3 Hours

Introduction to ethical issues in engineering by studying theories of moral justification and codes of ethics for engineers, and by applying these theories and codes to moral issues in engineering. Prerequisite(s): PHL 103 or ASI 120 or equivalent.
PHL 317. Ethics of War. 3 Hours
Study of the ethics of war and the Just War Tradition. Students will be expected to apply the principles of this tradition to ethical issues such as the ethics of torture and the ethics of humanitarian intervention. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 318. Family Ethics. 3 Hours

Introduction to the development of the concept of a family in the tradition of Western philosophy and the philosophic analysis of contemporary ethical problems in marriage and in parenthood. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 319. Information Ethics. 3 Hours

Examination of ethical principles, codes, cases, incidents, and issues in the creation, use and distribution of information in and through various media. This includes issues in the ethical design, implementation, and use of computerized information systems. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

PHL 320. Philosophy of Art. 3 Hours
This course will critically evaluate advanced philosophical and arthistorical texts pertaining to understanding and appreciating such arts as painting, sculpture, architecture, comedy, literature, theatre, music, dance, and street art. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

## PHL 321. Environmental Ethics. 3 Hours

Study of the principal ethical perspectives on the treatment of animals and nature including such issues as agriculture, energy, pollution, and economics; assessment of political responses to current environmental problems. Prerequisite(s): PHL 103 or ASI 120 or equivalent.
PHL 322. Philosophy and Theatre/Dance: Performing Human Identity. 3 Hours
An interdisciplinary and advanced philosophy course with two components: 1) theoretical, focusing on the philosophy of dance or theatre and the philosophy of human identity, and/or human flourishing, and 2) dance or theatre, where students will learn to use dance or theatre to express human identity. Repeatable for extra credit as topics change up to 6 semester hours. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 323. Philosophy \& Literature. 3 Hours

Critical examination of philosophical concepts in selected literary masterpieces, ancient and modern. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 324. Philosophy \& Film. 3 Hours

This course will critically evaluate texts in philosophy, film criticism, popular culture and other areas that are related to the philosophical study of movies and film. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

## PHL 325. Philosophy of Music. 3 Hours

Philosophical investigation of the nature and value of music with emphasis on the varied attributes and purposes of music in relation to art, language, emotion, spirituality, and culture. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 327. Philosophy of Peace. 3 Hours

Examination of human violence and ethical justifications for war and exploration of resolutions for human conflict in processes such as pacifism, peacemaking, democratic world governance, nonviolent caring, and a sustainable economy. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 328. Philosophy of Punishment. 3 Hours

Critical examination of punishment, through an analysis of various forms of punishment and what they imply about human nature, power, social norms, and moral principles. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 330. Philosophy of Science. 3 Hours

Critical examination of the underpinnings of scientific knowledge, and how it differs from other systems of belief and knowledge, through an analysis and evaluation of various scientific concepts such as scientific laws, explanation, observation, and theory, with an exploration of the methods, presuppositions, and biases of scientific knowledge claims. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 331. Science, Objectivity \& Values. 3 Hours

Study of three interrelated issues: the limits of scientific methodology; science as a social institution; and science and human values.
Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 332. Technology \& Values. 3 Hours

Study of the social impact of technology-scientists' responsibility; technological change and social change; the 'technological fix'; democracy and the new technological elite; counter-culture critiques of technology. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

PHL 333. Philosophy \& Cognitive Science. 3 Hours
Philosophical introduction to recent research in cognitive psychology, artificial intelligence, and neuroscience regarding human, animal, and machine intelligence; the relation between mind, brain, and personhood; and the biology of conscious states. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 334. Philosophy \& Ecology. 3 Hours

An examination of the epistemological, methodological, ontological, and value issues of ecology, with a focus on how these issues affect the debates in philosophy of science. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 335. Philosophy of Sustainability. 3 Hours

Critical examination of the conceptual foundations of sustainability science, and how it differs from other domain specific sciences, through an analysis and evaluation of the various concepts of sustainability, its relationship to economics, ecology, society, moral, political and religious values, with an examination of the nature of sustainability problems and of the methodology required to study and solve them. Prerequisite(s): PHL 103 or ASI 110, ASI 120.

## PHL 340. Special Problems in Philosophy. 1-3 Hours

Examination of perennial and contemporary problems of philosophy. May be repeated when topic changes. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 341. Hip Hop and Philosophy. 3 Hours

Exploration of various theories of what hip hop is, at a basic level. It also investigates how we know what kind of phenomenon hip hop is, at a fundamental level. The course critically evaluates the political, ethical, and aesthetic significance of hip hop. By thinking through hip hop we will work to gain a better understanding of the complex relationships between race, gender, class, religion and other variables of difference. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 345. Philosophy Scholars' Seminar. 3 Hours

Study and seminar discussion of selected major philosophical works and the analysis, interpretation, and criticism of these works. Open by permission only to students in the Berry Scholars Program. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

PHL 347. Japanese Philosophy. 3 Hours
Introduction to Japanese thought through the study of Japanese philosophers, texts, sects, philosophical schools, and concepts. Comparisons of various Japanese philosophies and religions with each other as well as with Western traditions. Prerequisite(s): PHL 103 and REL 103 or ASI 120 or equivalent.
PHL 350. Classical Greek Philosophy. 3 Hours
Critical exploration of the history of ancient Greek philosophy from the Presocratics to Aristotle. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 351. Jewish, Christian, and Islamic Philosophy. 3 Hours

A critical examination of theological arguments by major thinkers representing the Jewish, Christian, and Islamic traditions in the Middle Ages, with close attention to common philosophical underpinnings, and the cross-fertilization of ideas. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

## PHL 352. Modern Philosophy. 3 Hours

Survey of developments of Natural Philosophy in the seventeenth and eighteenth centuries and how strands of Christian and Jewish religious traditions influenced the philosophical beginnings of modern science. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

PHL 353. Kant \& Nineteenth-Century Philosophy. 3 Hours
Development of philosophy beginning with Kant through the nineteenth century including Kant and philosophers such as Fichte, Schelling, Hegel, Schopenhauer, Nietzsche, James, Peirce, and Frege. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 354. Twentieth-Century Philosophy. 3 Hours

Study of some of the major philosophical movements in the twentieth century including phenomenology, existentialism, critical theory (Frankfurt School), hermeneutics, and analytic philosophy. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 355. Asian Philosophy. 3 Hours

Introduction to Asian thought through the study of philosophers, texts, philosophical schools, and concepts that have their origins in Asia. Comparisons of various Asian philosophies and religions with each other as well as with Western traditions. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 356. Christian Philosophy. 3 Hours

An examination of the underlying philosophical issues of selected topics in the Christian faith to deepen the students' understanding of the faith in its historical and intellectual contexts. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

## PHL 357. Radical Philosophy. 3 Hours

Study of major attempts to develop a critical understanding of society; analysis of theories such as socialism, anarchism, feminism, critical theory, and critical race theory. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 358. Marxist Philosophy. 3 Hours

Explanation and critical examination of the basic concepts of dialectical and historical materialism and their application to issues of social change, with particular emphasis on class, gender, and race inequalities. Evaluation of the Marxist analysis of globalism and world inequality. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 360. Existentialism. 3 Hours

This course examines the body of philosophic thought known as Existentialism: its genesis within Kierkegaard's analysis of faith; its reaction to 19th century philosophy; its maturation in 20th century; and its absorption and extension into Christian Existentialism, religious inquiry, the arts, literature, social thinking and freedom movements of today. Primary foci of this course revolve around the themes of Faith as a lived experience, Human Reasoning and the Human Condition, Self and Others, Freedom and Morality. This course directs virtually all of its textual materials and discursive development toward the question "What does it mean to be human?" and in light of that, "What then shall we do?" Prerequisite(s): (ASI 110, ASI 120) or PHL 103.
PHL 361. Philosophies of Change in U.S. History. 3 Hours
Study of philosophies of change emerging within U.S. history. It will examine 1) Philosophies arising from interactions and tensions among Indigenous, European, African, Latin American, and Asian cultural groups, and 2) American Pragmatism as articulating processes of change rather than seeking universal truths. Prerequisite(s): ASI 120 or PHL 103.

## PHL 362. Philosophy of Language. 3 Hours

Theories of meaning and reference and their philosophical significance. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

PHL 363. African Philosophy. 3 Hours
Study African philosophy both in its confrontations with Eurocentrism and as an expression of Black Africa's distinct identity. It combines analytical and comparative approaches to expound Africa's traditional worldviews, ethical notions, and social ideas in the context defined by the impacts and legacies of colonization and the subsequent difficult transition to modernity. Prerequisite(s): PHL 103 or ASI 120 or equivalent.
PHL 364. Race, Gender and Philosophy. 3 Hours
Investigation of how the intersections of race and gender shape our identity and the organization of local and global spaces. To this end the course considers questions about the metaphysical and epistemological dimensions of raced and gendered identity. Attention will be given to ethical and political analyses of racial patriarchy and in the course students will think through the most effective ways of reaching racial and gender justice. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

## PHL 365. Islamic Philosophy \& Culture. 3 Hours

Study of the intellectual history and culture of Islam as epitomized by Islamic philosophy, ethics, politics, and arts. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 370. Political Philosophy. 3 Hours

The course analyzes the evolution of political theories through a study of representative ancient and modern works of political philosophy. It also studies political changes and contemporary political ideas and practices in relation to diverse cultural contexts. Prerequisite(s): ASI 110 and ASI 120 or PHL 103.

## PHL 371. Philosophy \& Human Rights. 3 Hours

Examination of the nature and philosophical foundations of universal moral (human) rights; and application of human rights theory to issues and cases involving civil and political rights, and rights to equality, security, subsistence, education, welfare, employment, and health care. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

## PHL 372. Values \& Economics. 3 Hours

An inquiry into the impact of values and beliefs on the generation of modern economic forces. Analyzing capitalism as a system of validation of beliefs and values, the course relates underdevelopment with the conflict between tradition and modernity. It then reflects on the conditions of change liable to promote global expansion. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 373. Philosophy \& Cultural Diversity. 3 Hours

Philosophical investigation into historical, social, and political dimensions of human diversity in its various manifestations. Topics include colonialism, racism, multiculturalism, nationalism, and democracy.

## PHL 374. Philosophy and the City. 3 Hours

By studying philosophical questions as they apply to the local community, students will deepen their understanding both of philosophical theory and Dayton. This class may be taken multiple times for credit. Prerequisite(s): PHL 103 or ASI 110 or ASI 120.

## PHL 375. Ethical Theory. 3 Hours

An examination of the significant ethical theories offered by historically significant philosophers along with some contemporary critiques of these theories. The theories examined will include virtue, deontological, and utilitarian approaches. Prerequisite(s): PHL 103 or ASI 120 or equivalent.
PHL 376. Philosophy \& Revolution. 3 Hours
No description available.

PHL 377. Philosophy and Mass Media. 3 Hours
Study of the intersection of various areas of philosophical inquiry and the mass media and investigation into the implications for the lives of individuals, the functioning of societies, and the development of the global community. Students will be expected to engage in inquiry into how mass media influences their own lives and communities, and to reflect upon the ethical responsibilities they have as consumers of mass media and that the makers of mass media might have. Prerequisite(s): PHL 103, ASI 120, or equivalent.
PHL 378. The Self Concept: Reality or Social Construct?. 3 Hours The concept of a 'self' is one of the more elusive concepts in reflections on what it means to be human. Starting with (i) the Cartesian model of self as a metaphysically distinct, nonphysical entity, the course then explores (ii) Asian (particularly Buddhist) speculations on self as a linguistic fiction. Students are then introduced to (iii) recent cognitive science modeling of self and personal identity as instances of embodied/ situated cognition, followed by contributions from the social sciences, including (iv) sociological theories of self as a social construct, as well as (v) clinical case studies of autistic, pathological, and fragmented selves. Prerequisite(s): PHL 103.

## PHL 379. Latin American Philosophy. 3 Hours

This course provides background to the history of philosophy that emerges in and from Latin America. Were the Indians human? Did they have souls? When, if at all, is war justified? Why is the U.S. rich and Latin America poor? How can poverty in Latin America be addressed? What could it mean for nations in Latin America to take small steps of selfdetermination and embark on a path of liberation? These questions and others are addressed by thinking through theory within the Latin American philosophical tradition. In the process students gain a sense of what it's like to philosophize from a Latin American perspective. PHL 103 or ASI 120 or equivalent.
PHL 380. Language \& Our World. 3 Hours
No description available.

## PHL 381. Sexual Ethics. 3 Hours

Academic examination of a range of issues in sexual ethics, including monogamy, adultery, and fidelity; contraception; homosexuality and homophobia; and sexual objectification, exploitation, and violence. Special attention will be devoted to Catholic perspectives, as well as to contemporary feminist perspectives. Prerequisite(s): PHL 103.
PHL 382. Culture, Modernization, and Multiple Modernities. 3 Hours The course surveys representative and contending theories of modernization with the view of unraveling the role of values and beliefs in the modernization process. It reexamines the role of culture in light of the emergence of a globalized world and the associated rise of diverse modernities. Prerequisite(s): PHL 103 or equivalent.

## PHL 383. Ethics of Scientific Research. 3 Hours

Inquiry into the main ethical problems of scientific research and the moral principles for resolving them. Prerequisite(s): PHL 103.
PHL 440. Seminar - Advanced Problems in Philosophy. 3 Hours Detailed examination of some of the more technical problems of philosophy as well as those problems that arise in interdisciplinary settings upon which philosophers have brought their technical skills to bear. May be repeated when topic varies. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

PHL 451. Seminar - Individual Philosophers. 3 Hours Detailed examination of the thought of an individual philosopher (e.g., Aquinas, Kant, Rawls, Quine) who is of sufficient importance to warrant special study. May be repeated when topic varies. Prerequisite(s):PHL 103 or ASI 120 or equivalent.

PHL 461. Seminar - Contemporary Epistemology. 3 Hours Study of recent philosophical work in the theory of knowledge inclusive of scepticism, knowledge and belief, evidence and justification, theories of perception and knowledge, human interests and valuation. Prerequisite(s): PHL 103 or ASI 120 or equivalent.
PHL 462. Seminar - Contemporary Ethics. 3 Hours
Study of recent philosophical work in ethics inclusive of an analysis of ethical concepts, theories of normative ethics, theories of human action, and moral justification. Prerequisite(s): PHL 103 or ASI 120 or equivalent.
PHL 463. Seminar - Contemporary Metaphysics. 3 Hours
Study of recent work in metaphysics inclusive of the nature of metaphysics, causality, free will and determinism, personal identity and the theory of mind and body. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## PHL 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## PHL 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## PHL 480. Senior Capstone. 0 Hours

PHILOSOPHY SENIOR CAPSTONE CAPSTONE AND PRESENTATION Project and presentation in the scholarship, activity and/or practice related to the major. Students will present their work in a forum appropriate to the major. Prerequisite(s): SENIOR STANDING.

## PHL 490. Directed Readings. 1-4 Hours

Guided independent study primarily for philosophy majors but open to students who have completed twelve semester hours in philosophy. Normally three semester hours but in certain cases the chairperson may approve one, two, or four semester hours. May be repeated when topic changes. Prerequisite(s): PHL 103 or ASI 120 or equivalent; permission of department chairperson and instructor.

## PHL 492. Directed Research. 3 Hours

Faculty-directed research for philosophy majors who have completed all 300 -level requirements and at least one 400 -level seminar. Students will write a substantial paper in relation to this research. Prerequisite(s):PHL 103 or ASI 120 or equivalent; permission of department chairperson and instructor.

PHL 495. Internship. 1-3 Hours
Supervised practical and professional experience related to philosophy for philosophy majors who have completed prescribed course work. May be repeated to a maximum of three semester hours. Grading Option Two only. Prerequisite(s): PHL 103 or ASI 120, PHL 302, PHL 350, PHL 352; one 400-level seminar; permission of department chairperson.

## Physics

- Bachelor of Science, Physical Science (p. 246)
- Bachelor of Science, Physics (p. 247)
- Bachelor of Science, Physics-Computer Science (p. 248)

Minor

- Physics (p. 249)

The program leading to the Bachelor of Science with a major in physics is designed to provide a strong yet versatile basis for a subsequent scientific career or advanced study. Minimum requirements for all majors are listed below, but students planning for graduate work in physics or an allied area are advised to select additional mathematics and physics courses. A physics major must complete all 300-400-level courses with a 2.0 minimum grade-point average.

Students have the option of adding a multidisciplinary concentration in electro-optics to their physics degree. The concentration is appropriate for physics majors who wish to pursue possible careers in photonics or graduate degrees in the area of optics.

PHY, PSC, and PCS majors are required to attain a grade of C- or better in all physics and math courses that are prerequisite courses for physics courses required of majors.

A minor in physics consists of twelve semester hours.

## Faculty

John E. Erdei, Chairperson
Distinguished Service Professor: O'Hare
Professors Emeriti: Berney, Craver, Graham, Miner, O'Hare, Yaney
Professors: Brecha, Elhamri, Evwaraye, Pedrotti
Associate Professors: Ahoujja, Chong, J. Erdei, Smith
Assistant Professors: Agha, Mathews, Plick, Sudakov, Zhao
Lecturers: Kariyawasam, Merithew
Lab Instructors: Ballard, Powers, Schaurer

## Bachelor of Science, Physical Science (PSC) minimum 120 hours

The Physical Science Program is administered by the Department of Physics. It provides a broad training in the physical sciences that is desirable for one who plans to pursue a goal built on a composite science background. The physical science major combines adequate physics, chemistry, geology, and mathematics to provide a sound working knowledge of physical science. Since the program is less specialized than one in a single science, it has provision for adequate course selections and sufficient electives to provide the opportunity for concentrated study in a discipline chosen to meet the career objectives of the individual student.

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |  |
| :---: | :---: | :---: |
| REL 103 | Introduction to Religious and Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writ | ing Seminar ${ }^{3}$ | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communicat |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| SSC 200 | Social Science Integrated |  |
| Arts |  | 3 |
| Natural Sciences |  | 7 |
| Crossing Bounda |  | variab credit |
| Faith Tradition |  |  |
| Practical Ethic | al Action |  |
| Inquiry |  |  |
| Integrative |  |  |
| Advanced Study |  | variab credit |

Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice
Major Capstone 0-3


## Major Requirements

(Satisfies CAP Natural Science)
CHM 123 General Chemistry 4

| \& 123L | and General Chemistry Laboratory |
| :--- | :--- |
| CHM 124 | General Chemistry |

\& 124L
GEO 115
\& 115L
GEO 116
\& 116L
PHY 206
PHY 207
PHY 208

| PHY 210L | General Physics Laboratory I | 1 |
| :--- | :--- | ---: |
| PHY 211L | General Physics Laboratory II | 1 |
| PHY 480 | Physics Capstone (Satisfies CAP Major Capstone) | 1 |
| Physical science courses (300/400 level) ${ }^{1}$ | 26 |  |

Breadth
ASI $150 \quad$ Introduction to the University Experience 1
Social and Behavioral Sciences (includes CAP Social Science) 6
Total Hours to total at least ..... 120

1 At least twelve semester hours in physics.

## Bachelor of Science, Physics (PHY) minimum 120 hours <br> ```Common Academic Program (CAP)``` <br> *credit hours will vary depending on courses selected <br> First-Year Humanities Commons ${ }^{1}$ <br> | HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ | <br> Second-Year Writing Seminar ${ }^{3} \quad 0-3$

ENG 200 Writing Seminar II
Oral Communication 3
$\begin{array}{ll}\text { CMM } 100 \text { Principles of Oral Communication } \\ \text { Mathematics } & 3\end{array}$
Social Science 3
SSC 200 Social Science Integrated
Arts 3
Natural Sciences ${ }^{4} 7$
Crossing Boundaries variable
credit
Faith Traditions
Practical Ethical Action
Inquiry
Integrative
Advanced Study variable
credit
Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice 3
Major Capstone 0-3
Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

## Science Breadth Requirements

| CHM 123 | General Chemistry <br> and General Chemistry Laboratory | 4 |
| :--- | :--- | :--- |
| \& 123L | General Chemistry | 4 |
| CHM 124 | and General Chemistry Laboratory |  |
| \& 124L |  |  |


| CPS 132 <br> or CPS 150 | Computer Programming for Engineering \& Science <br> Algorithms \& Programming I | 3 |
| :--- | :--- | :--- |
| MTH 168 | Analytic Geometry \& Calculus I (Satisfies CAP <br> Mathematics) | 4 |
| MTH 169 | Analytic Geometry \& Calculus II | 4 |
| MTH 218 | Analytic Geometry \& Calculus III | 4 |
| MTH 219 | Applied Differential Equations | 3 |
| MTH 310 | Linear Algebra \& Matrices | 3 |

## Major Requirements

Select one concentration from:

| General Physiscs Concentration | 40 |  |
| :--- | :--- | ---: |
| PHY 206 | General Physics I - Mechanics | 3 |
| PHY 207 | General Physics II - Electricity \& Magnetism | 3 |
| PHY 208 | General Physics III- Thermodynamics, Waves, and | 3 |
|  | Fluids | 1 |
| PHY 210L | General Physics Laboratory I | 1 |
| PHY 211L | General Physics Laboratory II | 3 |
| PHY 301 | Thermal Physics | 3 |
| PHY 303 | Intermediate Mechanics I | 3 |
| PHY 321 | General Physics IV - Modern Physics | 3 |
| PHY 333 | Digital \& Analog Electronics for Scientists | 3 |
| PHY 390 | Introduction to Quantum Mechanics | 3 |
| PHY 408 | Intermediate Electricity \& Magnetism I | 2 |
| PHY 430 | Advanced Lab I | 2 |
| PHY 431 | Advanced Lab II | 1 |
| PHY 480 | Physics Capstone (Satisfies CAP Major Capstone) | 1 |
| PHY electives (300/400 level) | 6 |  |

Physics and Electro-Optics Concentration 43
ECE 443 Introduction to Electro-Optics 3
PHY 206 General Physics I - Mechanics (Applies to Cap 3
Natural Science)
PHY 207 General Physics II - Electricity \& Magnetism 3
PHY 208 General Physics III- Thermodynamics, Waves, and 3
Fluids

| PHY 210L | General Physics Laboratory I | 1 |
| :--- | :--- | :--- |
| PHY 211L | General Physics Laboratory II | 1 |
| PHY 301 | Thermal Physics | 3 |
| PHY 303 | Intermediate Mechanics I | 3 |
| PHY 333 | Digital \& Analog Electronics for Scientists | 3 |
| PHY 390 | Introduction to Quantum Mechanics | 3 |
| PHY 404 | Physical Optics | 3 |
| PHY 408 | Intermediate Electricity \& Magnetism I | 3 |
| PHY 430 | Advanced Lab I | 2 |
| PHY 431 | Advanced Lab II | 2 |
| PHY 480 | Physics Capstone (Satisfies CAP Major Capstone) | 1 |

Select two courses from:

| EOP 501 | Geometric Optics |
| :--- | :--- |
| EOP 502 | Optical Radiation \& Matter |
| EOP 505 | Introduction to Lasers |
| EOP 506 | Electro-Optical Devices \& Systems |

EOP 514 Guided-Wave Optics
or ECE 574 Guided Wave Optics

## Breadth

ASI 150 Introduction to the University Experience 1 Social Science and Behavioral Science (Includes CAP Social Science) 6 Total Hours to total at least

## Bachelor of Science, Physics-Computer Science (PCS) minimum 120 hours

This combined program in physics and computer science leading to the Bachelor of Science with a major in Physics-Computer Science emphasizes the use of computer software in scientific applications and at the same time gives a foundation in the scientific disciplines of physics and computer science. Minimum requirements for the degree are listed below. Students are advised to select additional computer science, mathematics, and physics courses as electives. For further information contact the Physics Department.

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |

$\begin{array}{ll}\text { Second-Year Writing Seminar }\end{array}{ }^{3} \quad 0-3$
ENG $200 \quad$ Writing Seminar II
Oral Communication 3
CMM 100 Principles of Oral Communication
Mathematics 3
Social Science 3

SSC 200 Social Science Integrated
Arts 3
Natural Sciences ${ }^{4} 7$
Crossing Boundaries variable credit
Faith Traditions
Practical Ethical Action
Inquiry
Integrative
Advanced Study variable
credit
Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice 3
$\begin{array}{ll}\text { Major Capstone } & 0-3\end{array}$
1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

| (Satisfies CAP Mathematics and CAP Natural Science) |  |  |
| :---: | :---: | :---: |
| Computer Science |  | 26 |
| CPS 150 | Algorithms \& Programming I |  |
| CPS 151 | Algorithms \& Programming II |  |
| CPS 250 | Computer Organization and Architecture |  |
| CPS 346 | Operating Systems I |  |
| CPS 350 | Data Structures \& Algorithms |  |
| Three CPS courses (340 level or above) |  |  |
| Mathematics |  | 18 |
| MTH 168 | Analytic Geometry \& Calculus I |  |
| MTH 169 | Analytic Geometry \& Calculus II |  |
| MTH 218 | Analytic Geometry \& Calculus III |  |
| MTH 219 | Applied Differential Equations |  |
| MTH 310 | Linear Algebra \& Matrices |  |
| Physics 28 |  |  |
| PHY 206 | General Physics I-Mechanics |  |
| PHY 207 | General Physics II - Electricity \& Magnetism |  |
| PHY 208 | General Physics III- Thermodynamics, Waves, and Fluids |  |
| PHY 210L | General Physics Laboratory I |  |
| PHY 211 L | General Physics Laboratory II |  |
| PHY 323 | Computational Physics |  |
| PHY 333 | Digital \& Analog Electronics for Scientists |  |
| PHY 480 | Physics Capstone (Satisfies CAP Major Capstone) |  |
| Four PHY cours | es (300/400 level) |  |

Minor in Physics (PHY)
Physics ..... 12
Select four PHY courses (300/400 level)
Total Hours ..... 12

- Bachelor of Science, Physical Science (p. 249)
- Bachelor of Science, Physics (p. 249)
- Bachelor of Science, Physics- Computer Science (p. 250)


## Bachelor of Science, Physical Science

| First Year |  |  |
| :--- | :---: | ---: |
| Fall | Hours Spring | Hours |
| ASI 150 | 1 PHY 207 | 4 |
|  | \& PHY 211L |  |
| PHY 206 | 4 CHM 124 | 3 |
| \& PHY 210L (CAP Natural Science w/lab) |  |  |
| CHM 123 | 3 MTH 169 | 4 |
| MTH 168 (Satisfies CAP Mathematics) | 4 PHL 103, HST | 3 |
|  | 103, or REL |  |
|  | 103 (CAP |  |
|  | Humanities |  |
|  | Commons) |  |
| ENG 100 (CAP Humanities Commons) | 3,4 REL 103, PHL |  |
|  | 103, or HST | 103 (CAP |
|  | Humanities |  |
| HST 103, PHL 103, or REL 103 (CAP Humanities | Commons) |  |
| Commons) | 3 | 17 |



Total credit hours: 128-131

## Bachelor of Science, Physics

First Year

## Fall

Hours Spring Hours

1 PHY 207 \& PHY 211L

4 CHM 124

3 MTH $169 \quad 4$
4 PHL 103, REL 3
103, or HST
103 (CAP
Humanities Commons)
3,4 REL 103, PHL


## Courses

PHY 100. Seminar. 0 Hours
Opportunity to become acquainted with the broad spectrum of modern science through periodic meetings with the entire department. Invited speakers, films, student presentations, book reviews, and informal discussions. For all physics, physical science, and physics-computer science majors.
PHY 105. Physical Science - Energy \& the Environment. 3 Hours
General introduction to principles of physics including motion, energy, thermodynamics, electricity and magnetism, and nuclear physics. Applications of these principles to non-renewable and renewable energy systems and the climate. Intended for business students.

## PHY 108. Physical Science of Light \& Color. 3 Hours

Conceptual study of physical science with emphasis on light, color, and the interaction of light with materials.
PHY 108L. Light \& Color Laboratory. 1 Hour
Laboratory experiences to accompany PHY 108. Corequisite(s): PHY 108.

## PHY 201. College Physics I. 3 Hours

Topics from mechanics, thermal and mechanical properties of matter, wave motion, and sound without the formalism of calculus.

## PHY 201L. College Physics Laboratory I. 1 Hour

Algebra-based introductory laboratory. Experimental scientific techniques and the use of standard laboratory equipment. One two-hour period each week. Corequisite(s): PHY 201 or PHY 206.

## PHY 202. General Physics. 3 Hours

Continuation of PHY 201 with a treatment of electricity and magnetism, wave motion and properties of light, atomic and nuclear physics. Second term, each year. Prerequisite(s): PHY 201.

## PHY 202L. General Physics Laboratory. 1 Hour

Experimental scientific techniques and the use of standard laboratory equipment. One two-hour period per week. Second term, each year. Prerequisite(s): PHY 201L.

## PHY 203. Modern Technical Physics. 3 Hours

Introduction to selected topics in modern physics without the formalism of calculus. For engineering technology students. Prerequisite(s): College algebra, trigonometry, and introductory statics and dynamics.
PHY 203L. Technical Physics Laboratory. 1 Hour
Laboratory experiences to accompany PHY 203.
PHY 206. General Physics I-Mechanics. 3 Hours
Calculus-based introductory course in mechanics. Three lectures, one recitation each week. Corequisite(s): MTH 138, MTH 148 or MTH 168.
PHY 207. General Physics II - Electricity \& Magnetism. 3 Hours The basic principles of electricity and magnetism. Three lectures, one recitation each week. Prerequisite(s): PHY 201 or PHY 206. Corequisite(s): MTH 149 or MTH 169.
PHY 208. General Physics III- Thermodynamics, Waves, and Fluids. 3 Hours
Introduction to wave phenomena (including mechanical waves, sound waves, physical optics and geometrical optics), thermal physics, and fluids. Prerequisite(s): (MTH 149; PHY 202) or (MTH 169; PHY 207).
PHY 210L. General Physics Laboratory I. 1 Hour
Introduction to laboratory methods, handling of data, and analysis of results. Experiments appropriate to the background of students with an interest in mathematical and physical sciences. Two hours laboratory, one hour recitation each week. Corequisite(s): PHY 206.

## PHY 211L. General Physics Laboratory II. 1 Hour

Laboratory methods, data handling, and analysis of results. Experiments appropriate to the background of students with an interest in mathematical and physical sciences. Two hours laboratory, one hour recitation each week. Prerequisite(s): PHY 210L. Corequisite(s): PHY 207.

## PHY 220. Energy \& Environmental Physics. 3 Hours

Introduction to the physical basis of energy systems and the climate. Topics covered will include thermodynamics, planetary radiation balance, heat transfer, basic atmospheric and ocean physics, nuclear energy, renewable energy, modeling of carbon emissions from fossil fuels, simple climate models, monitoring climate change, and mitigation strategies. Prerequisite(s): PHY 206.

## PHY 232. The Physics of Waves. 3 Hours

Examination of analytical approaches and conceptual frameworks of physics applied to wave phenomena in a variety of physical systems. Topics include oscillation in mechanical and electrical systems, mechanical and electromagnetic waves, and geometrical and physical optics. This course is designed for electrical and computer engineering students, but is open to all meeting the prerequisites. Prerequisite(s): PHY 206, MTH 169 (may be taken as co-requisite).

## PHY 250. Descriptive Astronomy. 3-4 Hours

Descriptive survey for students who have had little or no previous exposure to astronomy; material from ancient times to present, including pulsars and quasi-stellar objects.
PHY 295. Research Participation I. 1 Hour
No description available.

## PHY 301. Thermal Physics. 3 Hours

Thermodynamical descriptions of many particle systems obtained from microscopic statistical considerations; laws of thermodynamics, kinetic theory of dilute gases, and Fermi-Dirac and Bose-Einstein statistics. Prerequisite(s): PHY 208 or PHY 232. Corequisite(s): MTH 219.

PHY 303. Intermediate Mechanics I. 3 Hours
The fundamental concepts of mechanics: virtual work, kinematics, special theory of relativity, Lagrange's equation-and central forces, particle dynamics. Prerequisite(s): PHY 208 or PHY 232. Corequisite(s): MTH 219.
PHY 321. General Physics IV - Modern Physics. 3 Hours Introduction to modern physics. Topics include special relativity, elementary quantum mechanics, the structure of matter, atoms, and nuclei, radioactivity, interactions of radiation with matter, and fundamental particles. Prerequisite(s): (PHY 208 or PHY 232) or permission of the chair of the physics department.

## PHY 323. Computational Physics. 3 Hours

The course will explore how computers are used in physics. Topics will include simulations of physical systems, numerical analysis, and the use of mathematical analysis packages (MATHCAD, for example.) Programming will be done in True BASIC and MATHCAD. Prerequisite(s): MTH 218; (PHY 208 or PHY 232).

## PHY 333. Digital \& Analog Electronics for Scientists. 3 Hours

Basic concepts of digital and analog integrated circuit electronics are developed as a way to understand modern microcomputer based instrumentation. A microcomputer based data collection and analysis system is used to study binary data input and output, analog to digital conversion (ADC) devices, digital to analog conversion (DAC) devices, and other digital integrated circuits and concepts. The analog electronics part of the course begins with a study of discrete analog devices and ends with operational amplifiers and their application. Two hours lecture and two hour laboratories each week. Prerequisite(s): (PHY 202L or PHY 211L) or equivalent.
PHY 390. Introduction to Quantum Mechanics. 3 Hours
Basic postulates of quantum mechanics with applications made to atomic physics. Prerequisite(s): MTH 219; (PHY 208 or PHY 232). Corequisite(s): MTH 310.

## PHY 395. Research Participation I. 1-6 Hours

Individual projects conducted as part of the physics Undergraduate Research Participation program to encourage involvement of students with faculty researchers. Projects must be arranged in advance with faculty research directors.

## PHY 399. Special Problems in Physics. 1-4 Hours

Special topical courses, laboratory, tutorial, or library work in areas of current interest. Students should consult the composite.

## PHY 403. Intermediate Mechanics II. 3 Hours

Emphasis on solving physical problems; noninertial coordinate systems, rigid body motion, rotating systems, coupled systems, introductory fluid statics and dynamics, normal coordinates, and the descriptions of mechanics appropriate for the transition to wave mechanics. Prerequisite(s): PHY 303.

## PHY 404. Physical Optics. 3 Hours

The electromagnetic wave theory of light, propagation of waves, reflection, refraction, dispersion, polarization, dichroism, birefringence, superposition of waves, interference, diffraction, Fourier optics. Prerequisite(s): MTH 219; (PHY 208 or PHY 232).

## PHY 408. Intermediate Electricity \& Magnetism I. 3 Hours

Electrostatics, Coulumb's law, Gauss's law, potential, dielectric materials, electrostatic energy, solutions to Laplace's and Poisson's equations, Biot-Savart law, Faraday induction law, magnetization, and Maxwell's equations. Prerequisite(s): MTH 219; (PHY 208 or PHY 232).

## PHY 409. Intermediate Electricity \& Magnetism II. 3 Hours

Further study of electric and magnetic fields with emphasis on solving problems; Maxwell's equations, propagation of electromagnetic waves, electromagnetic radiation. Prerequisite(s): PHY 408.
PHY 411. Topics in Modern Physics. 3 Hours
Elements of modern optics, solid state and other selected subjects. Consult chairperson for details. Prerequisite(s): PHY 390 or equivalent.

## PHY 420. Introduction to Solid State. 3 Hours

Classification of solids, crystals and crystal structures, survey of lattice properties, free electron theory, band theory of solids, semi-conductors, and crystal imperfections. Prerequisite(s): MTH 219; (PHY 208 or 232); PHY 390.

PHY 430. Advanced Lab I. 2 Hours
No description available.

## PHY 431. Advanced Lab II. 2 Hours

Second course in a two-semester laboratory sequence designed for upper-level undergraduate physics majors. Programming and use of data acquisition and analysis systems, design and construction of experiments that combine mechanical, electrical, and optical components, documentation of laboratory procedures, and writing and presenting technical reports are emphasized. Prerequisite(s): PHY 430.

## PHY 440. Quantum Mechanics II. 3 Hours

Study of selected principles in quantum mechanics. Prerequisite(s): PHY 390.

## PHY 450. Senior Project. 3 Hours

The senior project is a capstone experience for senior physics majors. It will consist of a research project of the student's choosing and will require both an oral and written report. The nature and scope of the project will be chosen in consultation with the student's advisor. Permission of the department chairperson is required. Senior physics majors only.

## PHY 460. Seminar. 1 Hour

Presentation of papers by undergraduate students, faculty, and a guest lecturers on topics of concern to the modern physicist. Reviews of books and films appropriate to the group.

## PHY 470. Introduction to Computational Physics. 3 Hours

Study of important problems in physics, other sciences, and engineering that require a numerical solution. This course refines computation skills by providing direct experience writing, executing and analyzing computer programs used to solve such problems. The approach in this course is intended to mimic approaches used in research. Prerequisite(s): MTH 219, PHY 208 or PHY 232.

## PHY 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## PHY 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## PHY 480. Physics Capstone. 1 Hour

This seminar course is the capstone for all physics majors. Students will complete an independent research project and present their results in written form and in a presentation. Students will learn about the variety of career paths available after completing an undergraduate physics degree, and how to engage in these career paths in an ethical manner.

## PHY 495. Research Participation II. 1-6 Hours

Individual projects conducted as part of the physics Undergraduate Research Participation program to encourage involvement of students with faculty researchers. Projects must be arranged in advance with faculty research directors.

PHY 499. Special Problems in Physics. 1-6 Hours
Laboratory, tutorial, or library work in one of such selected topics as solid state physics, polymers, atomic and nuclear physics, modern optics, theoretical physics, surface physics, or general physics. Prerequisite(s): Permission of department chairperson.

## Political Science

Majors:

- Bachelor of Arts, Human Rights Studies (p. 253)
- Bachelor of Arts, Political Science (p. 255)

Minors:

- Human Rights Studies (p. 255)
- Political Science (p. 256)

The Department of Political Science offers a Bachelor of Arts with a major in Political Science and a Bachelor of Arts with a major in Human Rights Studies. Minors in political science and human rights studies are also offered.

- A major in political science requires 39 semester hours of political science courses.
- A major in human rights studies requires 45 to 57 semester hours of courses in the humanities and the social sciences.
- A minor in political science consists of 15 semester hours. Courses selected by students should strengthen academic or career objectives.
- A minor in human rights studies consists of 18 semester hours. Courses selected should strengthen academic or career objectives.


## Minors and Teacher Licensure

A student majoring in political science can acquire teacher licensure through the dual-degree B.A. and B.S.E. program conducted in conjunction with the Department of Teacher Education in the School of Education and Health Sciences, or minor in any related discipline within the College of Arts and Sciences. The student must consult with the department administering the discipline for the particular requirements of a minor.

## Faculty

Grant W. Neeley, Chairperson
Director of Human Rights Studies Program: Natalie Hudson Director of Master of Public Administration: Michelle Pautz Director of Graduate Certificate in Nonprofit \& Community Leadership: Steve Neiheisel
Professors Emeriti: Ahern, Fogel, Inscho, Karns, Lapitan, Nelson Professors: Ghere, Ingram, Pierce
Associate Professors: Bilocerkowycz, Ensalaco, Hudson, Miller, Neeley, Pautz, Watkins
Assistant Professors: Ambrosius, Devine, Pruce
Lecturers: Birdsong, Neiheisel, Talbott

## Bachelor of Arts, Human Rights Studies (HRS) minimum 124 hours

The Bachelor of Arts in Human Rights Studies is an integrated preprofessional degree firmly grounded in the traditional liberal arts. Students, faculty, and staff participating in the program enter into it guided by their fundamental commitment to respect and promote
the dignity of each human person. The degree is intended to produce intellectually adept students who are capable of performing rigorous research and conducting high quality analysis of critical questions in the area of human rights studies. It is equally intended to produce thoughtful and transformational servant-leaders who will apply the knowledge and skills obtained in the program to contemporary human rights issues and situations both domestically and internationally. Through the integration of liberal and pre-professional education, the interdisciplinary program prepares distinctive graduates who intend to pursue advanced study and training in the field of human rights, or careers in human rights advocacy and humanitarian assistance. Those graduates will possess the values, knowledge and skills necessary for effective public service in:

- Government agencies
- Non-governmental organizations
- International aid agencies
- Non-profit groups in human rights or humanitarian assistance

Courses taken for the major may also count toward completion of the Common Academic Program and the Liberal Studies Curriculum.

| Common Academic Program (CAP) |  |
| :---: | :---: |
| *credit hours will vary depending on courses selected |  |
| First-Year Humanities Commons ${ }^{1}$ | 12 |
| HST 103 The West \& the World |  |
| REL 103 Introduction to Religious and Theological Studies |  |
| PHL 103 Introduction to Philosophy |  |
| ENG 100 Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ | 0-3 |
| ENG 200 Writing Seminar II |  |
| Oral Communication | 3 |
| CMM 100 Principles of Oral Communication |  |
| Mathematics | 3 |
| Social Science | 3 |
| SSC 200 Social Science Integrated |  |
| Arts | 3 |
| Natural Sciences ${ }^{4}$ | 7 |
| Crossing Boundaries | variable credit |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |
| Advanced Study | variable credit |

Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice 3

| Major Capstone | 0-3 |
| :--- | :--- |

Completed with ASI 110 and ASI 120.
Or ENG 100A and ENG 100B, or ENG 200H, by placement.
Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

## Liberal Studies Curriculum

| Creative and Performing Arts (May include CAP Arts) |  | 3 |
| :---: | :---: | :---: |
| L2 Proficiency (Proficiency in a language other than English) ${ }^{1}$ |  | 0-11 |
| Literature (May include CAP Components) |  | 3 |
| Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) |  | 3 |
| Natural Sciences (Satisfies CAP Natural Sciences) |  | 11 |
| Social Sciences (Includes CAP Social Science) |  | 12 |
| Major Requirements ${ }^{2}$ |  | 48 |
| HRS 200 | Introduction to Human Rights | 3 |
| HRS 497 | Capstone Seminar in Human Rights Studies | 3 |
| CMM 355 | Rhetoric of Social Movements | 3 |
| HST 312 | Age of Democratic Revolutions | 3 |
| PHL 371 | Philosophy \& Human Rights | 3 |
| $\begin{aligned} & \text { POL } 305 \\ & \quad \text { or POL } 361 \end{aligned}$ | Introduction to Public Administration <br> Leadership in Nongovernmental Organizations | 3 |
| POL 333 | Politics of Human Rights | 3 |
| POL 334 | Politics of Human Rights II | 3 |
| POL 406 | International Law \& Organization | 3 |
| $\begin{aligned} & \text { REL } 363 \\ & \quad \text { or REL } 261 \end{aligned}$ | Faith \& Justice <br> Faith Traditions: Human Rights | 3 |
| SOC 371 | Sociology of Human Rights | 3 |
| or ANT 325 | Anthropology of Human Rights |  |
| Select one course from: |  | 3 |
| CMM 412 | Research Methods in Communication |  |
| HST 301 | Research Methods Seminar |  |
| POL 207 | Political Analysis |  |
| SOC 208 | Social Research Methods |  |
| Select one course from three different concentrations: |  | 9 |
| Anthropology |  |  |
| ANT 360 | Making of Modern South Asia |  |
| Criminal Justice Studies |  |  |
| CJS 336 | Comparative Criminal Justice Systems |  |
| Economics |  |  |
| ECO 460 | Economic Development \& Growth |  |
| History |  |  |
| HST 334 | History of the Palestinian-Israeli Conflict |  |
| HST 337 | History of Africa - 19th Century to the Present |  |
| HST 356 | Topics in Transnational Feminist History |  |
| HST 361 | U.S. Legal \& Constitutional History II |  |
| HST 399 | History of Blacks in the United States Since 1900 |  |
| Philosophy |  |  |
| PHL 314 | Philosophy of Law |  |
| PHL 317 | Ethics of War |  |
| PHL 327 | Philosophy of Peace |  |
| PHL 370 | Political Philosophy |  |
| PHL 372 | Values \& Economics |  |
| Political Science |  |  |
| POL 300 | Political Issues ${ }^{3}$ |  |
| POL 319 | Twentieth-Century Political Thought |  |
| POL 331 | Nationalism \& Ethnopolitics (Satisfies CAP Social Science) |  |
| POL 361 | Leadership in Nongovernmental Organizations |  |
| POL 450 | Civil Liberities |  |


| POL 452 | Political Violence |
| :---: | :---: |
| Religious Studies |  |
| REL 358 | Liberation Theologies |
| REL 360 | Christian Ethics |
| REL 366 | The Holocaust: Theological \& Religious Responses |
| Sociology |  |
| SOC 326 | Law \& Society |
| SOC 328 | Racial \& Ethnic Relations |
| SOC 339 | Social Inequality |
| SOC 345 | Sociology of Extremism |
| SOC 368 | Immigration \& Immigrants |
| SOC 435 | Sociology of Globalization |
| Spanish |  |
| SPN 380 | Spanish \& Ibero-American Cinema |
| SPN 480 | Spanish \& Ibero-American Cinema |
| Experiential or | search Requirement 3-6 |
| Select one course (for a total of 3 semester hours): |  |
| CMM 390 | Independent Study |
| HST 496 | Independent Study |
| PHL 492 | Directed Research |
| POL 431 | Independent Study \& Research |
| POL 495 | Internship |
| SOC 409 | Senior Project Capstone |
| SOC 498 | Independent Study |
| Or complete an Honors Thesis (for a total of 6 semester hours): |  |
| CMM 477 <br> \& CMM 478 | Honors Thesis Project and Honors Thesis Project |
| HST 477 <br> \& HST 478 | Honors Thesis Project and Honors Thesis Project |
| PHL 477 <br> \& PHL 478 | Honors Thesis Project and Honors Thesis Project |
| $\begin{aligned} & \text { POL } 477 \\ & \& \text { POL } 478 \end{aligned}$ | Honors Thesis Project and Honors Thesis Project |
| REL 477 <br> \& REL 478 | Honors Thesis Project and Honors Thesis Project |
| $\begin{aligned} & \text { SOC } 477 \\ & \& \text { SOC } 478 \end{aligned}$ | Honors Thesis Project and Honors Thesis Project |
| Breadth |  |
| ASI 150 | Introduction to the University Experience 1 |
| Total Hours to | al at least 124 |
| 1 Majors must demonstrate proficiency in a foreign language by passing a University proficiency examination or by completing a language course at the 141 level or higher with a minimum grade of C in one of the following languages: <br> - Arabic <br> - French <br> - German <br> - Italian <br> - Mandarin Chinese <br> - Russian <br> - Spanish |  |
| 2 May include | AP Components. |

3 This course can only be counted when taught as International Political Economy.

## Bachelor of Arts, Political Science (POL) minimum 124 hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected $^{\text {First-Year Humanities Commons }}{ }^{1}$

| HST 103 | The West \& the World |
| :---: | :---: |
| REL 103 | Introduction to Religious and Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |
| Second-Year Writing Seminar ${ }^{3}$ |  |
| ENG 200 | Writing Seminar II |


| Oral Communication | 3 |
| :--- | :--- |
| CMM $100 \quad$ Principles of Oral Communication |  |


| Mathematics | 3 |
| :--- | :--- |
| Social Science | 3 |


| Social Science | 3 |
| :--- | :---: |
| SSC $200 \quad$ Social Science Integrated |  |
| Arts | 7 |
| Natural Sciences ${ }^{4}$ | varia <br> credi |
| Crossing Boundaries |  |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry | varia |
| Integrative | credi |
| Advanced Study |  |



| Liberal Studies Curriculum |  |
| :--- | ---: |
| Creative and Performing Arts (May include CAP Arts) | 3 |
| L2 Proficiency (Proficiency in a language other than English) | $0-11$ |
| Literature (May include CAP Components) | 3 |
| Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) | 3 |
| Natural Sciences (Satisfies CAP Natural Science) | 11 |
| Social Sciences, excluding POL courses (Includes CAP Social | 12 |
| Science) |  |
| Major Requirements | 39 |
| POL 200 $\quad$ Introduction to Political Science | 3 |
| POL 201 $\quad$ The American Political System | 3 |
| POL 202 $\quad$ Introduction to Comparative Politics | 3 |


| or POL 214 | Introduction to International Politics |  |
| :---: | :---: | :---: |
| POL 207 | Political Analysis | 3 |
| $\begin{aligned} & \text { POL } 316 \\ & \text { or POL } 317 \\ & \text { or POL } 319 \end{aligned}$ | American Political Thought Development of Political Theory Twentieth-Century Political Thought | 3 |
| POL 499 | Political Science Capstone (Satisfies CAP Major Capstone) | 3 |
| Select seven POL courses (May include CAP Components) ${ }^{\text {1,2 }}$ |  | 21 |
| Breadth |  |  |
| ASI 150 | Introduction to the University Experience | 1 |
| Total Hours to total at least |  | 124 |
| Students earning the B.A. in Political Science may count no more than six semester hours earned on internships (POL 495) toward the fulfillment of the degree requirements in POL. Students may, however, take additional hours of internship credit (POL 495) and count them toward the necessary 124 hours needed for graduation |  |  |

## Minor in Human Rights Studies (HRS)

The interdisciplinary minor in Human Rights Studies provides students an opportunity to address issues related to human rights from various riabldisciplinary approaches. The universal nature of human rights issues credit may directly relate to a major, while in other cases this minor will provide an opportunity for broadening one's exposure to these important topics.

The Human Rights Studies minor requires 18 semester hours. It is recommended that the required course be taken in the sophomore year. Students should consult with the Director of Human Rights Studies te ensure that the courses selected from the elective pool display a credit significant degree of coherence. Courses taken from this minor may be applied to other minors and to breadth and general education requirements.

## Human Rights Studies

POL 333 Politics of Human Rights 3

POL 334 Politics of Human Rights II 3
Select one course from: 3
PHL 371 Philosophy \& Human Rights
REL 363 Faith \& Justice
Select one course from: 3

| ANT $325 \quad$ Anthropology of Human Rights |  |
| :---: | :--- |
| SOC 371 | Sociology of Human Rights |
| Select two courses from: ${ }^{1,2}$ | 6 |


| ANT 325 | Anthropology of Human Rights |
| :--- | :--- |
| ANT 360 | Making of Modern South Asia |
| ANT 368 | Immigration \& Immigrants |
| CJS 336 | Comparative Criminal Justice Systems |
| CMM 355 | Rhetoric of Social Movements |
| ECO 460 | Economic Development \& Growth |
| HST 312 | Age of Democratic Revolutions |
| HST 334 | History of the Palestinian-Israeli Conflict |
| HST 337 | History of Africa - 19th Century to the Present |
| HST 356 | Topics in Transnational Feminist History |
| HST 361 | U.S. Legal \& Constitutional History II |


| HST 399 | History of Blacks in the United States Since 1900 |
| :--- | :--- |
| PHL 314 | Philosophy of Law |
| PHL 317 | Ethics of War |
| PHL 327 | Philosophy of Peace |
| PHL 370 | Political Philosophy |
| PHL 371 | Philosophy \& Human Rights |
| PHL 372 | Values \& Economics |
| POL 300 | Political Issues ${ }^{3}$ |
| POL 305 | Introduction to Public Administration |
| POL 319 | Twentieth-Century Political Thought |
| POL 331 | Nationalism \& Ethnopolitics |
| POL 406 | International Law \& Organization |
| POL 450 | Civil Liberities |
| POL 452 | Political Violence |
| REL 358 | Liberation Theologies |
| REL 360 | Christian Ethics |
| REL 363 | Faith \& Justice |
| REL 366 | The Holocaust: Theological \& Religious Responses |
| SOC 326 | Law \& Society |
| SOC 328 | Racial \& Ethnic Relations |
| SOC 339 | Social Inequality |
| SOC 345 | Sociology of Extremism |
| SOC 368 | Immigration \& Immigrants |
| SOC 371 | Sociology of Human Rights |
| SOC 435 | Sociology of Globalization |

At least one course must be from CMM, HST, PHL, or REL.
Select any course that has not been already used to fulfill other Human Rights Studies Minor requirements.
This course can only be counted when the topic is relevant to human rights.

## Minor in Political Science (POL)

| Political Science | 3 |
| :--- | ---: |
| Select one POL introductory course $(201,202,214)$ | 12 |
| Select four POL courses $(300 / 400$ level) | 15 |

- Bachelor of Arts, Human Rights (p. 256)
- Bachelor of Arts, Political Science (p. 256)


## Bachelor of Arts, Human Rights

| First Year |  |  |
| :--- | :---: | ---: |
| Fall | Hours Spring | Hours |
| ASI 150 | 1 REL 103 (CAP | 3 |
|  | Humanities |  |
|  | Commons) |  |
| HST 103 (CAP Humanities Commons) | 3 ENG 100 | 3,4 |
|  | (CAP |  |
|  | Humanities |  |
|  | Commons) | 3 |
| PHL 103 (CAP Humanities Commons) | 3 CMM 100 |  |
|  | (CAP |  |
|  | Communication ) | 3 |
| MTH 114 or 207 (Satisfies CAP Mathematics) | 3 HRS 200 | 4 |
| Language 101 | 4 Language | 1417 |


| Second Year |  |  |
| :---: | :---: | :---: |
| Fall | Hours Spring | Hours |
| ENG 200 (CAP Writing Seminar) | 3-4 POL 214 | 3 |
| ANT 150 (CAP Inquiry, Diversity and Social Justice; Social Science - intro level) | 3 REL 363 <br> or 261 <br> (CAP Faith Traditions) | 3 |
| SSC 200 (CAP Social Science) | 3 PHL 371 <br> (CAP <br> Advanced <br> Philosophy/ <br> Religious <br> Study) | 3 |
| POL 207 or SOC 208 | $\begin{aligned} & 3 \text { POL } 305 \text { or } \\ & 361 \end{aligned}$ | 3 |
| Language 201 or contextual course | 3 INSS (CAP <br> Natural Science w/ lab | 4 |
|  | 15-16 | 16 |
| Third Year |  |  |
| Fall | Hours Spring | Hours |
| POL 333 | 3 HRS Elective <br> (Social <br> Science <br> 300/400) | 3 |
| HST 312 (CAP Advanced Historical Studies) | 3 POL 334 | 3 |
| CMM 355 | 3 HRS Elective | 3 |
| SOC 371 or ANT 325 (Social Science - elective) | 3 INSS (CAP <br> Natural Science w/ lab) | 4 |
| CAP Arts / Creative and Performing | 3 HRS Elective | 3 |
|  | 15 | 16 |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| POL 406 | 3 INSS (CAP <br> Natural Science) | 3 |
| POL 495 | 3 CAP <br> Integrative | 3 |
| CAP Advanced Philosophy/Religious Studies | 3 CAP Practical Ethical Action | 3 |
| Literature | 3 General Elective | 3 |
| HRS 497 | 3 General Elective | 3 |
| General Elective | 2 |  |
|  | 17 | 15 |

Total credit hours: 124-126

## Bachelor of Arts, Political Science

| First Year |  |  |
| :--- | :---: | ---: |
| Fall | Hours Spring | Hours |
| ASI 150 | 1 ENG 100 | 3,4 |
|  | (CAP |  |
|  | Humanities |  |
| HST 103 (CAP Humanities Commons) | Commons) |  |
|  | 3 PHL 103 |  |
|  | (CAP |  |
| REL 103 (CAP Humanities Commons) | Humanities | 3 |
| POL 200 | Commons) | 3 |
|  | 3 POL 201 |  |
|  | 3 MTH 114 |  |
|  | (Satisfies |  |
|  | CAP |  |
|  | Mathematics) |  |


| CMM 100 (CAP Communication) | 3 Language $141$ | 4 |
| :---: | :---: | :---: |
| Language 101 | 4 |  |
|  | 17 | 16-17 |
| Second Year |  |  |
| Fall | Hours Spring | Hours |
| POL 202 or 214 | 3 ENG 200 <br> (CAP Writing Seminar) | 3-4 |
| POL 207 | $\begin{aligned} & 3 \text { SSC } 200 \\ & \text { (CAP Social } \\ & \text { Science) } \end{aligned}$ | 3 |
| PSY 101, SOC 101, or SOC 204 (Social Science intro - level) | 3-4 INSS (CAP <br> Natural <br> Science w/ <br> lab) | 4 |
| INSS (CAP Natural Science w/lab) | 4 POL elective | 3 |
| Language 201 or contextual course | 3 Upper level SOC, PSY, or ECO | 3 |
|  | 16-17 | 16-17 |
| Third Year |  |  |
| Fall | Hours Spring | Hours |
| POL 316, 317, or 319 | 3 Social Science (Elective not POL) | 3 |
| POL elective | 3 POL elective | 3 |
| CAP Faith Traditions | 3 CAP Inquiry | 3 |
| CAP Diversity and Social Justice | 3 CAP <br> Advanced Philosophy/ Religious Studies | 3 |
| INSS Natural Science | 3 CAP Practical Ethical Action | 3 |
|  | 15 | 15 |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| POL 499 (Satisfies CAP Major Capstone) | 3 POL elective | 3 |
| POL elective | 3 POL elective | 3 |
| CAP Integrative | 3 CAP Arts / <br> Creative and Performing | 3 |
| Social Science - elective | 3 CAP <br> Advanced Philosophy/ Religious Studies | 3 |
| Literature | 3 CAP <br> Advanced Historical Studies | 3 |
| POL elective | 3 |  |
|  | 18 | 15 |

Total credit hours: 128-131

## Courses

## POL 200. Introduction to Political Science. 3 Hours

Study of the dominant theoretical approaches, central questions and concepts, and history of political science. Political Science majors only.

## POL 201. The American Political System. 3 Hours

Study of the American political system, its attitudinal and constitutional base, its structure and processes.

POL 202. Introduction to Comparative Politics. 3 Hours
Analysis of major concepts and approaches in the study of comparative government and politics.
POL 207. Political Analysis. 3 Hours
Introduction to the basic concepts and processes of research in political science.
POL 214. Introduction to International Politics. 3 Hours
Analysis of the dynamic forces of conflict and cooperation in world politics.

## POL 300. Political Issues. 3 Hours

Introductory examination of contemporary political issues selected by the instructor, such topics as welfare, political morality, political campaigns, institutional reform, and political economy.

## POL 301. The American Judicial Process. 3 Hours

Study of the judicial process as part of the political system. Focus on the participants (police, lawyers, judges, interest groups, litigants, jurors) and the process (criminal, civil, and appellate proceedings).

## POL 303. State \& Local Government. 3 Hours

Comparative study of the political institutions, processes, and systems of the fifty states and their effect on the content and administration of selected public policies, programs, and services.
POL 305. Introduction to Public Administration. 3 Hours
Basic principles of organization and management in executive departments of government at all levels; questions of planning, leadership, and control.
POL 306. Public Policy Analysis. 3 Hours
Introduction to public policy-making systems and the methodology of policy analysis; theories of policy formulation, the policy-making process, means for measuring policy effectiveness, analysis of proposals for policy change.

## POL 307. The Politics of Bureaucracy \& Regulation. 3 Hours

Examination of the nature and meaning of bureaucracy in contemporary American society, its relationship to the private sector, and the devices for its evaluation and control.

POL 308. Morality Policy. 3 Hours
Introduction to the morality-based public policy debate with comparison of morality policy (e.g. abortion, drugs, gay rights, pornography) and traditional forms of public policy; study of the moral basis underlying current political topics and debate.
POL 310. Political Parties, Campaigns \& Elections. 3 Hours
Analysis of the history, nature, and function of political parties and their role in the political system in both a domestic and comparative context.
POL 311. Public Opinion \& Political Behavior. 3 Hours
The formation, maintenance, change, and impact of public opinion on the American political system; the role of theory and analysis of data in understanding public and political behavior.

## POL 313. The American Presidency. 3 Hours

Study of the American presidency, the development of presidential powers, and its leadership role in the political system.

## POL 314. Interest Group Politics. 3 Hours

Exploration of the role of interest groups in the American political system through an examination of their internal organization and their roles in the electoral and policy making processes at the national, state and local levels. Prerequisite(s): POL 201.

## POL 316. American Political Thought. 3 Hours

An exploration and critical investigation of selected actors, thinkers, texts, ideas and movements in American political thought and theory from the colonial period to the present. Topics may include the founding, the age of Jackson, the Civil War, Progressivism, Women's Suffrage, the New Deal, the Cold War, the Civil Rights Movement, the 1960s, and others.

## POL 317. Development of Political Theory. 3 Hours

Analysis of selected theorists and political doctrines forming the tradition of Western thought on politics. Theorists including Plato, Aristotle, the Stoics, Augustine, Aquinas, Machiavelli, Hobbes, Locke, Rousseau, Mill, Marx, Spencer, Lenin, Gasset, and Camus presented in their historical and socio-political contexts.

## POL 318. Public Integrity \& Political Leadership. 3 Hours

Analysis of contemporary leadership issues related to integrity and values in political office-holding, public service, and global governance contexts. Prerequisite(s): CMM 201 or (POL 201 or POL 202 or POL 214) or permission of instructor.

## POL 319. Twentieth-Century Political Thought. 3 Hours

Analysis of selected political theorists, concepts, and movements from the late nineteenth century to the present. Thinkers and concepts may include Marx, Nietzsche, Sarte, Camus, Freud, Arendt, Strauss, the Frankfurt School, Fanon, Foucault, Rawls, Rorty, existentialism, feminism, colonialism, post-modernity, liberalism, neo-conservatism among others.
POL 320. Comparative Politics: Western Europe. 3 Hours
Analysis of governmental institutions and political processes of Western Europe.
POL 321. Comparative Politics: Russia \& the New States. 3 Hours
Analysis of governmental institutions and political processes of Russia and the New States.
POL 323. Comparative Politics: Latin America. 3 Hours
Analysis of governmental institutions and political processes of Latin America.

## POL 331. Nationalism \& Ethnopolitics. 3 Hours

An analysis of the politics of nationalism and ethnicity and their impact on social justice. Diverse case studies (US, Russia, Northern Ireland, Israeli-Palestinian) and institutions (European Community, United Nations) will be explored.

POL 333. Politics of Human Rights. 3 Hours
Examines the evolution of international human rights norms and the creation of the institutions for the protection and promotion of human rights, and case material relating to each category of internationally recognized human rights.

POL 334. Politics of Human Rights II. 3 Hours
This research seminar examines select topics related to the protection and promotion of human rights. This course is required for all Human Rights Studies majors. The research seminar adopts a case-study approach that enables students to analyze the complex social, economic, cultural, and political factors that impede the full realization of internationally recognized human rights, and to critically evaluate the effectiveness of the advocacy strategies used by inter-governmental human rights bodies and non-governmental human rights organizations. Thus, this seminar is designed to enable students to connect human rights theory and practice. Part I (Overview) provides a more in-depth examination of the material covered in POL 333 (the Politics of Human Rights I). Part II (Case Studies) examines critical contemporary issues and covers the full range of civil, political, economic, social, and cultural rights. Students will collaborate on team research projects and produce a final Human Rights Report containing an analysis of a specific situation of the violation of human rights, findings of fact, and recommendations aimed at rectifying the situation. Students will present and defend their team reports and present in class at the end of the semester. Prerequisite(s): POL 333.

## POL 335. United States National Security Policy. 3 Hours

Analysis of various political, economic, and military issues and problems relating to U.S. national security.

## POL 336. United Nations System: Theory and Practice. 3 Hours

 Introduction to the United Nations system with detailed case studies of specific countries, issues, and policies. Course also serves to prepare students for participation in the National Model United Nations Conference. Prerequisite(s): SSC 200.POL 340. Gender, Women's Rights and Global Politics. 3 Hours Overview of the ways international relations scholars study gender and use gender as a lens on world politics. Course includes a foundation in feminist theory as it relates to other international relations theories as well as investigation of political topics such as war, labor, human rights, political participation, and violence. Course is intersectional in approach, examining how the power of gender operates to maintain interlocking inequalities based on gender, nationality, race, class, and sexuality and how these inequalities result in problematic gender equality policymaking. Prerequisite(s): POL 214 or permission of instructor.

## POL 341. Power, Gender \& Performance. 3 Hours

Consideration of performances of identity and advocacy at the intersection of political power and gender as constructive responses to gender inequality. Performance protests for gender equality, and cultural performances of gender are examined in historical case studies and current events.

## POL 350. Legislative Politics. 3 Hours

Study of the U.S. Congress, its organization and procedures, and its powers and influence in the political system.

## POL 354. Political Campaign Communication. 3 Hours

Examination of theory and research on the role, processes and effects of communication in political campaigns with emphasis on mass media, public speaking, debates, advertising, and interpersonal communications. Prerequisite(s): CMM 100 and Sophomore standing.

## POL 360. Urban Politics \& Policy. 3 Hours

Study of the nature of urban political systems in the U.S. with emphasis on explanation of differences in their policy responses.

POL 361. Leadership in Nongovernmental Organizations. 3 Hours
Examination of management skills required of professionals in various types of nongovernmental organizations (NGOs) and how leaders integrate agency values and management processes to promote rightsrelated missions. HRS and POL majors or minors only or permission of the department chairperson.

## POL 365. Disaster Policy \& Administration. 3 Hours

Exploration of policy approaches and administrative response strategies related to various phases of disasters and security crises in the U.S. and international settings with attention to human rights issues.
Prerequisite(s): POL 201 or permission of instructor.

## POL 371. Environmental Policy. 3 Hours

Examination of environmental public policymaking and implementation in the United States. Students will apply knowledge of government and policy processes to specific environmental issues, analyze governmental response, and consider how action on those issues may be pursued. Prerequisite(s): SSC 200.

## POL 381. Film \& Politics. 3 Hours

Exploration of film as a medium for both reflecting societal opinions and influencing those opinions. In this course, students will investigate various political topics and issues and explore how American narrative film has dealt with these topics integrated across fields such as history, economics, communications and sociology.

## POL 404. United States - Latin American Relations. 3 Hours

This course examines the foreign relations of the United States with other countries of the Western hemisphere. Political, economic and security issues are examined from both theoretical and historical perspectives. Prerequisite(s): (POL 210 or POL 214) or permission of instructor.

## POL 406. International Law \& Organization. 3 Hours

Study of rules governing the community of nations; their nature, sources, and development; the international agencies responsible for their development, interpretation, and administration. Prerequisite(s): POL 214 or permission of instructor.

## POL 408. American Foreign Policy. 3 Hours

Critical study of the American foreign policy process and evaluation of the sources of American foreign policy. Prerequisite(s): (POL 201, POL 214) or permission of instructor.

## POL 409. Russian Foreign Policy. 3 Hours

Analysis of the internal and external factors shaping the foreign policies of Russia and the independent republics.

## POL 410. Comparative Foreign Policy. 3 Hours

Comparative analysis of the foreign policies of major states with emphasis on the process of policy development and on the national and international determinants of policy behaviors. Prerequisite(s): (POL 202 or POL 217) or permission of instructor.

## POL 41 1. Constitutional Law. 3 Hours

Analysis of the role of the U.S. Supreme Court in its interpretation of the Constitution. Emphasis on the various methods of judicial interpretation as they affect such provisions as the commerce clause, the taxing and spending powers, due process, the dimensions of presidential and congressional authority, and the doctrine of judicial review. Prerequisite(s): POL 301 or permission of instructor.
POL 412. Comparative Law. 3 Hours
Explores how foreign judicial systems protect and promote civil and political rights through different constitutional designs. Prerequisite(s): POL 301.

POL 413. The Politics of Bureaucracy \& Regulation. 3 Hours
Examination of the nature and meaning of bureaucracy in contemporary American society and the devices for its evaluation and control.
POL 421. Seminar in Political Science. 3 Hours
Seminar on current problems and issues in political science. May be taken more than once when content changes. Prerequisite(s): Political Science major; completed POL core courses.

## POL 426. Leadership in Building Communities. 3 Hours

Investigation of the processes by which urban neighborhoods develop themselves from the inside out. Students cultivate their own interdisciplinary appreciation of urban communities through extensive interaction with one neighborhood's visioning process. Topics include asset-based community development, social capital, citizenship, adaptive leadership, and community building strategies and tools.

## POL 431. Independent Study \& Research. 1-6 Hours

Individual reading and research on selected topics under faculty direction. Recommended for seniors only. Prerequisite(s): POL 207 and permission of instructor or department chairperson.

## POL 450. Civil Liberities. 3 Hours

Analytical examination of civil liberties in the U.S. with emphasis on the Supreme Court as arbiter in the endless conflict between the demand for individual liberty and the needs of constitutional authority. Prerequisite(s): (POL 301 or POL 411) or permission of instructor.

## POL 452. Political Violence. 3 Hours

Consideration of theoretical approaches to understanding violent change in political institutions; the continuum between violence and nonviolence; revolution, revolt, campus dissent, and political assassination. Prerequisite(s): (POL 202 or POL 333) or permission of instructor.

## POL 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## POL 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## POL 479. Selected Topics in Public Policy. 3 Hours

Intensive examination of policy process, outcomes, and impact in an area or areas of American public policy selected by the instructor; such topics as transportation, education, welfare, national defense, urban and community development, civil rights, and science and technology. May be repeated once when topic changes.

## POL 495. Internship. 1-9 Hours

Supervised experience in government agencies and programs. Prelaw students are assigned to law firms and judicial chambers. Prerequisite(s): Permission of supervising professor.

## POL 496. Public Service Practicum. 1-6 Hours

Individualized mentorship course integrating professional development and a critical analysis of applied experience related to public service. Includes an integrative presentation which connects students' internship to political science theories and concepts presented in coursework. Prerequisite(s): Permission of instructor.

POL 497. Service Learning Experience. 1 Hour
Supervised community research or service experience that complements a specific upper division course in Political Science. Repeatable up to three semester hours. No more than three semester hours of Social Science 497 credits can count toward graduation. Prerequisite(s): Permission of instructor. Corequisite(s): A 300-400 Political Science course.

## POL 498. Political Science and Vocation. 0 Hours

Political Science as Vocation reflects on the purposes of life and proposed work through the language of vocation. For those majors writing an honors thesis, independent study, or completing a capstone in a second major. All others must take POL 499. Prerequisite(s): Senior standing and permission of the department chair.

## POL 499. Political Science Capstone. 3 Hours

Project and presentation in the scholarship, activity and/or practice related to the major. Students will present their work in a forum appropriate to the major. Senior standing. Prerequisite(s): POL 207.

## Prelaw

Minor:

- Prelaw (p. 260)

The Prelaw Program, designed to serve students from all areas of the University, provides undergraduates and alumni interested in law school with opportunities to acquire the knowledge and skills necessary for a successful legal career through both the Prelaw Studies minor as well as through an extensive variety of preprofessional services and resources designed to help students plan an intentionally developmental undergraduate academic path. While students interested in careers in law should choose undergraduate majors to match their interests and abilities, they should also contact and stay engaged with the Prelaw Program as early in their undergraduate careers as possible so they can receive effective prelaw advice.

Students can take advantage of one or both paths through the Prelaw Program. The interdisciplinary Prelaw Studies minor enhances the preparation of students planning to seek admission to law school by promoting both the development of skills considered essential by both law schools and legal professionals -- critical reasoning, writing, and analytical skills - and professional skills. The Prelaw Program, i.e., the Director, together with fifteen additional prelaw faculty advisors, provides students with curriculum guidance for developing the skills set needed for success in their future legal education and career, with law school admissions fairs, with aid in preparing for the Law School Admission Test (LSAT), including simulated tests and prep workshops, and with individual assistance in law school selection and law school applications. Moreover, the Program has a legal internship program and a Mock Trial team, both of which offer students valuable experiential learning, an undergraduate chapter of Phi Alpha Delta, a Prelaw Club, and other opportunities for development based on the individual student's talents, interests, and goals.

For further information concerning the Prelaw Program at the University of Dayton, students should contact the Prelaw Program in Alumni Hall, Room 117; phone (937) 229-4229 or at prelaw@udayton.edu.

## Prelaw Committee

Laura H. Hume (History), Director
Agnew (International Studies), Alakkad (Engineering), Bednarek (History), Berry (Psychology), Bresnahan (Philosophy), Hudson (Human Rights Studies), Ingram (Political Science), Lau (Business), Leonard (Business), Neeley (Political Science), Parsons (Communication), Picca (Criminal Justice Studies), Shafer (Arts and Sciences), Shaw (Law), Slade (English), Small (Sociology)

## Minor in Prelaw (PLW)

| PreLaw |  | 20-22 |
| :---: | :---: | :---: |
| Core Courses |  |  |
| PLW 200 | Legal Careers \& Professional Development | 1 |
| PHL 302 | Symbolic Logic | 3 |
| POL 301 | The American Judicial Process | 3 |
| Additional Essential Skills Courses (13-15 hours) |  |  |
| Writing Skills - select one course from: |  | 3 |
| ENG 316 | Elements of Style |  |
| ENG 370 | Report \& Proposal Writing |  |
| ENG 371 | Technical Communication |  |
| ENG 372 | Business and Professional Writing |  |
| ENG 474 | Argument and Style |  |
| Quantitative Analysis Skills - select one from: ${ }^{1}$ |  | 3 |
| ACC 207 | Introduction to Financial Accounting |  |
| ACC 208 | Introduction to Managerial Accounting |  |
| CMM 412 | Research Methods in Communication |  |
| DSC 210 | Statistics for Business I |  |
| DSC 211 | Statistics for Business II |  |
| ECO 203 | Principles of Microeconomics |  |
| MTH 148 | Introductory Calculus I |  |
| MTH 207 | Introduction to Statistics |  |
| PSY 216 | Elementary Statistics |  |
| SOC 308 | Data Analysis |  |
| Written Research Skills - select one from: ${ }^{2}$ |  | 3 |


| Written Research Skills - select one from: ${ }^{2}$ | 3 |
| :--- | :--- |
| CJS 447 | Senior Seminar in Criminal Justice Studies |
| ENG 490 | Research Seminar-Literature |
| HST 301 | Research Methods Seminar |
| HST 498 | History Capstone Seminar |
| INS 499 | Senior Capstone Seminar |
| PHL 492 | Directed Research |
| Legal Vocabulary and Concepts - select one from: |  |


| CJS 305 | Criminal Law |
| :--- | :--- |
| CJS 315 | Criminal Procedure |
| MGT 201 | Legal Environment of Business |
| PHL 314 | Philosophy of Law |
| POL 411 | Constitutional Law |
| SOC 326 | Law \& Society |

Experiential Learning - complete 1-3 hours from the following: ${ }^{3}$ 1-3

CJS 495 Internship in Criminal Justice I
POL 495 Internship

| PLW $301 \quad$ Mock Trial I ${ }^{4}$ |
| :--- |
| PLW $302 \quad$ Mock Trial II $^{4}$ |
| PLW $495 \quad$ Legal Internship |
| 2 Other MTH courses may also apply with permission of program |
| coordinator. |
| May be completed with an Honors Thesis course in any academic <br> department or with permission of the program coordinator any other <br> course not listed that both teaches research methods and requires <br> the student to research and write a substantial paper (12-page <br> minimum length) will also fulfill this requirement. |
| 3Other internships may also apply with permission of program <br> coordinator. <br> 4 |
| Must complete sequence in consecutive semesters over the course <br> of one academic year. |

## Courses

PLW 200. Legal Careers \& Professional Development. 1 Hour Introduction to careers in various legal practice fields and the different employment options students will have with a law degree. Emphasis is on exploring personal motives and strengths as students consider preparing for law school and a legal career. Includes academic planning and professional behaviors development.

## PLW 301. Mock Trial I. 1 Hour

Practice and performance of attorney and witness roles for Mock Trial National Competition case. Repeatable up to four semester hours.

## PLW 302. Mock Trial II. 1 Hour

Practice and performance of attorney and witness roles for Mock Trial Regional and National competitions. Repeatable up to four semester hours. Prerequisite(s): PLW 301; invitation by mock trial coaches.

## PLW 495. Legal Internship. 1-3 Hours

Supervised legal work experience with an approved law or law-related office, organization or program. Prerequisite(s): Sophomore status, 3.0 minimum overall GPA, completion of PLW 200 and/or permission of supervising professor.

## Premedicine/Predentistry

Majors:

- Bachelor of Science, Predentistry (p. 261)
- Bachelor of Science, Premedicine (p. 263)

Minor:

- Medical Humanities (p. 264)

The Bachelor of Science with a major in premedicine (MED) or predentistry (DEN) is an interdisciplinary curriculum of study. It is distinctively designed to provide a science-based, diverse education as a preparation for admission to any of the health professional schools including medical, dental, physician assistant, optometry, pharmacy, veterinary, and chiropractic. Courses in biology, chemistry, mathematics, and physics comprise the science core of the major. A substantial complement of humanities and social sciences courses are also required. Within this framework the curriculum is flexible and can be tailored to suit personal interests. During the first two years, students enroll in courses appropriate for entry into professional schools while they also fulfill basic University requirements.

Admission to professional schools depends upon many factors in addition to the curriculum or major. Academic standing, performance on standardized examinations, practical experience relevant to the profession of interest, and adherence to application procedures are all important. The Premedical Programs Office addresses these factors through a comprehensive approach to pre-health care education.

Along with the administration of the DEN and MED majors, the Premedical Programs office acts as the focal point for all matters related to admission to any allied health care professional school. It is an information clearing house, functions as a liaison with professional schools, and coordinates the application process. The Premedical Programs Office also coordinates a number of internships, health related student organizations, and community based clinical opportunities for students. Students in any major planning to apply to professional schools are urged to maintain a close relationship with this office.

The University automatically enrolls entering premedical or predental majors into special orientation classes, and identifies them to the Premedical Programs office. Members of the Premedical/Predental Advisory Committee advise these students. However, advising services are available to all preprofessional students regardless of their major. Students in other majors may elect to have committee members serve as their secondary advisors; such students should identify themselves to the Premedical Programs office.

In addition to providing counseling, Premedical Programs offers a seminar series, clinical opportunities, grants for health care related experiences, and scholarships. Since admission to professional schools is highly selective, the program monitors the academic progress of MED/ DEN majors, and provides feedback at the end of the first and second year. Transfers to other majors, particularly to science majors, can usually be accommodated during the first two years without affecting normal progress towards graduation.

## Premedical/Predental Advisory Committee

Kathleen C. Scheltens, Director
Madeleine DeBeer (Chemistry), Assistant Director
Ahoujja (Physics), Burky (Biology), Carter (Biology), Crecelius (Health and Sport Science), Hansen (Biology), Johnson (Chemistry), Kango-Singh (Biology), Krane (Biology), Lopper (Chemistry), Mammana (Chemistry), Nielsen (Biology), Pitychoutis (Biology), Rhoads (Biology), Simon (Mathematics), Singh (Biology), Smith (Physics), Sun (Biology), S. Swavey (Chemistry), T. Williams (Biology), S. Wright (Biology)

## Bachelor of Science, Predentistry (DEN) minimum 120 hours

| Common Academic Program (CAP) |  |  |
| :---: | :---: | :---: |
| *credit hours will vary depending on courses selected |  |  |
| First-Year Humanities Commons |  | 12 |
| HST 103 | The West \& th |  |
| REL 103 | Introduction |  |
| PHL 103 | Introduction |  |
| ENG 100 | Writing Semin |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Semin |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of |  |
| Mathematics |  | 3 |


| Social Science |  | 3 |
| :---: | :---: | :---: |
| SSC 200 | Social Science Integrated |  |
| Arts |  | 3 |
| Natural Sciences ${ }^{4}$ |  | 7 |
| Crossing Boundaries |  | variab credit |
| Faith Traditions |  |  |
| Practical Ethical Action |  |  |
| Inquiry |  |  |
| Integrative |  |  |
| Advanced Study |  | variab credit |
| Philosophy and/or Religious Studies |  |  |
| Historical Studies ${ }^{5}$ |  |  |
| Diversity and Social Justice |  | 3 |
| Major Capstone |  | 0-3 |
| Completed with ASI 110 and ASI 120. <br> Or ENG 100A and ENG 100B, or ENG 200H, by placement. <br> Completed with ENG 200 H or ASI 120. <br> Must include two different disciplines and accompanying lab. <br> U.S. History AP credit will not satisfy this requirement. |  |  |
| Major Requirements |  | 63 |
| Satisfies CAP Mathematics and CAP Natural Science |  |  |
| $\begin{aligned} & \text { BIO } 151 \\ & \text { \& 151L } \end{aligned}$ | Concepts of Biology I: Cellular \& Molecular Biology and Concepts of Biology Laboratory I: Cellular \& Molecular Biology | 4 |
| $\begin{aligned} & \text { BIO } 152 \\ & \& 152 \mathrm{~L} \end{aligned}$ | Concepts of Biology II: Evolution \& Ecology and Concepts of Biology Laboratory II: Evolution \& Ecology | 4 |
| $\begin{aligned} & \text { CHM } 123 \\ & \& 123 \mathrm{~L} \end{aligned}$ | General Chemistry and General Chemistry Laboratory | 4 |
| CHM 124 \& 124L | General Chemistry and General Chemistry Laboratory | 4 |
| CHM 313 <br> \& 313L | Organic Chemistry and Organic Chemistry Laboratory | 4 |
| CHM 314 $\& 314 \mathrm{~L}$ | Organic Chemistry and Organic Chemistry Laboratory | 4 |
| CHM 420 | Biochemistry | 3 |
| CHM 420L | Biochemistry Lab for the Medical Sciences | 1 |
| MTH 148 <br> \& MTH 149 | Introductory Calculus I and Introductory Calculus II | 6 |
| or MTH 168 <br> \& MTH 169 | Analytic Geometry \& Calculus I and Analytic Geometry \& Calculus II |  |
| PHY 201 <br> \& PHY 202 | College Physics I and General Physics ${ }^{2}$ | 6 |
| or PHY 206 <br> \& PHY 207 <br> \& PHY 208 | General Physics I-Mechanics and General Physics II - Electricity \& Magnetism and General Physics III- Thermodynamics, Waves, Fluids |  |
| PHY 201L | College Physics Laboratory ${ }^{2}$ | 1 |
| PHY 202L | General Physics Laboratory | 1 |
| MED 480 | Pre-Medicine Capstone (Satisfies CAP Major Capstone) | 1 |

Select one course from:

| MTH 207 | Introduction to Statistics |
| :--- | :--- |
| MTH 367 | Statistical Methods I |
| PSY 216 | Elementary Statistics |

Select five science courses, two with accompanying laboratories, 17 from: ${ }^{3}$

| $\begin{aligned} & \text { BIO } 309 \\ & \& 309 \text { L } \end{aligned}$ | Comparative Anatomy of the Vertebrates and Comparative Anatomy Laboratory |
| :---: | :---: |
| $\begin{aligned} & \text { BIO } 312 \\ & \& 312 L \end{aligned}$ | General Genetics and Genetics Laboratory |
| $\begin{aligned} & \text { BIO } 403 \\ & \& 403 \mathrm{~L} \end{aligned}$ | Physiology I and Physiology Laboratory I |
| BIO 404 | Physiology II |
| $\begin{aligned} & \text { BIO } 411 \\ & \& 411 \mathrm{~L} \end{aligned}$ | General Microbiology and General Microbiology Laboratory |
| BIO 415 | Neurobiology |
| BIO 427 | Immunology |
| BIO 439 | Analysis \& Interpretation of Biological Data |
| $\begin{aligned} & \text { BIO } 440 \\ & \& 440 \mathrm{~L} \end{aligned}$ | Cell Biology and Cell Biology Laboratory |
| $\begin{aligned} & \text { BIO } 442 \\ & \& 442 \mathrm{~L} \end{aligned}$ | Developmental Biology and Developmental Biology Laboratory |
| BIO 445 | Evolution \& Development |
| BIO 460 | Introduction to Bioinformatics |
| BIO 462 | Molecular Biology |
| BIO 466 | Biology of Infectious Disease |
| BIO 470 | Cancer Biology |
| $\begin{aligned} & \text { BIO } 475 \\ & \& 475 \text { L } \end{aligned}$ | Human Anatomy and Human Anatomy Laboratory |
| $\begin{aligned} & \mathrm{BIO} 480 \\ & \& 480 \mathrm{~L} \end{aligned}$ | Principles of Microscopy and Principles of Microscopy Laboratory |
| CHM 201 <br> \& 201L | Quantitative Analysis and Quantitative Analysis Laboratory |
| CHM 302 | Physical Chemistry |
| CHM 427 | Medicinal Chemistry |
| CHM 451 | General Biochemistry I |
| CHM 452 | General Biochemistry II |

## Breadth

ASI 150 Introduction to the University Experience 1
Electives ${ }^{4,5} 10$
ENG Elective ${ }^{6} 3$

Select one course from: (Satisfies CAP Practival Ethical Action and 3
Adv Studies in PHL or REL)

| PHL 312 | Ethics |  |
| :--- | :--- | :--- |
| PHL 315 | Medical Ethics |  |
| REL 365 | Christian Ethics \& the Environment |  |
| REL 367 | Christian Ethics \& Health Care Issues |  |
| Social and Behavioral Sciences (Includes CAP Social Science) | 12 |  |
| Total Hours to total at least | 120 |  |
| 1 | Well qualified students are advised to take MTH 168-MTH 169. |  |
| 2 | Well qualified students are strongly advised to take |  |
| PHY 206-PHY 207-PHY 208 lecture sequence with PHY 201L and |  |  |
| PHY 202L. |  |  |

3 The elective courses must be directly related to the primary field of interest.
4 Only general elective courses can be taken under Grading Option Two.
Courses in graphic design, studio art, or performing arts are recommended.
Select from any 300 or 400 level ENG course.

## Bachelor of Science, Premedicine (MED) minimum 120 hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |

Second-Year Writing Seminar ${ }^{3} \quad 0-3$

ENG 200 Writing Seminar II
Oral Communication 3

| CMM 100 Principles of Oral Communication |  |
| :---: | :--- |
| Mathematics |  |

Social Science 3

| SSC 200 Social Science Integrated |  |  |  |  |
| :--- | :--- | :---: | :---: | :---: |
| Arts | 3 |  |  |  |
| Natural Sciences ${ }^{4}$ | 7 |  |  |  |

Faith Traditions
Practical Ethical Action
Inquiry
Integrative

| Advanced Study | variab |
| :--- | :--- |
| credit |  |


| Philosophy and/or Religious Studies |  |
| :--- | ---: |
| Historical Studies ${ }^{5}$ |  |
| Diversity and Social Justice | 3 |
| Major Capstone | $0-3$ |

Completed with ASI 110 and ASI 120.
Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

## Major Requirements

Satisfies CAP Mathematics and Natural Science
BIO 151 Concepts of Biology I: Cellular \& Molecular Biology 4
\& 151L and Concepts of Biology Laboratory I: Cellular \& Molecular Biology
BIO 152 Concepts of Biology II: Evolution \& Ecology 4
\& 152L and Concepts of Biology Laboratory II: Evolution \& Ecology



\begin{tabular}{|c|c|c|c|}
\hline Bachelor of Science \& IIcine \& \& General elective \(\begin{array}{r}1 \text { General } \\ \text { elective }\end{array}\) \\
\hline First Year \& \& \& \(14 \times 14\) \\
\hline Fall \& Hours Spring \& Hours \& Total credit hours: 123-125 \\
\hline ASI 150 \& \[
\begin{gathered}
1 \text { BIO } 152 \\
\& 152 \mathrm{~L}
\end{gathered}
\] \& 4 \& Courses \\
\hline BIO 151
\& 151L (CAP Natural Science w/lab) \& 4 CHM 124
\& 124 L \& 4 \& MED 210. Premed Community Health Experience. 0-1 Hours \\
\hline CHM 123
\& 123L \& 4 MTH 149 \& 3 \& This zero or one credit pass/fail mini-course is intended to orient and train the student to provide services as a volunteer at Reach Out of \\
\hline MTH 148 (Satisfies CAP Mathematics) \& \begin{tabular}{l}
3 REL 103 \\
or PHL \\
103 (CAP \\
Humanities \\
Commons)
\end{tabular} \& 3

3 \& Montgomery County. In addition to learning skills required to perform volunteer functions during the open clinic, students will learn about the complexities of providing healthcare to under-served populations and develop interpersonal skills to be an empathic and informed advocate for patients. Prerequisite(s): Sophomore status. <br>

\hline ENG 100 (CAP Humanities Commons) \& | or PHL |
| :--- |
| 103 (CAP |
| Humanities |
| Commons) | \& 3 \& | MED 220. Hospital Elder Life Program. 0-1 Hours |
| :--- |
| Experiential course utilizing the Hospital Elder Life Program (HELP) which is an innovative model program designed to improve the hospital experience of older patients. In this program student volunteers carry out | <br>

\hline Second Year \& 15-16 \& 17 \& program interventions directly at the bedside. This training program gives <br>
\hline Fall \& Hours Spring \& Hours \& \multirow[t]{3}{*}{volunteers a level of patient contact and responsibility that is unique among hospital programs. The training course includes instruction in the four volunteer intervention programs: Daily Visitor Program, Feeding} <br>
\hline CHM 313 \& 4 CHM 314 \& 4 \& <br>
\hline \& 313L \& \& 314L \& \& <br>
\hline PHY 201 \& 4 PHY 202 \& 4 \& \multirow[t]{2}{*}{Assistance Program, Early Mobilization Program, Therapeutic Activities Program. Students must complete all elements of the training program} <br>
\hline \& 201L (CAP Natural Science w/lab) \& \& 202L \& \& <br>
\hline ENG 200 (CAP Writing Seminar) \& 3-4 CMM 100 (CAP Communication) \& 3 \& Program. Students must complete all elements of the training program including classroom instruction, Sim lab skills check-offs, and fulfill all required supervised training hours. Prerequisite(s): Sophomore status. <br>

\hline SSC 200 (CAP Social Science) \& | 3 Social |
| :--- |
| Science - |
| elective | \& 3 \& | MED 339. Global Brigades: Perspectives on Global Poverty and Health. 1 Hour |
| :--- |
| Exploration of the health related conditions of rural Nicaragua in | <br>

\hline HST 103 (CAP Humanities Commons) \& 3 \& \& \multirow[t]{2}{*}{Exploration of the health related conditions of rural Nicaragua in preparation for participation in a nine day medical/dental/public health brigade to this area. Upon completion of this course, students} <br>
\hline \& 17-18 \& 14 \& <br>
\hline Third Year \& \& \& will possess the knowledge and skill set necessary to participate in <br>
\hline Fall \& Hours Spring \& Hours \& \multirow[t]{2}{*}{a medical service project with an international service organization focused on providing acute and preventative medical care to underserved populations in rural Nicaragua.} <br>

\hline CHM 420 \& | 3 MED 480 |
| :--- |
| (CAP |
| Capstone) | \& 1 \& <br>


\hline CHM 462L \& | 1 Social |
| :--- |
| Science - |
| elective | \& 3 \& | MED 351. Healthy Children: Addressing Social Needs to Improve Health Outcomes. 1 Hour |
| :--- |
| Examination of the social needs of pediatric patients and families' social | <br>

\hline MTH 207, 367, or PSY 216 \& 3 Science elective \& 3 \& needs that most affect children's health. Will include methods of helping families connect with community resources that can assist in meeting <br>
\hline Science elective \& 3 Science elective \& 3 \& \multirow[t]{2}{*}{these needs. Prerequisite(s): Sophomore Standing, basic orientation to healthcare or human service industries.} <br>
\hline CAP Inquiry / Social Science \& 3 CAP Arts \& 3 \& <br>

\hline English elective \& 3 CAP Practical Ethical Action \& 3 \& \multirow[t]{3}{*}{| MED 477. Honors Thesis Project. 3 Hours |
| :--- |
| First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the |} <br>

\hline \& 16 \& 16 \& <br>
\hline Fourth Year \& \& \& <br>
\hline Fall \& Hours Spring \& Hours \& \multirow[t]{3}{*}{University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.} <br>
\hline Science elective w/lab \& 4 Science elective with lab \& 4 \& <br>
\hline CAP Faith Traditions \& 3 CAP Integrative \& 3 \& <br>

\hline CAP Advanced Historical Studies \& | 3 CAP |
| :--- |
| Advanced |
| Philosophy/ |
| Religious |
| Studies | \& 3 \& <br>

\hline CAP Advanced Philosophy/Religious Studies \& 3 CAP Diversity and Social Justice \& 3 \& <br>
\hline
\end{tabular}

## MED 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## MED 480. Pre-Medicine Capstone. 1 Hour

Seminar focuses on reflection and analysis of a clinical experience such as international medical brigade, Reach Out community medicine experience or Good Neighbor House dental experience (or other experience pre-approved by program director.) Course is offered in Spring semester. Junior or Senior status. MED or DEN Major. Completion of one of the following: international medical brigade and MED 339; Reach Out community medicine experience and MED 210; MED 220 Hospitalized Elder Life Program; Good Neighbor House dental experience and UDI 276 (or other experience pre-approved by program director). Prerequisite(s): MED 210 or MED 220 or MED 339 or UDI 276 or other experience preapproved by program director.

## Psychology

Majors:

- Bachelor of Arts, Psychology (p. 266)
- Bachelor of Science, Psychology (p. 267)

Minor:

- Psychology (p. 268)

Psychology is the scientific study of mind, brain and behavior. It is a diverse field that touches all aspects of our lives.

The Department of Psychology offers a Bachelor of Arts (B.A.) and a Bachelor of Science (B.S.) in Psychology. The department encourages students who are interested in preparation for graduate school or a career in a particular area of psychology to consult with their faculty advisor regarding courses that would be recommended for preparation in that area. Some examples of such areas include clinical, developmental, cognitive, and social psychology.

Each psychology major must complete: PSY 101, PSY 201, PSY 216, and PSY 217 early in his or her academic career. Specifically, PSY 101 is required prior to taking most psychology courses. Further, students can take no more than 6 credit hours prior to enrolling in PSY 216, and no more than 15 hours before enrolling in PSY 217. The remaining requirements are stated in the outline below. Exceptions to these requirements must be approved by the department chairperson.

Completion of PSY 101 with a C- or better and enrollment in PSY 216 is required to transfer into the major. Students who do not earn a C- or better in PSY 216 after two attempts will be required to meet with the department chairperson.

Psychology majors are required to attain grades of C - or better in the following courses:

| PSY 101 | Introductory Psychology | 3 |
| :--- | :--- | :--- |
| PSY 201 | Sophomore Seminar: Psychology as a Science and | 1 |


| PSY 216 | Elementary Statistics | 3 |
| :--- | :--- | :--- |
| PSY 217 | Research Methods | 3 |

and any two courses from each of the two core groupings:

| PSY 321 | Cognition | 3 |
| :--- | :--- | :--- |
| PSY 322 | Learning | 3 |
| PSY 323 | Psychology of Perception | 3 |
| PSY 422 | Biopsychology | 3 |
| PSY 341 | Social Psychology | 3 |
| PSY 351 | Child Psychology | 3 |
| PSY 361 | Personality | 3 |
| PSY 363 | Abnormal Psychology | 3 |

If a C - or better is not attained, courses will have to be retaken if they are used to satisfy the psychology major.

A minor in psychology consists of eighteen semester hours, including PSY 101, one course from each of the core groupings, and three electives.

## Faculty

Lee Dixon, Chairperson
Professors Emeriti: Allik, Biers, Butter, DaPolito, Eggemeier, Katsuyama, Korte, Kuntz, Moroney, Polzella
Professors: Bauer, Reeb, Zois
Associate Professors: Crutcher, Dixon, Elvers, Goodnight, Kirschman, Kunz, Montoya, O'Mara, Roecker Phelps
Assistant Professors: Butler, Davis, Fuhs, Walsh-Messinger Visiting Assistant Professor: Berry
Lecturers: Engle, Farnsworth, Layman-Guadalupe, Rodriguez

## Bachelor of Arts, Psychology (PSY) minimum 124 hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1} 12$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |

Second-Year Writing Seminar ${ }^{3}$ 0-3
ENG 200 Writing Seminar II
Oral Communication 3
CMM 100 Principles of Oral Communication
Mathematics 3
Social Science 3

SSC 200 Social Science Integrated
Arts 3

Natural Sciences ${ }^{4} 7$
Crossing Boundaries variable
credit
Faith Traditions
Practical Ethical Action
Inquiry
Integrative


## Science Breadth Requirements

Satisfies CAP Mathematics and CAP Natural Science

| athemati |  | 6-8 |
| :---: | :---: | :---: |
| Select one mathematics sequence from: |  |  |
| MTH 137 <br> \& MTH 138 | Calculus I with Review and Calculus I with Review |  |
| MTH 148 \& MTH 149 | Introductory Calculus I and Introductory Calculus II |  |
| MTH 168 <br> \& MTH 169 | Analytic Geometry \& Calculus I and Analytic Geometry \& Calculus II |  |
| Natural Sciences ${ }^{1}$ |  | 17 |
| Major Requirements |  | 37 |
| PSY 101 | Introductory Psychology | 3 |
| PSY 201 | Sophomore Seminar: Psychology as a Science and Profession | 1 |
| PSY 216 | Elementary Statistics | 3 |
| PSY 217 | Research Methods | 3 |
| Select two courses from: |  | 6 |


| PSY 321 | Cognition |
| :--- | :--- |
| PSY 322 | Learning |
| PSY 323 | Psychology of Perception |
| PSY 422 | Biopsychology |

Select two courses from: 6

| PSY 341 | Social Psychology |
| :--- | :--- |
| PSY 351 | Child Psychology |
| PSY 361 | Personality |
| PSY 363 | Abnormal Psychology |

Select one course from: (Satisfies CAP Major Capstone) 3

| PSY 471 | History of Psychology |
| :--- | :--- |
| PSY 480 | Senior Seminar in Psychology |

$\begin{array}{lr}\text { PSY } 499 \text { Independent Research Capstone } & \\ \text { SSY courses }\left(300 / 400 \text { level) }{ }^{2}\right. & 12-24\end{array}$

## Breadth

| ASI 150 | Introduction to the University Experience | 1 |
| :--- | ---: | ---: |
| Social and Behavioral Science, excluding PSY courses (Includes CAP | 12 |  | Social Science)

Total Hours to total at least 120
1 Bio 151 and Bio 152 with accompanying labs are required. The remaining 9 hours may be fulfilled by courses in BIO, CHM, GEO, PHY, and CPS courses as well as by MTH courses beyond the departmental MTH requirement.
2
No more than a total of six hours of PSY 477, PSY 490, PSY 493, PSY 494 and/or PSY 497 may count toward the thirty-seven semester hours required in PSY for the major.

## Minor in Psychology (PSY)

Psychology

| PSY 101 | Introductory Psychology |
| :---: | :--- |
| Select one course from: | 3 |
| PSY 321 | Cognition |
| PSY 322 | Learning |
| PSY 323 | Psychology of Perception |
| PSY 422 | Biopsychology |
| Select one course from: | 3 |


| PSY 341 | Social Psychology |  |
| :---: | :--- | ---: |
| PSY 351 | Child Psychology |  |
| PSY 361 | Personality |  |
| PSY 363 | Abnormal Psychology | 9 |
| Select three PSY courses (300/400 level) |  |  |

First Year

| Fall | Hours Spring | Hours |
| :--- | :---: | ---: |
| ASI 150 | 1 PSY 216 | 3 |
| PSY 101 | 3 ENG 100 | 3,4 |
|  | (CAP |  |
|  | Humanities |  |
|  | Commons) |  |
| BIO 151 | 4 BIO 152 | 4 |
| \& 151L (CAP Natural Science w/lab) | \& 152L |  |
| MTH 116 or 148 (MTH 148 Satisfies CAP | $3-4$ MTH 148, | $3-4$ |
| Mathematics) | 149 or 169 |  |
| Language 101 | 4 Language | 4 |
|  | 141 |  |
|  | 15-16 | $17-19$ |
| Second Year |  |  |
| Fall | Hours Spring | Hours |


| Fall | Hours Spring | Hours |
| :---: | :---: | :---: |
| HST 103 (CAP Humanities Commons) | 3 PSY 201 | 1 |
| ENG 200 (CAP Writing Seminar) | $\begin{gathered} \text { 3-4 PSY } 341,351, \\ 361 \text {, or } 363 \end{gathered}$ | 3 |
| PSY 217 | 3 PHL 103 <br> (CAP <br> Humanities Commons) | 3 |
| Language 201 or contextual course | $\begin{aligned} & 3 \text { CMM } 100 \\ & \text { (CAP } \\ & \text { Communication) } \end{aligned}$ | 3 |
| REL 103 | 3 SSC 200 <br> (CAP Social Science) CAP Natural Science | 3 3 |

Third Year
Fall Hours Spring Hours

PSY 341, 351, 361, or 363
3 PSY 321, 322, 3
323, or 422
3 PSY at 300 or 3
400 level
3 CAP
Advanced
Philosophy/
Religious
Studies
3 CAP
Advanced
Historical
Studies

| CAP Faith Traditions | 3 Literature | 3 |
| :--- | :---: | ---: |
| 15 | 15 |  |


| Fourth Year |  |  |
| :---: | :---: | :---: |
| Fall | Hours Spring | Hours |
| PSY at 300 or 400 level | 3 PSY 471, 478, or 499 (Satisfies CAP Major Capstone) | 3 |
| PSY at 300 or 400 level | 3 PSY at 300 or 400 level | 3 |
| Social Science - 300/400 level not PSY | 3 CAP Inquiry | 3 |
| CAP Integrative | 3 CAP Diversity and Social Justice | 3 |
| CAP Practical Ethical Action, Advanced Philosophy/ Religious Studies | 3 Social <br> Science elective not PSY | 3 |
|  | 15 | 15 |

Total credit hours: 123-127

## Bachelor of Science, Psychology

| First Year |  |  |
| :---: | :---: | :---: |
| Fall | Hours Spring | Hours |
| ASI 150 | 1 MTH 149 | 3 |
| BIO 151 | 4 BIO 152 | 4 |
| \& 151L (CAP Natural Science w/lab) | \& 152L |  |
| MTH 148 or 168 (Satisfies CAP Mathematics) | 3-4 PSY 216 | 3 |
| ENG 100 (CAP Humanities Commons) | 3,4 REL 103 (CAP | 3 |
|  | Humanities |  |
|  | Commons) |  |
| HST 103 (CAP Humanities Commons) | 3 PHL 103 | 3 |
|  | (CAP |  |
|  | Humanities |  |
|  | Commons) |  |
| PSY 101 | 3 |  |
|  | 17-19 | 16 |
| Second Year |  |  |
| Fall | Hours Spring | Hours |
| PSY 201 | $\begin{aligned} & 1 \text { PSY 321, 322, } \\ & 323 \text {, or } 422 \end{aligned}$ | 3 |
| PSY 217 | $\begin{gathered} 3 \text { PSY } 341,351, \\ 361 \text {, or } 363 \end{gathered}$ | 3 |
| PSY 341, 351, 361, or 363 | $\begin{aligned} & 3 \text { SSC } 200 \\ & \text { (CAP Social } \\ & \text { Science) } \end{aligned}$ | 3 |
| ENG 200 (CAP Writing Seminar) | 3-4 Natural <br> Science elective | 3 |
| CMM 100 (CAP Communication) | 3 CAP Arts | 3 |
| CAP Natural Science | 3 |  |
|  | 16-17 | 15 |
| Third Year |  |  |
| Fall | Hours Spring | Hours |
| PSY 321, 322, 323, or 422 | 3 PSY 317 (or | 3 |
|  | PSY at 300 or |  |
|  | 400 level) |  |
| CAP Faith Traditions | 3 PSY at 300 or | 3 |
|  | 400 level |  |
| CAP Practical Ethical Action | 3 CAP Inquiry | 3 |
| Natural Science elective | 3 CAP | 3 |
|  | Advanced |  |
|  | Philosophy/ |  |
|  | Religious |  |
|  | Studies |  |


| Social Science - elective not PSY | 3 CAP | 3 |
| :---: | :---: | :---: |
|  |  |  |
|  | Historical |  |
|  | Studies |  |
|  | 15 | 15 |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| PSY 471, 480, or 499 (Satisfies CAP Major Capstone) | 3 PSY at 300 or 400 level | 3 |
| PSY at 300 or 400 level | $3 \text { CAP }$ <br> Integrative | 3 |
| CAP Advanced Philosophy/Religious Studies | 3 CAP Diversity and Social Justice | 3 |
| Social Science - elective not PSY | 3 Social <br> Science elective not PSY | 3 |
| General elective | 3 General elective | 3 |
|  | 15 | 15 |

Total credit hours: 124-127

## Courses

PSY 101. Introductory Psychology. 3 Hours
Study of human behavior including development, motivation, emotion, personality, learning, perception; general application of psychological principles to personal, social, and industrial problems. Students must participate in departmental research.
PSY 201. Sophomore Seminar: Psychology as a Science and Profession. 1 Hour
Introduction to the science and profession of psychology including the nature and breadth of psychological study and career exploration. Prerequisite(s): PSY 101. Co-rerequisite(s): Must be a Psychology major of sophomore status (based on credit hours earned).

## PSY 216. Elementary Statistics. 3 Hours

Basic probability and applied statistics: measures of central tendency and dispersion, sampling, estimation, hypothesis testing, tests between means, linear regression, correlation, and ANOVA. Prerequisite(s): MTH 102 or higher; PSY 101.

## PSY 217. Research Methods. 3 Hours

Basic concepts of scientific methods as applied to psychological problems. Experiments to familiarize students with application of scientific methodology to study of human psychological processes. Required of all psychology majors. Prerequisite(s): PSY 101, PSY 216.

## PSY 251. Human Growth \& Development. 3 Hours

Focuses on stages of human development from infancy through the aging adult. Emphasis is on various theoretical approaches and the development associated with each stage. Psychology majors may not take for credit toward major. Prerequisite(s): PSY 101.

## PSY 317. Advanced Research Methods. 3 Hours

Advanced application of statistical and research methods learned in PSY 216 and PSY 217 to the design, analysis, and write-up of an original empirical study. Research area will vary according to instructor expertise. Prerequisite(s): PSY 217.

## PSY 321. Cognition. 3 Hours

Information-processing approach to attention, perception, memory, imagery, and thought. Theoretical structures including neuron modeling of higher cognitive and experimental processes. Prerequisite(s): PSY 101.

PSY 322. Learning. 3 Hours
Foundations of the learning process. Classical and instrumental paradigms and variants of each considered in preparation for investigations of complex learning. Prerequisite(s): PSY 101.
PSY 323. Psychology of Perception. 3 Hours
Introduction to major theoretical and experimental work in perception, including visual, auditory, proprioceptive, and other sensory systems. Prerequisite(s): PSY 101.

## PSY 333. Psychological Tests \& Measurements. 3 Hours

Survey of major tests of intelligence, aptitude, interest, and personality presently used in clinics, schools, personnel offices, and research settings. Emphasis on evaluation and comparison, rationale of construction, ethical considerations. Prerequisite(s): (PSY 101, PSY 216) or equivalent.

## PSY 334. Industrial Psychology. 3 Hours

Introduction to modern efforts to improve human performance in industrial organizations and society; selection and placement of employees, morale, training, and incentives. Prerequisite(s): PSY 101.

PSY 341. Social Psychology. 3 Hours
Survey of major theoretical and experimental work in the field; attitudes, conformity, emotions, group dynamics, and topics related to diversity such as racism and sexism. Prerequisite(s): PSY 101.
PSY 344. Interpersonal Relationships. 3 Hours
Social psychological research in nonverbal behavior, social exchange, self-disclosure, and interpersonal attraction and how these are related to developing relationships. Prerequisite(s): PSY 101.

## PSY 351. Child Psychology. 3 Hours

Study of psychological processes from the developmental point of view; changes in perception, cognition, emotion, and social behavior from infancy to adolescence. Prerequisite(s): PSY 101.

PSY 353. The Psychology of Adult Development \& Aging. 3 Hours
Provides a general introduction to the multi-disciplinary field of adulthood and aging with a specific focus on aspects of interest to psychologists: cognitive, intellectual, personality, and biological changes across adult development. Prerequisite(s): PSY 101.

## PSY 355. Developmental Psychopathology. 3 Hours

Survey of developmental theory and research related to the psychopathology of infants, children, and adolescents. Focus is on etiology, identification, and intervention. Prerequisite(s): (PSY 101,
PSY 351) or permission of instructor.

## PSY 361. Personality. 3 Hours

Introduction to the study of personality through analysis of such major theories as those of Freud, Skinner, Maslow, and Rogers. The development of personality and the stability of personality characteristics over time. Review of clinical and experimental findings. Prerequisite(s): PSY 101.

## PSY 363. Abnormal Psychology. 3 Hours

Patterns of disordered behavior; social, psychological, and physiological factors; theoretical explanations of abnormal behavior. Prerequisite(s): PSY 101.

## PSY 364. Psychotherapy. 3 Hours

Survey of current types of psychotherapy. Emphasis on similarities and differences in underlying theories of behavioral change and associated techniques. Prerequisite(s): PSY 101.

PSY 366. Health Psychology. 3 Hours
Explores psychological research, theory, and techniques in healthrelated areas, such as health promotion, the identification of contributors to illness, illness prevention, stress and coping, stress management, changing health beliefs and behavior, pain and its management, and the management of chronic and terminal illnesses.

## PSY 368. Community Psychology. 3 Hours

The application of psychological principles to the understanding and prevention of prevalent community problems including teen pregnancy, school violence, mental illness, substance abuse, homelessness and poverty. Prerequisite(s): PSY 101.

## PSY 375. Psychology of the Arts. 3 Hours

Explores the psychological experiences associated with the creation and appreciation of music, art, and literature. Course content is presented in terms of the theories, methods, and research findings in the fields of perception, cognition, and development.

## PSY 390. Forensic Psychology. 3 Hours

Exploration of psychological research, theory, and techniques in the intersection of psychology and the law, such as police psychology, criminal investigation techniques, interrogations and false confessions, eyewitness identifications, risk assessments, issues of competency, trial consulting, and influencing public policy. Equipping students with this information and familiarizing them with their legal rights will contribute to their ability to protect themselves from injustice. They are also encouraged to work toward social justice for all citizens, particularly the most vulnerable in our communities. Prerequisite(s): SSC 200.

## PSY 410. Questionnaire Design. 3 Hours

Students will learn about critical issues in questionnaire design and use, the advantages/disadvantages of questionnaires, types of questionnaires, questionnaire development strategies, scale selection, and how to evaluate questionnaires. Students will develop, test and evaluate a questionnaire in a domain of interest to them. Depending on the size of the effort, students may work in teams.

## PSY 422. Biopsychology. 3 Hours

Neurophysiological analysis of attention, sensation, perception, emotion, motivation, and learning. Prerequisite(s): PSY 101.

## PSY 431. Interviewing \& Counseling. 3 Hours

Integrated approach to the theory, techniques, skills, and values of interviewing and counseling. Practice through written assignments, self study, classroom exercises, and role-playing. Prerequisite(s): PSY 101.

## PSY 435. Human Factors. 3 Hours

Students learn methods to improve the interface between humans and their environment. Human characteristics are studied to determine the best way to design the task, product, workstation, or other environmental features to accommodate the human. Students in the School of Engineering must have junior or senior status.

## PSY 443. Women, Gender, and Psychology. 3 Hours

Survey of a wide range of topics pertaining to women, and gender more broadly. Such topics include, but are not limited to gender role development, gender differences and similarities, sexual orientation, mental health, interpersonal relationships, and victimization. The format of this course is a combination of lectures, group activities, and out-ofclass experiential learning. This course fulfills the CAP Diversity and Social Justice Requirement and one of the requirements for both the Women's and Gender Studies Minor and Major. Prerequisite(s): SSC 200.

PSY 444. Environmental Psychology. 3 Hours
Study of the effects of the physical and social environment on human behaviors, attitudes, and affective responses. Prerequisite(s): (PSY 101, PSY 341) or permission of instructor.

## PSY 445. Technology, Environment \& Behavior. 3 Hours

Examines the cultural bases for the individual and societal choices which humans make about their use of technology. Technology is broadly defined to include human-machine systems.

PSY 450. Psychology for Ministry. 3 Hours
Human development and adjustment, interpersonal communication, and the psychology of religion. Prerequisite(s): Acceptance into the Lay Ministry Program or permission of instructor.

## PSY 451. Psychology of Religion. 3 Hours

Addresses the psychological study of the nature of religion and religious experience; explores the development of internalized beliefs, attitudes, and values and the effect they have on individual functioning. An introductory course in psychology is highly recommended. Prerequisite(s): Junior or senior standing.

## PSY 452. Cognitive Development in Children. 3 Hours

Major approaches to the study of cognitive development; attentional and mediational development in children's learning, memory, and problem solving; language development and Piaget's theory. Prerequisite(s): (PSY 101, PSY 351) or permission of instructor.

## PSY 461. Current Implications of Drug Dependency. 3 Hours

Survey of effects, symptoms, treatment, causalities, and myths associated with drug use and abuse. Emphasis on existing treatment methods and psychological implications of drug dependency. Prerequisite(s): PSY 101.

## PSY 462. Human Sexuality. 3 Hours

Psychological factors in human sexuality including developmental, biological, and social perspectives. Such topics as sexual orientation, gender identity and roles, sexual relationships, sexual dysfunction, power and violence, and commercialization.

## PSY 471. History of Psychology. 3 Hours

The evolution of psychology from its origins in philosophy, science, clinical, and applied settings. Emphasis on integrating these systems and schools of thought with modern psychology. Students will produce a scholarly work which will be presented publicly. Students will reflect on how the various schools of thought influence the purpose of their life, their proposed work and how they, in the profession of Psychology, might serve the community. Prerequisite(s): PSY 101; At least three of PSY 321, PSY 322, PSY 323, PSY 422, PSY 341, PSY 351, PSY 361, PSY 363 (the core areas of psychology); Seniors only.
PSY 477. Honors Thesis Project. 3 Hours
First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

PSY 478. Honors Thesis Project. 3 Hours
Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## PSY 480. Senior Seminar in Psychology. 3 Hours

Advanced exploration of the meaning of scholarship to the vocation of psychology. Students will engage in critical review of readings in psychology and develop a scholarly project consistent with discipline standards and suited to the professional goals of the student. Prerequisite(s): PSY 217.

## PSY 490. Internship in Psychology. 1-6 Hours

Supervised experience arranged on an individual basis in appropriate settings. For junior or senior psychology majors who have completed prescribed course work only. Consult internship director for details. May be repeated up to six semester hours. Grade Option Two only.

## PSY 493. Independent Study. 0-6 Hours

Problems of special interest investigated under faculty direction. Area and criteria for evaluation to be specified prior to registration. May be repeated up to six semester hours. Prerequisite(s): Permission of instructor.

## PSY 494. Readings in Psychology. 1-6 Hours

Directed reading in a specific area of interest, under faculty supervision. Topic and criteria for evaluation to be specified prior to registration. May be repeated up to six semester hours. Prerequisite(s): Permission of instructor.

## PSY 495. Special Topics in Psychology. 1-3 Hours

Topics of special interest to faculty and students; intensive critical evaluation of appropriate literature. Prerequisite(s): Permission of instructor.

## PSY 496. Capstone Special Topics in Psychology. 3 Hours

Topics of special interest to faculty and students; intensive critical evaluation of appropriate literature. Development and public presentation of a scholarly project. Reflection on the meaning of scholarship to the vocation of psychology. Permission of instructor. Must be a psychology major of senior status based on credit hours earned.
PSY 497. Service Learning Experience. 1 Hour
Supervised community research or service experience that complements a specific upper division course in Psychology. Repeatable up to three semester hours. Corequisite(s): A 300-400 level Psychology course.

## PSY 499. Independent Research Capstone. 3 Hours

Project and presentation of special interest investigated under faculty direction. Students will produce a scholarly work which will be presented publicly. Students will reflect on how psychological research will influence their professional life as a psychologist, the implications of that for their own life, and how they, in the profession of Psychology, serve the community. PSY 478H and PSY 499 cannot both be taken for credit. Prerequisite(s): PSY 216; PSY 217; At least three of PSY 321, PSY 322, PSY 323, PSY 422, PSY 341, PSY 351, PSY 361, PSY 363 (the core areas of psychology); Seniors only.

## Religious Studies

Major:

- Bachelor of Arts, Religious Studies (p. 272)

Minors:

- Religious Studies (p. 273)
- Religious Studies- Catechesis (p. 273)

The Department of Religious Studies sees itself as a community of scholars serving the University community and the local community by teaching, research, criticism, and action. The main concern of the department is an understanding and elucidation of the Judaeo-Christian religious experience as it is exemplified in the Roman Catholic tradition. This implies not only a deep investigation of the Roman Catholic position but also a dialogue with other Christian traditions and with other world religious.

Students majoring in religious studies ordinarily follow one of five tracks in the major:

- Students preparing for ministry in a Christian church (e.g., pastoral associates, youth ministry, parish religious educators) follow the "Ministry" track.
- Students preparing to teach religion in elementary or secondary schools follow the "Catholic Schools" track.
- Students preparing for graduate study in Christian theology, systematics, church history, ethics, etc., follow the "Graduate School Preparation" track.
- Students preparing for graduate study of religions other than Christianity and/or interested in world religions follow the "World Religions" track.
- Students wishing to study religion as a way of broadening their horizons or who are interested in religious studies as an undergraduate major follow the "General" track.

All religious studies majors must show basic practical communicative proficiency in one foreign language.

A minor in religious studies consists of 18 semester hours, which includes REL 103 or REL 198 or ASI 110. At least three semester hours are to be at the 400-level.

A minor in Catechesis consists of 19 semester hours, not including REL 103 or REL 198 or ASI 110.

## Faculty

Daniel Speed Thompson, Chairperson
Professors Emeriti: Anderson, Buby, Burns, Friedland, Hater, L'Heureux, Martin, Roberts, Thimmes
Professors: Barnes, Branick, Doyle, Groppe, Inglis (Philosophy),
Kallenberg, Miller, Portier, Trollinger (History), Zukowski
Associate Professors: Bennett, Bunta, Johnson, Johnston, Kozar, Moore,
Orji, Salih, Smith, Thompson, Yocum
Assistant Professors: Atlas, DeAnda, Henning
Lecturer: Ryan

## Bachelor of Arts, Religious Studies (REL) minimum 124 hours

[^6]| REL 103 | Introduction to Religious and Theological Studies |  |
| :---: | :---: | :---: |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| SSC 200 | Social Science Integrated |  |
| Arts |  | 3 |
| Natural Sciences ${ }^{4}$ |  | 7 |
| Crossing Boundaries |  |  |


| Faith Traditions |  |
| :--- | :--- |
| Practical Ethical Action |  |
| Inquiry | variable |
| Integrative | credit |

Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice 3

| Major Capstone | $0-3$ |
| :--- | :--- |

Completed with ASI 110 and ASI 120.
Or ENG 100A and ENG 100B, or ENG 200H, by placement.
Completed with ENG 200H or ASI 120.
Must include two different disciplines and accompanying lab.
U.S. History AP credit will not satisfy this requirement.

| Liberal Studies Curriculum |  |  |
| :---: | :---: | :---: |
| Creative and Performing Arts (May include CAP Arts) |  | 3 |
| L2 Proficiency (Proficiency in a language other than English) |  | 0-11 |
| Literature (May include CAP Components) |  | 3 |
| Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) |  | 3 |
| Natural Sciences (Satisfies CAP Natural Science) |  | 11 |
| Social Sciences (Includes CAP Social Science) |  | 12 |
| Major Requirements ${ }^{\text {1,2,3 }}$ |  | 36 |
| REL 103 or ASI 110 | Introduction to Religious and Theological Studies The Roots and Development of Western Culture in a Global Context |  |
| REL 490 | Capstone Seminar (Satisfies CAP Major Capstone) | 3 |
| Select one track from: |  |  |
| Ministry |  | 30 |
| REL 315 | The Gospels |  |
| REL 323 or REL 324 | History of Early Christianity History of Christianity II: Medieval |  |
| REL 360 | Christian Ethics |  |
| REL 437 | Significance of Jesus |  |
| REL 440 | The Church |  |
| REL 443 | The Sacraments |  |
| REL 485 | Lay Ecclesial Ministry: Vision and Practice |  |

Select one course in each: Old Testament, world religions, religion and culture

| Catholic Schools |  | 30 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { REL } 323 \\ & \text { or REL } 324 \end{aligned}$ | History of Early Christianity <br> History of Christianity II: Medieval |  |
| REL 327 <br> or REL 328 <br> or REL 329 | United States Religious Experience United States Catholic Experience African-American Religion |  |
| REL 360 | Christian Ethics |  |
| REL 383 or REL 487 | Philosophy of Religious Education Religious Education- Theory \& Practice |  |
| Select one cour religions, religi | rse in each: Old Testament, New Testament, world on and culture; two courses in systematic theology |  |
| Graduate School | Preparation | 30 |
| REL 323 | History of Early Christianity |  |
| REL 324 | History of Christianity II: Medieval |  |
| REL 437 | Significance of Jesus |  |
| REL 440 <br> or REL 443 | The Church The Sacraments |  |

Select one course in each: Old Testament, New Testament, ethics, world religions, religion and culture, systematic theology
World Religions 30
REL 323 History of Early Christianity
or REL 324 History of Christianity II: Medieval
Select three courses from:
REL 304 Hinduism
REL 305 Eastern Orthodoxy
REL 306 Buddhism
REL 307 Judaism
REL 308 Islam
Select one course in each: Old Testament, New Testament, ethics, systematic theology, religion and culture
REL elective

## General

Select one course in each: Old Testament, New Testament, world religions, church history, systematic theology, ethics, religion and culture
REL elective
Breadth
ASI 150 Introduction to the University Experience 1

Total Hours to total at least 124
1 Includes CAP Components.
${ }^{2}$ Six semester hours in addition to REL 490 must be at the 400 -level.
3 REL courses are not applicable to CAP Advanced Studies.

## Minor in Religious Studies (REL)

| Religious Studies |  |
| :--- | :--- |
| Select eighteen REL semester hours $^{1}$ | 18 |
| Total Hours | 18 |

1 At least three semester hours at the 400 level.

## Minor in Religious Studies-Catechesis (CTE)

The Minor in Religious Studies - Catechesis (CTE) offers students an excellent opportunity to prepare to teach religion (catechesis) in Catholic schools, or parish ministry today. The minor is grounded in the official principles of catechesis required by the United States Conference of Catholic Bishops. The minor incorporates the basic courses required by most dioceses across the country for achieving diocesan certification in content, methodology, and praxis experiences. It is open to all students who desire to engage in a religion teaching ministry either on a full-time professional or a volunteer basis following graduation.

## Religious Studies - Catechesis ${ }^{1}$

REL $328 \quad$ United States Catholic Experience ${ }^{2} 3$
Forum for Young Catechetical Leaders 4

| REL 281 | Forum for Catechetical Leaders I |
| :--- | :--- |
| REL 282 | Forum for Catechetical Leaders II |
| REL 283 | Forum for Catechetical Leaders III |
| REL 284 | Forum for Catechetical Leaders IV |

Select one Liturgy course from: 3

| REL 356 | The Christian Tradition of Prayer |
| :--- | :--- |
| REL 383 | Philosophy of Religious Education |
| REL 443 | The Sacraments |
| REL 446 | Christian Liturgy |
| REL 488 | Spirituality \& Religious Education |

Select one Scripture course from: 3

REL 310 The Pentateuch
REL 311 The Prophets
REL 315 The Gospels
REL 318 Studies in Paul
Select one Morality or Ethics course from: 3

| REL 360 | Christian Ethics |  |
| :---: | :--- | :--- |
| REL 363 | Faith \& Justice |  |
| REL 364 | Current Moral Issues |  |
| Select one Ecclesiology or Church History course from: |  |  |
| REL 323 | History of Early Christianity |  |
| REL 324 | History of Christianity II: Medieval |  |
| REL 440 | The Church |  |
| Total Hours |  | 19 |

1 These hours are in addition to REL 103 (or REL 198 or ASI 110), which is usually taken in the student's first year.
2 Or equivalent.

First Year
Fall
ASI 150

ASI 110 (CAP Humanities Commons)

CMM 100 (CAP Communication)

| Hours Spring | Hours |
| :--- | ---: |
| 1 ASI 120 (CAP | 8 |
| Humanities |  |
| Commons) |  |
| 7 MTH (CAP |  |
| Mathematics) | 3 |
| 3 Language |  |
| 141 | 4 |
| 4 | 15 |


| Second Year |  |  |
| :---: | :---: | :---: |
| Fall | Hours Spring | Hours |
| REL Major Elective | 3 REL Major elective | 3 |
| SSC 200 (CAP Social Science) | 3 REL Major elective | 3 |
| Literature | 3 CAP Arts | 3 |
| INSS (CAP Natural Science w/lab) | 4 INSS (CAP <br> Natural Science w/ lab) | 4 |
| Language 201 or contextual course | 3 Social <br> Science intro level | 3 |
|  | 16 | 16 |
| Third Year |  |  |
| Fall | Hours Spring | Hours |
| REL Major (CAP Faith Trad) | 3 REL Major | 3 |
| REL Major | 3 REL Major | 3 |
| Creative \& Performing Arts | 3 CAP <br> Advanced <br> Historical Studies | 3 |
| INSS Natural Science | 3 CAP <br> Advanced Philosophy | 3 |
| Social Science - elective | 3 Social <br> Science 300/400 level | 3 |
|  | 15 | 15 |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| REL Major | 3 REL 490 <br> (Satisfies CAP Major Capstone) | 3 |
| REL Major | 3 REL Major | 3 |
| CAP Advanced Philosophy | 3 CAP Inquiry | 3 |
| CAP Integrative | 3 CAP Diversity and Social Justice | 3 |
| CAP Practical Ethical Action | 3 General elective | 3 |
| General elective | 2 |  |
|  | 17 | 15 |

Total credit hours: 124

## Courses

REL 103. Introduction to Religious and Theological Studies. 3 Hours This course introduces students to two academic disciplines: the study of religions as historical and embodied realities, and theology as faith seeking understanding. By learning about these two disciplines, students will gain a critical self-awareness of the ways in which the modern context shapes their engagement with religion. The course emphasizes learning how to read Scripture and other primary religious sources, and to learning how the Catholic intellectual tradition addresses the question of God, the meaning of human life, and the significance of human diversity.
REL 198. Religioius Studies Scholars' Seminar. 3 Hours
Study and seminar discussion of major types of religions in history and some of their practices, values, beliefs, historical development, and theological reflection, including Catholic tradition; review of major theories on the nature, origin, and function of religion in human life. Open by permission only to first-year students in the Berry Scholars Program.

## REL 207. Faith Traditions: Judaism. 3 Hours

Introduction to Judaism: religious thought, practice, mysticism, and history, from Biblical times to the present day. Prerequisite(s): REL 103 or ASI 110 or equivalent; CMM 100.
REL 208. Faith Traditions: Islamic Religious Traditions. 3 Hours
Historical and topical survey of the origins and development of Islam. Prerequisite(s): ASI 110 or REL 103 or equivalent.

## REL 210. Introduction to Scripture. 1 Hour

An introductory overview of Christian scripture that is foundational for Old and New Testament online courses.

## REL 211. Introduction to the Old Testament. 1 Hour

Study of contemporary Old Testament studies to learn how to read a biblical text in terms of its literary qualities and cultural influences on interpretations.

REL 212. Introduction to the New Testament. 1 Hour
Introduction to the New Testament with a focus on the text's cultural contexts, literary composition, theological themes, and pastoral applications.
REL 213. The New Testament and Related Ancient Literature. 3 Hours Introduction to historical and literary study of the New Testament with emphasis on the Gospels, the Pauline letters, and the Book of Revelation with attention given also when pertinent to early Christian Apocrypha and Jewish intertestamental literature. An analysis of early Christian faith commitments in their diversity from each other and in their diversity from those of major Christian churches today. Prerequisite(s): REL 103 or ASI 110 or equivalent.
REL 214. Magic, Medicine, or Miracles: Disability in the Ancient World, the Bible, and Today. 3 Hours
Exploration of ancient attitudes towards sickness and healing including the practices observed in Greek and Roman medical authors, ancient inscriptions, the Bible, and other ancient Jewish and Early Christian texts. Study of these ancient perspectives in relation to contemporary attitudes toward disability. Prerequisite(s): (ASI 110 or ASI 120 or equivalent) or (REL 103 or REL 198).
REL 227. Faith Traditions: Beliefs in Dialogue. 3 Hours
Exploration of selected beliefs of diverse religious systems and the ways such beliefs impact social justice. Prerequisite(s): REL 103 or ASI 110 or equivalent; CMM 100.

## REL 228. Faith Traditions: Historical Encounters. 3 Hours

Comparative historical exploration of changes and continuities in distinct faith traditions including the impact on social justice. Prerequisite(s): (REL 103 or ASI 110 or equivalent); CMM 100.

## REL 244. Faith Traditions: Celebrating and Living the Eucharist. 3 Hours

 Exploration of the history, theology, ritual, and spirituality of the Eucharist (the Mass), in dialogue with other Christian traditions, and with attention to its impact on daily Christian living. Prerequisite(s): REL 103 or ASI 110 or equivalent; CMM 100.
## REL 256. Faith Traditions: Prayer. 3 Hours

Exploration of the rationale for and practice of prayer in diverse faith traditions, with an emphasis on the connection between prayer and social justice. Prerequisite(s): REL 103 or ASI 110 or equivalent; CMM 100.

## REL 260A. Catholic Social Teaching I. 1 Hour

The first of two courses that provide background on Catholic social teaching as articulated in the Catechism of the Catholic Church and Episcopal documents.

## REL 260B. Catholc Social Teaching II. 1 Hour

The second of two courses that provide background on Catholic social teaching as articulated in the Catechism of the Catholic Church and Episcopal documents. Prerequisite(s): REL 260A.

## REL 261. Faith Traditions: Human Rights. 3 Hours

Exploration of diverse faith traditions in dialogue on theory of and activism for human rights. Compares and contrasts elements of the international human rights movement with major sources from other philosophical and religious traditions, with attention to historical development and to spiritual practices for enduring, challenging, and rebuilding after suffering and injustice. Prerequisite(s): REL 103 or ASI 110 or equivalent; CMM 100.

REL 266. Faith Traditions: Moral Reasoning. 3 Hours
Exploration of diverse moral perspectives regarding social justice within religious traditions, emphasizing the cultivation of skills for dialogue about those differences. Prerequisite(s): REL 103 or ASI 110 or equivalent; CMM 100.

## REL 270. Popular Culture, American Religions. 3 Hours

Exploration of major themes, issues and practices of modern American popular culture as historical context for religious peoples, communities and expressions in America. Examines the role of popular culture in the production, circulation and reception of religious identities in American cultural history. Prerequisite(s): REL 103 or ASI 110 or equivalent.
REL 277. Faith Traditions: Women and Gender. 3 Hours
Examination of gender and women in at least two major faith traditions. Survey of both traditional and contemporary thought, practice, and attitudes toward women and gender. Prerequisite(s): REL 103 or ASI 110 or equivalent; CMM 100.

## REL 281. Forum for Catechetical Leaders I. 1 Hour

Study of key themes of The National Directory for Catechesis regarding 'The Tasks of Catechesis and Faith Formation'. Themes include (a) Introduction to the Catechetical Ministry of the Church, (b) The Vocation of the Catechist, (c) Faith Formation, and (d) Fundamentals for Designing Catechetical Plans. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 282. Forum for Catechetical Leaders II. 1 Hour

Study of key themes of The National Directory for Catechesis regarding 'The Art of Communicating Faith: Scripture and Tradition'. Themes include (a) Effective Catechesis, (b) Four Pillars of Our Catholic Faith, (c) Integrating Scripture in Catechetical Ministry, and (d) Integrating Liturgy and Liturgical Experiences in Catechetical Ministry. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 283. Forum for Catechetical Leaders III. 1 Hour

Study of key themes of The National Directory for Catechesis regarding: 'Liturgy, Popular Devotions, Literature and the Religious Imagination. Themes include (a) Storytelling, (b) Popular Devotions and Faith Experiences, (c) Role of Mary in Catechesis, and (d) Diverse Religious Traditions and the Quest for God. Prerequisite(s):REL 103 or ASI 110 or equivalent.

## REL 284. Forum for Catechetical Leaders IV. 1 Hour

Study of key themes of The National Directory for Catechesis regarding: 'Discipleship (Catholic Moral Life), Catholic Social Teachings and Catechetical Planning'. Themes include (a) Developing a Pastoral Catechetical Plan, (b) Call and Challenge of Discipleship, (c) Catholic Social Teachings, and (d) Communications Technology and Catechesis. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 300. Rel of the East. 3 Hours

Course description is currently unavailable.

## REL 304. Hinduism. 3 Hours

Study of the world's oldest living religion. Examines the historical development of major Hindu teachings, texts, practices and paths from ancient times to present, including forms of Hinduism taking root in the West today. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 305. Eastern Orthodoxy. 3 Hours

Exploration of the history and theology of the Eastern Orthodox Church, from the Apostles to Byzantium to Russia and the United States. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 306. Buddhism. 3 Hours

Exploration of the 2,500-year-old Buddhist tradition - the life of its founder, development of its teachings, rituals, and meditation techniques. Survey of the spread of Buddhism to the West in the twentieth century. Parallels and contrasts with the Christian tradition. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 307. Judaism. 3 Hours

Basic introduction to Judaism: its history, its faith, its worship. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 308. Islam. 3 Hours

Exploration of the Islamic religious traditions: the life of Islam's founder, the development of its teaching and ritual, its spread from North Africa into Europe, Asia, Oceania, its influence on culture and its contemporary resurgence. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 309. Afro-Latin Religions. 3 Hours

The study of Voudou, Santeria and other religions which arose when the religious traditions of West Africa were transplanted to the Americas and the Caribbean where practitioners encountered Christianity. These religions' historical and contemporary forms as well as issues of syncretism and church-state relations are considered. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 310. The Pentateuch. 3 Hours

Examination of the first five books of the Hebrew Bible, focusing on the historical and literary traditions that relate primeval beginnings, ancestral history, the exodus, wilderness wanderings, and the legal codes. A reconstruction of the history of the text. Prerequisite(s): REL 103 or ASI 110 or equivalent and any Crossing Boundaries-Faith Traditions course.

## REL 311. The Prophets. 3 Hours

Study of the prophetic texts of the Old Testament as reformulations of ancient religious traditions to meet new historical situations and study of the relevance of the prophets to contemporary life. Requires REL 103 and any Crossing Boundaries: Faith Traditions course as prerequisites. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 312. The Psalms \& the Wisdeom Literature. 3 Hours

Critical examination of the biblical books of Psalms, Proverbs, Job, Ecclesiastes, and Ben Sira and of related literature within the historical context in which they arose. The contemporary relevance of this literature. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 315. The Gospels. 3 Hours

Introduction to the cultural heritage of the early Christian movement and its place in both the Jewish and Greco-Roman world. Traditional historical-critical study of the texts of gospels in the Christian tradition that will serve as a background for contemporary narrative and scholarly approaches. Pre-requisite: any Crossing Boundaries: Faith Traditions course. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 316. New Testament Theologies. 3 Hours

Survey of New Testament writings with a focus on the religious ideas specific to each; special attention to authors' christology, eschatology, and soteriology; exploration of relevance of the New Testament message to Christian faith today. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 318. Studies in Paul. 3 Hours

Detailed examination of the letters of Paul, stressing the historical circumstances affecting their composition as well as the main religious ideas of Paul that govern their content. Requires REL103 and any Crossing Boundaries: Faith Traditions course as prerequisites. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 319. The Book of Revelation. 3 Hours

Detailed critical analysis of various biblical apocalyptic texts as found in Judaism and early Christianity. Focus on the Book of Revelation against the background of other biblical and intertestamental apocalyptic texts. Prerequisite(s):REL 103 or ASI 110 or equivalent.
REL 322. Latino/Latina Religious Experiences. 3 Hours
Exploration of the diversity of Latino/Latina religious experiences and communities in North America, with an emphasis on Roman Catholic experiences. The course prerequisites are REL 103 or equivalent, and any Crossing Boundaries: Faith Traditions course. Prerequisite(s): (ASI 110 or REL 103 or equivalent); any Crossing Boundaries: Faith Traditions course.

## REL 323. History of Early Christianity. 3 Hours

Study of the historical variables involved in Christianity's rise from an obscure first century religious movement to a respected world religion. Examination of different movements within the History of Christianity from the first century C.E. to the fourth century C.E., comparing the continuities and discontinuities between the people who have called themselves Christian in different times and places. Prerequisite(s): REL 103 or ASI 110 or equivalent, and any Crossing Boundaries: Faith Traditions course.

## REL 324. History of Christianity II. 3 Hours

Study of important events, movements, ideas, and people in the development of Christianity from 1100 to the present, including the separation of the Churches of the East and West, rise of the mendicant orders, Scholasticism, key themes and figures of the Reformation, Vatican I, Modernist crisis, ecumenism, and Vatican II. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 326. Protestant Christianity. 3 Hours

Survey of the development of Protestant thought from the Reformation. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 327. United States Religious Experience. 3 Hours

Study of a variety of religious traditions in their engagement with and influence within the U.S. social and cultural context including the effects of pluralism, religious liberty, secularization, and consumer capitalism. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 328. United States Catholic Experience. 3 Hours

Survey of the growth and development of Catholic Christianity in the U.S.; its interaction with America, its culture, and its people. Pre-requisite: Any Crossing Boundaries: Faith Traditions course. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 329. African-American Religion. 3 Hours

Study of the role religious beliefs, institutions, leaders and commitments have played in the lives of people of African descent in the United States of America from the 16th century to the present. Pre-requisite: any Crossing Boundaries: Faith Traditions course. Prerequisite(s): REL 103 or ASI 110 or equivalent.

REL 330. Faith of Immigrants. 3 Hours
This course will examine the faith traditions of all those people who came to the united States, either voluntarily or involuntarily, and the changes that they made upon those who were there before them, the changes in their own faith, and the effect upon other faith traditions. Prerequisites: REL 103 or ASI 110 or equivalent.

## REL 343. Theology of Humanity, Sexuality, and Marriage. 3 Hours

 Integrative study of theological anthropology (what it means to be human in relation to God) with historical and gender studies questions about gender, sexuality, and marriage. Topics include: scriptural and historical examinations of gender; what it means to be made in the image of God; sexuality, including LGBT+ and celibacy; states of singleness and vowed religious life; and historical/theological accounts of Christian marriage. Pre-requisite: any Crossing Boundaries: Faith Traditions course. Prerequisite(s): REL 103, ASI 110, or equivalent.
## REL 344. Christian Marriage. 3 Hours

Analysis of the sanctifying dignity of Christian marriage as a sacrament and commitment to share in the divine creative plan. Prerequisite(s):
(ASI 110, 120 or equivalent) or (REL 103 or REL 198).
REL 352. Understanding Sacred Music \& Worship in the Local Church. 3 Hours
Study of the important relationship between music and worship in the life of the individual and in the life of the corporate Christian church with an emphasis on developments in recent decades. Studies the distinction and interconnectedness of the local church (congregation) and the Institutional Church. An historical overview of music and worship with Biblical foundations is provided. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 356. The Christian Tradition of Prayer. 3 Hours

Study of several types and forms of Christian prayer from various periods in Church history. The meaning of the act of faith expressed in prayer and its relationship to belief. Prerequisite(s):REL 103 or ASI 110 or equivalent.

## REL 357. Peacebuilding. 3 Hours

Exploration of theories and practice of peacebuilding, including cultivation of skills in addressing violence on multiple levels.
Pre-requisite: any Crossing Boundaries: Faith Traditions course. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 358. Liberation Theologies. 3 Hours

Study of the theology of liberation and its specific expression among theologians of the Third World, particularly Latin America. Prerequisite(s): REL 103 or ASI 110 or equivalent; any Crossing Boundaries: Faith Traditions course. Jr. standing or higher.

REL 359. The Road to Hell: The Apocalypse in Classical and Contemporary Forms. 3 Hours
Study of depictions of the apocalypse in classical and contemporary literature, film and speech with special attention to the rhetorical dimensions of those messages.
REL 360. Christian Ethics. 3 Hours
Introduction to the reflection upon Christian morality; discussion of various approaches in Christian ethics, the elements of ethical judgments, and some specific ethical issues. Prerequisite(s):REL 103 or ASI 110 or equivalent.

REL 361. Christian Ethics and Meaningful Marketing. 3 Hours Interdisciplinary survey of basic marketing principles alongside Catholic social teaching and major ideas in Christian ethics. Students reflect on historical and contemporary questions about marketing and Christian ethics, and analyze marketing strategies with respect to diversity (i.e. gender, class, race,) and social justice. Prerequisite(s): REL 103 or ASI 110 or equivalent; sophomore level.
REL 362. Christian Family Values \& Television. 3 Hours
Comparative study of the criteria and rationale for family life in various Christian pronouncements with present values and practices in society as reflected in and promoted by current television programming. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 363. Faith \& Justice. 3 Hours

Exploration of the theory and practices of Catholic social tradition in the contemporary context, with particular attention to questions of economic justice. Pre-requisite: any Crossing Boundaries: Faith Traditions course. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 364. Current Moral Issues. 3 Hours

An examination of one or more issues (individual and/or social) in contemporary reflection on Christian moral life. May be repeated when topic changes. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 365. Christian Ethics \& the Environment. 3 Hours

Christian ethic of relationality and responsibility. Explores various approaches and related values found in society; elements of ethical judgments; and specific ethical issues resulting from ecofeminist, technological, and ecological awareness. Prerequisite(s): REL 103 or ASI 110 or equivalent.
REL 366. The Holocaust: Theological \& Religious Responses. 3 Hours Examination of the religious and theological literature of the Holocaust, focusing especially on Jewish and Christian responses. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 367. Christian Ethics \& Health Care Issues. 3 Hours

Study in virtue ethics related to contemporary practices of health care. Community engaged learning is a required component of the course. Prerequisite(s): ASI 110 or REL 103 or equivalent; Junior standing or higher; Any Crossing Boundaries: Faith Traditions course.

## REL 368. Christian Ethics \& the Business World. 3 Hours

Study in Christian ethics related to contemporary practices of business. Course prerequisites: (ASI 110 or REL 103 or equivalent); any Crossing Boundaries; Faith Traditions Course. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 369. Christian Ethics and Engineering. 3 Hours

Study in theological virtue ethics using engineering design as the paradigm for practical reasoning in both technology and everyday life. Intended for junior- or senior-level standing engineering students. Is in keeping with ABET standards which require ethics instruction for students enrolled in accredited engineering programs. Practice in formulating proper ethical arguments using standard notions of (claim, reasons, warrants and backing) culminating in the construction of proper ethical argument over some contemporary engineering artifact, process or issue. Prerequisite: any Crossing Boundaries: Faith Traditions course. Prerequisite(s): REL 103 or ASI 110 or equivalent; junior standing.

## REL 372. Religion \& Film. 3 Hours

Study of issues common to narrative films and religious thought; the power of various film techniques, dominant models in religious and film reflection, the similar roles imagination plays in film and religious thought. Prerequisite(s): REL 103 or ASI 110 or equivalent.

REL 373. Religion \& Literature. 3 Hours
Joint study of literature and religion, seeking the sacred in the secular, discussing the doctrines of humans and of God in major modern writings, especially those of current collegiate interest. Prerequisite(s): REL 103 or ASI 110 or equivalent.

REL 374. Visual and Material Cultures of Religion. 3 Hours
Study of the multiple intersections between religions and visual and material cultures including art, architecture, material expressions and visual practices. Prerequisite: Any Crossing Boundaries: Faith Traditions course. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 375. Religion \& Science. 3 Hours

Survey of the ways science has affected religion on specific doctrines, methods of knowing what is true, and general world views; study of religious response to these. Pre-requisite: any Crossing Boundaries: Faith Traditions course. Prerequisite(s): REL 103 or ASI 110 or equivalent.

REL 376. Theology \& the Social Sciences. 3 Hours
Exploration of developments in Christian theology that have paralleled or responded to the rise of the human sciences, including history, anthropology, sociology, and psychology, concerning such topics as the origin and nature of religion, belief in God, religious community, and modern secularity. Pre-requisite: any Crossing Boundaries Faith Traditions course. Prerequisite(s): REL 103 or ASI 110 or equivalent.

REL 377. The Inner Journey in Myth, Bible \& Literature. 3 Hours Study of stories of heroic figures in the Bible and in other literature as patterns of personal and spiritual development. Throughout, efforts to relate the material to the needs of contemporary persons. Prerequisite(s):REL 103 or ASI 110 or equivalent.

## REL 378. Religion, Society and Global Cinema. 3 Hours

Interdisciplinary survey of the post-World War II film movement of Italian neorealism and its influence in global cinema. Major films, directors and critical debates involving neorealism will be examined. Topics include cinema and society, religion and movies, and culture and Catholicism. (REL 103 or ASI 110 or equivalent) and any Crossing Boundaries: Faith Traditions course. Prerequisite(s): REL 103 or ASI 110.

## REL 379. Sustaining Art and Faith. 3 Hours

Exploration of the interrelated nature of faith traditions and the art connected to those traditions in terms of how they inform and sustain each other. Pre-requisite: a Crossing Boundaries: Faith Traditions course. Prerequisite(s): REL 103 or AS1 110.

## REL 383. Philosophy of Religious Education. 3 Hours

An attempt to construct a philosophy of religious education, various contemporary theoretical models, dimensions of teaching religion in a pluralistic society, the polarization generated. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 399. Readings in Religious Studies. 1-3 Hours

Directed readings in a specific area of interest under the supervision of a staff member. May be taken more than once. By permission only. Prerequisite(s):REL 103 or ASI 110 or equivalent.

## REL 408. Islam in the Modern World. 3 Hours

Historical and topical survey of the development of Islamic thought in the last two centuries. Prerequisite: any Crossing Boundaries: Faith Traditions course. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 425. Augustine. 3 Hours

The life and work of Augustine of Hippo (354-430), a major theologian of Western Christianity. His influence is strongly felt in both Protestant and Catholic traditions in areas of sexual ethics, church-state relations, Trinitarian and sacramental theology. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 429. Modern Catholicism. 3 Hours

An examination of Modern Catholicism based on a close study of the context, process, decisions, implementation, and challenges of Vatican II in the Roman Catholic Church. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 437. Significance of Jesus. 3 Hours

Emphasis on the identity of Jesus and on the significance that his ministry, death, and resurrection have for the salvation of humankind. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 440. The Church. 3 Hours

A Catholic and ecumenical study of the meaning of the Church which explores key documents of the Second Vatican Council, the meaning of vocation, and the mission of the Church in the world of today. Prerequisite(s): (REL 103 or ASI 110 or equivalent) and any Crossing Boundaries: Faith Traditions course.

REL 441. Theology of Mary. 3 Hours
Using the sources of Scripture and Sacred Tradition, and with particular reference to the documents of the Second Vatican Council (1962-65), this course is dedicated to theological reflection on the person of Mary, the Mother of God, in the context of the other central truths of the Catholic faith. The course requires two prerequisites: Either (ASI 110, 120 or equivalent) or (REL 103 or REL 198), and any Crossing Boundaries: Faith Traditions course. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 442. God \& Atheism. 3 Hours

Study of some recent contributions made by theology, philosophy, psychology, and the humanities to the current discussion of God's existence, nature, and relationship to humanity. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 443. The Sacraments. 3 Hours

Study of the meaning of sacramentality. The sacraments in the context of Christ as the sacrament of the human encounter with God and in the context of the Church as the sacrament of Christ. Personal, ecclesial, and ethical dimensions of sacraments. Theological and Ritual Studies methodologies. Pre-requisite: any Crossing Boundaries: Faith Traditions course. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 444. God in Christian Tradition. 3 Hours

Review of theologies of God in Christian tradition, from biblical through contemporary sources, especially as these theologies have affected overall Catholic thought and spirituality. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 446. Christian Liturgy. 3 Hours

Study of the basic principles of liturgy, the development of some of the basic forms of liturgy, and applications of the principles within current rites. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 447. Selected Catholic Doctrines. 3-4 Hours

Detailed study of several important current theological questions primarily from a Catholic systematic and historical perspective. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 449. Aquinas. 3 Hours

Theology of Aquinas including: Trinity, human nature, providence, grace, virtue, Christ, and sacraments. Some attention given to historical context and contemporary interpretation, but the main focus will be reading and understanding the Summa. Prerequisite(s):REL 103 or ASI 110 or equivalent.

REL 457. Living as Marianist Student Communities. 3 Hours
Study of Marianist founders and charism through the disciplines of history and theology as well as interdisciplinary fields such as Marianist studies, peace and justice studies, and human rights studies; only for those living in a Marianist Student Community. Prerequisite(s): REL 103 or ASI 110 or equivalent; any Crossing Boundaries: Faith Traditions Course; Permission only.

## REL 471. Women \& Religion. 3 Hours

Examination of the impact of the women's movement on Judaism, Christianity, and other major world religions. Survey of traditional religious attitudes toward women. Relevance of feminist approaches to scripture, ethics, spirituality, and ministry in understanding contemporary global issues. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 472. Ecology \& Religion. 3 Hours

Examination of the relationship between religion and ecology; bridges the contributions of traditional theological inquiry and modern scientific insights and offers an enlarged vision of ecological concerns. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 474. Women \& the Global Church. 3 Hours

An exploration of the intersection between faith communities, traditional and non-traditional, and particular cultures in the lives of contemporary women. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 475. Theology of Inculturation. 3 Hours

Interdisciplinary examination of the Christian understanding of the relationship between the local and universal Church, with an emphasis on the incarnation of Christian faith in local cultures; examination of inculturation in the context of the shift of worldwide Christianity to the Global South (Latin America, Africa, Asia). Pre-requisite: any Crossing Boundaries: Faith Traditions course. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## REL 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## REL 484. Practicum. 3 Hours

Supervised in-service experience in an area of religious education chosen by the student. By permission only. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 485. Lay Ministry. 3 Hours

Critical examination of lay ministry and its theological basis, in light of Vatican II and recent trends in the world and Church. Special topics: family ministry, ministry in the marketplace, leadership, evangelization, catechesis, women, social justice. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 487. Religious Education- Theory \& Practice. 3 Hours

Study of theory and practice of religious education for those who will be teaching religion in the school and parish. Various models and methods. Emphasis on process and religious education as developmental. Prerequisite(s): REL 103 or ASI 110 or equivalent.

## REL 488. Spirituality \& Religious Education. 3 Hours

Exploration of impact of liturgy and spirituality on contemporary models of religious education; study of interrelationship between faith experience and religious content; basic principles for developing practical programs. Prerequisite(s):REL 103 or ASI 110 or equivalent.

## REL 490. Capstone Seminar. 3 Hours

Integrative academic experience focused on student-produced research and scholarship in various fields of religious/theological studies.
Required of all REL majors, open to REL minors. Must have 24 credits including one 400 level REL course.
REL 492. Special Topics. 1-3 Hours
Concentrated study of issues and subjects pertinent to religion. May be repeated when topic changes. Prerequisite(s):REL 103 or ASI 110 or equivalent.

# Sociology, Anthropology, and Social Work 

Major:

- Bachelor of Arts, Sociology (p. 279)

Minors:

- Sociology (p. 280)
- Anthropology (p. 280)
- Social Work (p. 280)

Sociology is the scientific study of all levels of society, that is, people in groups. The discipline's unique insight is that people are who they are largely because of their social experiences and interactions with others. "The sociological imagination" enables us to understand the relationship between our individual experiences and the broader social context, from the local to the global. Beyond various aspects of social behavior, sociologists study the nature and causes of social problems such as poverty, racism, family instability, and crime. Sociologists strive to apply their understanding in ever more constructive ways for the improvement of society and the common good.
Students intending to major or minor in sociology should consult with the department chairperson to plan their program of courses. The requirements for majoring in sociology are stated in the outline below. Criminal justice studies is also one of the majors listed in this department. View CJS program requirements. (http:// catalog.udayton.edu/undergraduate/collegeofartsandsciences/ programsofstudy/criminaljusticestudies)

The minors in sociology, anthropology, and social work consist of 15 semester hours. The minor in criminal justice studies consists of 18 semester hours.

## Faculty

Leslie Picca, Chairperson
Professors: Curran, Davis-Berman, Donnelly, Hurley, Majka, Picca
Associate Professors: Becker, Dasgupta, Holcomb, Jipson, Leming
Assistant Professors: Hallett, Sayre, Small, Thompson-Miller
Lecturers: Litka, Rhubart

## Bachelor of Arts, Sociology (SOC) minimum 124 hours



Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice 3
Major Capstone 0-3

Completed with ASI 110 and ASI 120.
Or ENG 100A and ENG 100B, or ENG 200H, by placement.
Completed with ENG 200H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5
5 U.S. History AP credit will not satisfy this requirement.

| Liberal Studies Curriculum |  |  |
| :---: | :---: | :---: |
| Creative and Performing Arts (May include CAP Arts) |  | 3 |
| L2 Proficiency (Proficiency in a language other than English) |  | 0-11 |
| Literature (May include CAP Components) |  | 3 |
| Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) |  | 3 |
| Natural Sciences (Satisfies CAP Natural Science) |  | 1 |
| Social Sciences, excluding SOC courses (Includes CAP Social Science) |  | 12 |
| Major Requirements ${ }^{1}$ |  | 37 |
| $\begin{aligned} & \text { SOC } 101 \\ & \text { or SOC } 204 \end{aligned}$ | Principles of Sociology <br> Modern Social Problems | 3 |
| SOC 208 | Social Research Methods | 3 |
| SOC 308 | Data Analysis | 3 |
| SOC 351 | Urban Sociology | 3 |
| SOC 408 | Senior Project Design | 1 |


| SOC 388 | Social Theory | 3 |
| :--- | :--- | :--- |
| SOC 409 | Senior Project Capstone (Satisfies CAP Major <br> Capstone) | 3 |
|  |  |  |

Breadth
ASI $150 \quad$ Introduction to the University Experience 1

Total Hours to total at least 124

1 May include CAP Components.
2 A total of no more than six semester hours of field experience or internship from SOC 495, SOC 497, SWK 401, SWK 497, ANT 449, or ANT 497 may count toward the required thirty-seven semester hours for a sociology major. Up to nine hours total may be taken in anthropology and/or social work for a sociology major. These hours may also be used toward the completion of a minor.

## Minor in Anthropology (ANT)

Anthropology is the study of people at all times and places. It emphasizes understanding total cultural systems. A minor in anthropology consists of 15 semester hours. Students intending to minor in anthropology should consult with the department chairperson to plan their selection of courses.

| Anthropology |  |
| :--- | ---: | ---: |
| ANT $150 \quad$ Cultural Anthropology | 3 |
| Select four ANT courses (300/400 level) | 12 |
| Total Hours | 15 |

## Minor in Social Work (SWK)

Social work is the profession sanctioned by society to provide social services. It is the professional activity of helping individuals, groups, or communities to enhance or restore their capacity for social functioning. The profession also engages in activities aimed at facilitating societal conditions that enhance and/or restore social functioning.

A minor in social work consists of 15 semester hours.
Social Work ${ }^{1}$

| Select fifteen SWK semester hours ${ }^{2}$ | 15 |
| :--- | :--- |
| Total Hours | 15 |

1 No more than six semester hours of field experience credit can be accepted toward the minor. The field experience course requires students to take or have taken SWK 201, Social Work Practice.
2 At least twelve semester hours at the 300/400 level.

## Minor in Sociology (SOC)

| Sociology | 15 |
| :--- | ---: |
| Select fifteen SOC semester hours ${ }^{1}$ | 15 |

## Bachelor of Arts, Sociology

| First Year |  |  |
| :---: | :---: | :---: |
| Fall | Hours Spring | Hours |
| ASI 150 | 1 SOC elective |  |
| SOC 101 | 3,4 ENG 100 <br> (CAP <br> Humanities <br> Commons) | 3,4 |
| HST 103 (CAP Humanities Commons) | 3 MTH 114 or 207 (Satisfies CAP Mathematics) |  |
| PHL 103 (CAP Humanities Commons) | 3 REL 103 (CAP <br> Humanities Commons) |  |
| CMM 100 (CAP Communication) | 3 SCI 210 <br> \& 210L (CAP <br> Natural <br> Science w/ <br> lab) |  |

SCI 190
4
\& 190L (CAP Natural Science w/lab)

|  | $17-18$ | $16-17$ |
| :--- | :---: | ---: |
| Second Year | Hours Spring |  |
| Fall | 3 SOC 308 | Hours |
| SOC 351 | 3 SOC Elective | 3 |
| SOC 208 | 3 ENG 200 | 3 |
| SSC 200 (CAP Social Science) | (CAP Writing | $3-4$ |
|  | Seminar) |  |
| ANT 150 (CAP Inquiry, Diversity and Social Justice; | 3 Language |  |
| Social Science - intro level) | 141 | 4 |
| Language 101 | 4 SCI 230 |  |
|  | (INSS Natural | 3 |
|  | Science) |  |


| Third Year |  |  |
| :---: | :---: | :---: |
| Fall | Hours Spring | Hours |
| SOC 388 | 3 SOC elective | 3 |
| SOC elective | 3 SOC elective | 3 |
| SOC elective | 3 POL 201, 202, or 214 (Social Scienceelective) | 3 |
| CAP Arts / Creative and Performing | 3 CAP Faith Traditions | 3 |
| Language 201 or contextual course | 3 General elective | 3 |
|  | 15 | 15 |


| Fall | Hours Spring | Hours |
| :--- | :---: | ---: |
| SOC 408 | 1 SOC 409 | 3 |
| POL or ANT at 300 or 400 level | 3 CAP | 3 |
|  | Advanced |  |
|  | Philosophy/ |  |
|  | Religious |  |
|  | Studies |  |
| CAP Practical Ethical Action | 3 CAP | 3 |
|  | Advanced | Historical |
| CAP Integrative | Studies |  |
| CAP Advanced Philosophy/Religious Studies | 3 Literature | 3 |
|  | 3 General | 3 |
|  | elective | 3 |

General elective
3

## 16

Total credit hours: 126-129

## Anthropology Courses

ANT 150. Cultural Anthropology. 3 Hours
Overview of the basic principles of cultural anthropology. Survey of human adaptation to and transformation of the environment by means of culture. Comparison of ways of life among peoples of the world to better understand human behavior, particularly in relation to colonial histories and current global forces. Required for anthropology minors.

## ANT 300. Evolution of People \& Culture. 3 Hours

Survey of human biological and cultural evolution from prehuman ancestors to settled city-states. Consideration of contemporary peoples at various levels of social complexity.

## ANT 306. Culture \& Power. 3 Hours

Exploration of how culture and power are intertwined in the process of transformation of cultural beliefs and practices around the world. Focus on the ways in which anthropologists have studied modern state formation, and the attendant cultural politics, in local, regional, national, and global contexts. Sophomore standing or higher.

## ANT 310. Culture \& Personality. 3 Hours

Survey of studies investigating the relationship between cultural environment and the individual. Material drawn from both literate and nonliterate societies.

## ANT 315. Language \& Culture. 3 Hours

Students examine the relationship between language, thought, and behavior centering on human interaction and social justice in a variety of cultural contexts. Prerequisite(s): SSC 200.

## ANT 320. Anthropology of Childhoods. 3 Hours

Survey of anthropology research on issues related to children and childhood. Cross-cultural comparison of changing conceptions and varied experiences of the developmental stage known singularly as 'childhood', with a special emphasis on children as social agents and childhoods as lived experiences. Sophomore standing or higher.
ANT 325. Anthropology of Human Rights. 3 Hours
An overview of anthropological approaches to human rights, weighing human rights universals against situations of cultural particularity. Sophomore standing or higher.

## ANT 335. Urban Anthropology. 3 Hours

Survey of anthropology research on urban issues. Considers how cities arose and how urban people make a living, organize, and think. Considers urban futures.

## ANT 336. Topics in Medical Anthropology. 3 Hours

Medical Anthropology examines afflictions, illness narratives and the politics of therapeutics in a cross-cultural perspective. It specifically focuses on the biosocial approach that examines the interaction of biology, social environment, and medicine using the ethnographic method. Course may be repeated as topics change. Sophomore standing or higher.

ANT 340. Place, Culture, and Social Justice. 3 Hours
Exploration of the central role of space and place as it both reflects and constructs cultural identities, social inequalities, and relations of power. Themes of particular interest in the course may include inscription of history and memory in landscapes, shifting territories under late capitalism and economic restructuring, the policing of boundaries of national and local belonging, and the importance of geography in maintaining racial difference and inequality. The course is designed as an intensive service-learning class that will engage students in hands-on experiences. Sophomore standing or higher.

## ANT 350. Anthropology of Tourism. 3 Hours

Students examine the study of tourism as an academic discipline, including its historical development, current sub-fields and theoretical approaches, and the future of this industry in the globalized world.

## ANT 352. Cultures of Latin America. 3 Hours

Survey of Latin American culture from an anthropological perspective, ranging from the pre-Colombian era through colonial and up to the contemporary period. Themes include race, gender, colonialism, economics, politics, kinship, religion, tourism, immigration, food, and popular culture. Sophomore standing or higher.

## ANT 356. Cultures of Africa. 3 Hours

Examination of Africa through the lens of anthropology. Exploration of late colonial and postcolonial eras, with a focus on gender, kinship, ethnicity, politics, religion, and prospects for the future. Consideration of the production of knowledge about and dominant representations of Africa. Sophomore standing or higher.

## ANT 360. Making of Modern South Asia. 3 Hours

Historical survey and an anthropological exploration of the major political, economic, social, ecological, and cultural developments that have contributed to the making of region we now know as 'South Asia:' India, Pakistan, Bangladesh, Nepal, Sri Lanka, Bhutan, Maldives and Afghanistan. Prerequisite(s): HST 103 or equivalent.

## ANT 368. Immigration \& Immigrants. 3 Hours

Perspectives on immigration and ethnicity. Studies of social and economic adaptation of new immigrants and the second generation in communities, cities, and societies. Ethnic change, conflict, and contemporary national and international issues, with an emphasis on human rights. Sophomore standing or higher.

## ANT 392. Special Topics in Anthropology. 1-6 Hours

Intensive examination of current thematic, theoretical, or methodological issues from the viewpoint of anthropology. May be repeated as topics change. Sophomore standing or higher.

## ANT 449. Anthropological Field Work. 3 Hours

Students learn anthropological methods of data collection (participant observations, interviews, questionnaires, focus groups, archives, scholarly research) and analysis. Prerequisite(s): ENG 200, SSC 200.

## ANT 477. Honors Thesis. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## ANT 478. Honors Thesis. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## ANT 497. Service Learning Experience. 1 Hour

Supervised community research or service experience that complements a specific upper division course in Anthropology. Repeatable up to three semester hours. Prerequisite(s): Permission of instructor. Corequisite(s): A 300-400 level Anthropology course.
ANT 498. Independent Study. 1-6 Hours
Research problems or readings of special interest investigated under the guidance of an anthropology staff member. Prerequisite(s): Permission of department chairperson.

## Social Work Courses

## SWK 201. Social Work Practice \& Profession. 3 Hours

Study of the historical and theoretical underpinnings of the social work profession. Study of social work practice theory and technique.

## SWK 303. Community Practice \& Research. 3 Hours

Study of the design and implementation of community research, including needs assessment and program evaluation in the social service system. (Same as SOC 309.) Prerequisite(s): SOC 101 or SOC 204; permission of instructor.

## SWK 305. Social Services in the Health Field. 3 Hours

The role of social services in health care facilities and governmental health programs. U.S. health care policies and programs; methods of social work intervention in medical settings.
SWK 307. Mental Health Services. 3 Hours
Study of historical perspectives, deinstitutionalization, the community mental health movement, inpatient care, and innovative approaches. Policy and practice implications are examined. This course is normally taken in the Junior or Senior year.

## SWK 310. Law \& Human Services. 3 Hours

Orientation to the legal system as it affects the provision of human services and the profession; social legislation and court decisions as they affect child welfare, public assistance, mental health, housing, and probation and parole services.

## SWK 325. Child Abuse. 3 Hours

Comprehensive study of child abuse: its history, scope, causal factors, indicators for detection, treatment resources and modalities, and community responsibility.

## SWK 327. Parenting: Social Welfare Role. 3 Hours

Comprehensive study of historical and contemporary perspectives on parenting, future of parenting (assessing trends and choices in family structure and function), cross-cultural comparisons, policy and legal aspects of parenting, societal influences on parenting.

## SWK 330. Perspectives on Aging. 3 Hours

An introduction to the field of gerontology. Focus on the major physical, psychological, and social dynamics of aging. Selected issues will be highlighted. This course is normally taken in the Junior or Senior year(Same as SOC 330.).

## SWK 331. Death, Dying and Suicide. 3 Hours

Applied study of the phenomena of death and dying. The role and responsibility of the professional in working with the dying and their survivors. Study of suicide in contemporary U.S. society. This course is normally taken in the Junior or Senior year.

## SWK 335. Social Work \& Environmental Justice. 3 Hours

Study of the impact of environmental degradation upon individuals and communities and the role of social work in advocating for environmental justice. Topics include health, disasters, environmental degradation, human rights, and advocacy.

## SWK 360. International Social Work. 3 Hours

Study of the role of social workers in international contexts. Topics include migration, globalization, development, conflict, and the ethical implications of social workers practicing internationally.

## SWK 370. Social Welfare Policy. 3 Hours

Study of U.S. social welfare policy and its impact upon populations of interest to social workers and other helping professionals. Topics include history of social welfare policy, ideologies that inform social welfare policy, attention to the gendered nature of social policy, international social welfare policy, contemporary policy debates and the role of social workers and allies in the policy arena.

## SWK 392. Special Topics. 1-3 Hours

Exploration of special topics related to the field of human services. Assessment of appropriate literature and research. May be repeated as topics change.

## SWK 401. Community Field Experience. 5 Hours

Supervised field experience for students working in a micro or macro practice setting. Concurrent seminar includes intensive basic communication and interviewing skill development. Students spend 150 hours in the agency. Prerequisite(s): SWK 201; permission of instructor.

## SWK 465. Independent Study. 1-3 Hours

Individual research, study, and readings on specific topics and/or projects of importance to social work. Under individual faculty direction. Prerequisite(s): Permission of instructor.

## SWK 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with department chairpersons. Prerequisite(s): Approval of University Honors Program.

## SWK 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## SWK 497. Service Learning Experience. 1 Hour

Supervised community research or service experience that complements a specific upper division course in Social Work. Repeatable up to three semester hours. Prerequisite(s): Permission of instructor. Corequisite(s): A 300-400 level Social Work course.

## Sociology Courses

SOC 101. Principles of Sociology. 3,4 Hours
Study of social groups, social processes, and society; the individual's relationship to society, social structure, social inequality, ethnic minorities, cities and human populations, and social institutions such as the family, education, religion, and government.

## SOC 204. Modern Social Problems. 3 Hours

Course to familiarize nonsociology majors with contemporary problems in society; historical development, current status, and analysis of problems, using modern social theories. Content may vary from section to section.

## SOC 208. Social Research Methods. 3 Hours

Study of the logic of research design, data-gathering strategies, types of measurement, and sampling techniques. Both inductive and deductive approaches. Participation in research projects. Prerequisite(s): SOC 101 or SOC 204.

## SOC 305. Criminological Theory. 3 Hours

Study of the major theories of crime; consideration of the implications of theory for the criminal justice system. Prerequisite(s): SOC 101 or SOC 204.

## SOC 308. Data Analysis. 3 Hours

The analysis and interpretation of both quantitative and qualitative social science data. Prerequisite(s): SOC 208. Corequisite(s): SOC 308L.

## SOC 308L. Data Analysis Laboratory. 1 Hour

Training in appropriate computer programs and computer analysis of social science data. Prerequisite(s): SOC 208. Corequisite(s): SOC 308.
SOC 309. Community Practice \& Research. 3 Hours
Study of the design and implementation of community research, including needs assessment and program evaluation in the social service system. (Same as SWK 303.) Sophomore standing or higher.
SOC 310. Perspectives on Education and Social Justice. 3 Hours This Inquiry course gives students a set of lenses to critically evaluate contemporary issues around schools and schooling from a social justice perspective. The course focuses on educational and social scientific research methodologies used for investigating educational inequalities.
SOC 321. The Sociology of Work \& Occupations. 3 Hours
Survey of the major features of work and occupations in industrial society. The meaning of work, occupational choice and recruitment, occupational socialization, career patterns, and occupational rewards. Unemployment, underemployment, sex-typing, automation and alienation.

## SOC 322. Sex Roles \& Society. 3 Hours

Research findings and major analytical approaches to study social and cultural influences on the development of personal sexual identity and relationships between men and women. Major social issues concerning human sexuality.

## SOC 323. Juvenile Justice. 3 Hours

The environmental and internal factors that influence or determine delinquent behavior; roles of individual juvenile offenders, parents or guardians, school, church, police, business community, community agencies, and the juvenile justice and correctional system in preventing and treating delinquent behavior. Prerequisite(s): Sophomore standing or higher.

## SOC 325. Deviant Behavior. 3 Hours

Description of various types of deviant behavior; for example, mental illness, alcoholism, drug addiction, the professional criminal. Study of explanations for the consequences and the role of deviant behavior in modern society. Sophomore standing or higher.

SOC 326. Law \& Society. 3 Hours
Study of the legal system and practices from a sociological point of view; the historical origin and role of the law in society, issues relating to the law as an instrument of social control and/or social change; analysis of the legal profession.

## SOC 327. Criminology. 3 Hours

Social and cultural nature, origin, and development of law; criminal behavior; crime control. The influence of society in the creation and organization of legal and crime control systems. Biological, psychological, and sociological factors leading to criminal behavior. Sophomore standing or higher.

## SOC 328. Racial \& Ethnic Relations. 3 Hours

Study of the historical and contemporary experiences of racial and ethnic groups in the United States and globally. Examines how racial and ethnic relations function in the political, social, legal, and economic systems, and how this impacts privilege, oppression, and resistance.

## SOC 330. Perspectives on Aging. 3 Hours

An introduction to the field of gerontology. Focus on the major physical, psychological, and social dynamics of aging. Selected issues will be highlighted. (Same as SWK 330.).

## SOC 331. Marriages \& Families. 3 Hours

The course focuses on patterns of family formation and contemporary trends in family life. Topics covered include gender, sexuality, dating, mate selection, singlehood, marriage, reproduction, work and families, divorce, remarriage, and families in later life. Sophomore standing or higher.

## SOC 332. Gender and Society. 3 Hours

Overview of the ways that sociologists study and understand gender. Course includes a foundation in gender theory as well as investigation of empirical topics such as media, education, work, health, crime, and sexuality. Course is intersectional in approach, examining the ways that gender intersects with other identity categories, such as race, class, age, and sexuality.

## SOC 333. Sociology of Sexualities. 3 Hours

Examination of theoretical, ethical, and conceptual issues, empirical research and social policies germane to the sociological study of human sexualities. Topics include: sexual identity and orientation; sexuality throughout the life-course; sexual assault and coercive sexuality; social control of sexuality; social locations (race, class, and gender) and sexuality; and the relationship between sexuality and the socio-political process. Prerequisite(s): Sophomore standing or higher.

## SOC 334. Religion \& Society. 3 Hours

Definitions of religion and its role in society. Traditional and nontraditional expressions of religious life from the viewpoint of society. Varieties of religious experience and the interrelations between religious phenomena and other social institutions and societal behavior. Sophomore standing or higher.

## SOC 336. Organizations in Modern Society. 3 Hours

Analysis of the dynamics of organizations in modern industrial society. Organizational social psychology, organizational structure and process, and organization-community relations. Sophomore standing or higher.

## SOC 337. Political Sociology. 3 Hours

Study of political power. Political influence by economic elites, impact of bureaucracies, competing ideologies, alienation and nonvoting, and social movements as challenges to power structures. Sophomore standing or higher.

## SOC 339. Social Inequality. 3 Hours

Study of the historical and contemporary experiences of groups in society in terms of social inequality. Examines social structures and how they contribute to social hierarchy and inequality. The students will examine the wealthy, middle class, and the poor in society. Emphasis on the processes that divide people into unequal groups based on wealth, income, status, and power. The effects of social inequality on an individuals' life chances will be examined in this course.

## SOC 340. Social Psychology in Society. 3 Hours

Survey of the basic principles, concepts, theories, and methods of social psychology from the sociological perspective. Sophomore standing or higher.

## SOC 341. Self \& Society. 3 Hours

Study of the relationship between self and others. Socialization, self conceptions, deviant behavior, social influence, and social control.

## SOC 342. Collective Behavior. 3 Hours

Study of social protest, crowds, social movements, revolution, fads, fashion, public opinion processes, propaganda, and political and social responses to these phenomena. Sophomore standing or higher.
SOC 343. Mass Communication in Modern Society. 3 Hours
Social-psychological analysis of the structure and processes of mass communication related to advertising, patterns of social behavior, social change, propaganda, censorship, media control, and social institutions.

## SOC 344. Interaction Processes. 3 Hours

Study of the interaction processes of social life. Bargaining and negotiation, cooperation, social influence, solidarity, competition, and conflict. Prerequisite(s): SOC 101 or SOC 204.
SOC 345. Sociology of Extremism. 3 Hours
Study of the social understanding and social construction of identity, otherness, difference, and extremism in such cases as the development of white racial extremism in the United States. Sophomore standing or higher.

## SOC 348. Crime, Film \& Society. 3 Hours

This course will examine the portrayal of crime and justice in feature length films and how these films influence how our society views issues related to crime. The primary focus will be on the American criminal justice system (law enforcement, courts, and corrections) and the broader topic of justice. Sophomore standing or higher.

## SOC 350. Art and Social Practice. 3 Hours

Exploration of varying modes of collaborative art production, for both artists and non-art students, towards the end of understanding and organizing for effective social change and/or inquiry within studio and community settings. Students organize, produce and exhibit an interdisciplinary group project developed utilizing a sociological lens in an offcampus or social media space.

## SOC 351. Urban Sociology. 3 Hours

The study of the development of urban life from ancient times to the present, with an emphasis on contemporary urban population characteristics, social-economic-political structure, and problems. Prerequisite(s): SOC 101 or SOC 204.

## SOC 352. Community. 3 Hours

Study of the interaction of groups and individuals related by common situations, problems and intentions; creation, maintenance, eclipse, and restoration of close social ties in urban neighborhoods, small towns, and groups with similar interests and lifestyles.

## SOC 353. Internet Community. 3 Hours

The relationship between information and communications technologies, particularly the Internet, in contemporary society is examined. Topics will range from differential access to cultural production with an emphasis on the intersections of online and offline communities. Prerequisite(s): Sophomore status.

## SOC 354. Perspective on Childhood. 3 Hours

No description available.

## SOC 355. Families \& the Economy. 3 Hours

The relationship between families and their socio-economic environment. Consideration of public issues including family policy and government programs to assist families. Sophomore standing or higher.

## SOC 360. Sport and Bodies. 3 Hours

Critical examination of the historical and contemporary ways in which the human body is altered/modified, displayed/portrayed, valued/ devalued, and included/excluded in terms of gender, race, social class, and ability status within sports. This course will examine how sport and bodies function in the political, social, and economic systems of the U.S. and globally. Using the perspectives of health and sport sciences and sociology, this course examines sport and bodies from macro and micro perspectives.

## SOC 368. Immigration \& Immigrants. 3 Hours

Perspectives on immigration and ethnicity. Studies of social and economic adaptation of new immigrants and the second generation in communities, cities, and societies. Ethnic change, conflict, and contemporary national and international issues, with an emphasis on human rights. (Same as ANT 368.) Prerequisite(s): (SOC 101 or SOC 204) or ANT 150.

## SOC 371. Sociology of Human Rights. 3 Hours

Study of the sociological theories and research about human rights violations in the United States as well as globally. The course examines economic, cultural, social, health, and political rights. Human Rights are examined as gendered, racialized, and sexualized.

## SOC 384. Food Justice. 3 Hours

Diversity, social inequality and social justice are integral aspects of the fields of health science, sociology, and humanities. These issues particular to food are relevant in thinking about the challenges that people in Dayton and around the globe face. Through the combined analysis of at least two academic units, students will learn how to perform descriptive and normative analysis, as well as how to focus on pragmatic opportunities to address and ameliorate food injustice. Prerequisite(s): Sophomore-status.

## SOC 388. Social Theory. 3 Hours

Consideration of the works of classical and modern theorists and major trends in historical and contemporary social thought. Prerequisite(s): SOC 101 or SOC 204.

## SOC 392. Selected Topics in Sociology. 1-6 Hours

Examination of a current topic of general interest in sociology. Majors and nonmajors may enroll. Consult composite for topics. May be repeated as topic changes. Sophomore standing or higher.

## SOC 394. Popular Culture. 3 Hours

Introduction to an understanding of popular culture and the entertainment industry, culture trends, popular entertainers and performers and what they reveal about society. This course examines the nature of musical choice, television, radio, Internet, genres and styles, distribution, performance, and the social construction of popular culture. Sophomore standing or higher.

SOC 398. Social Science Scholars' Seminar. 3 Hours
Study and seminar discussion of selected sociological writings and the analysis, interpretation and criticism of these works. Open only to students in the Berry Scholars Program. Prerequisite(s): ENG 198; HST 198.

## SOC 408. Senior Project Design. 1 Hour

Preparation for sociology capstone course with a focus on a workable research topic, literature review, and research methods design. Required for Sociology majors. Prerequisite(s): SOC 308, SOC 388.

## SOC 409. Senior Project Capstone. 3 Hours

Capstone experience for sociology majors consisting of a seminar on research and writing in sociology, an empirical research project, and a written and oral presentation of the research. Students will reflect on how sociological research will influence their professional and personal activities and how they will serve their communities. Prerequisite(s): SOC 408.

## SOC 410. Victimology. 3 Hours

The study of victimization including the relationships between victims and offenders, the interactions of victims and the criminal justice system and other social groups and institutions. Prerequisite(s): SOC 101 or SOC 204; 12 hours of course work in the social sciences.

SOC 426. Leadership in Building Communities. 3 Hours Investigation of the processes by which urban neighborhoods develop themselves from the inside out. Students cultivate their own interdisciplinary appreciation of urban communities through extensive interaction with one neighborhood's visioning process. Topics include asset-based community development, social capital, citizenship, adaptive leadership, and community building strategies and tools. Same as POL 426. Prerequisite(s): Junior standing.

## SOC 432. Structure of Privilege. 3 Hours

Study of the theoretical and conceptual issues, empirical research, and social policies germane to the sociological analysis of privilege. Topics include whiteness, men and masculinities, class-privilege, heterosexuality and heterosexism, and intersectionality. Sophomore standing or higher.

## SOC 435. Sociology of Globalization. 3 Hours

Sociological analysis of modern economic institutions, with an emphasis on classical themes. Topics include capitalism, industrialism and social consequences of contemporary economic trends. Empirical research will be required. Sophomore standing or higher.

## SOC 437. Marx \& Sociology. 3 Hours

Study of Marx's writings on topics relevant to the social sciences. Comparison of contemporary Marxian scholarship in such areas as social inequality, political structures, urban change, ideology and consciousness, and models for the future. Prerequisite(s): SOC 101 or SOC 204; junior or senior standing.

SOC 438. Urban Poverty. 3 Hours
Study of the social factors that contribute to poverty in cities.
Consideration of the social effects of government and other programs to alleviate poverty. Sophomore standing or higher.

## SOC 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

SOC 478. Honors Thesis Project. 3 Hours
Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## SOC 492. Special Topics in Sociology. 1-6 Hours

Intensive examination of current theoretical or methodological issues; faculty-advised research project or library work. Consult composite for topics. May be repeated as topic changes. Prerequisite(s): SOC 101 or SOC 204; permission of instructor.
SOC 495. Sociology Internship. 1-6 Hours
Supervised work experience related to course work in sociology in appropriate government, social service, and private organizations. May be repeated to a maximum of six semester hours. Prerequisite(s): Permission of department chairperson.

SOC 497. Service Learning Experience. 1 Hour
Supervised community research or service experience that complements a specific upper division course in Sociology. Repeatable up to three semester hours. Prerequisite(s): Permission of instructor. Corequisite(s): A 300-400 level Sociology course.
SOC 498. Independent Study. 1-6 Hours
Research or special readings on problems of interest to the student under the guidance of sociology staff member. Prerequisite(s): Permission of department chairperson.

## Sustainability Studies Program

The Sustainability Studies Program (SSP) is a multidisciplinary effort to encourage students to explore complex societal sustainability issues that do not fit easily into one traditional academic discipline. The genesis of this program lies in the realization that a scientific and technical knowledge of environmental, ecological, and energy system challenges will not be sufficient to develop viable answers. Many disciplines at the University make contributions to these issues, ranging from ethical, spiritual, and artistic, to economic, political, and sociological approaches. Students will take interdisciplinary courses and will participate in interdisciplinary research.

Interested students should notify the program director.

## Sustainability Studies Program Advisory Committee

Rebecca Potter (English), Program Director
Beagle (Chemistry), Bednarek (History), Bohrer (Fitz Center), Brecha (Physics), Cuy Castellanos (Dietetics), Hallinan (Mechanical Engineering), Holcomb (Sociology), Jablonski (Marianist Environmental Education Center and Religious Studies), Jennings (Art and Design), King (Rivers Institute), McEwan (Biology), Pautz (Political Science), Schoenenberger (Hanley Sustainability Institute and Geology), Wu (Geology)

## Minor in Sustainability, Energy, and the Environment (SEE)

Sustainability, Energy and the Environment ${ }^{1}$
SEE 250 Introduction to Sustainability, Energy \& the Environment


| PHL 321 | Environmental Ethics |
| :--- | :--- |
| PHL 334 | Philosophy \& Ecology |
| POL 371 | Environmental Policy |
| REL 365 | Christian Ethics \& the Environment |
| REL 472 | Ecology \& Religion |
| SWK 335 | Social Work \& Environmental Justice |
| VAR 350 | Art and Social Practice |
| Total Hours |  |

1 Students who wish to minor in Sustainability, Energy and the Environment should contact the coordinator of the Sustainability, Energy and the Environment minor.
Students with a major not otherwise requiring a biology course must complete either SEE 301 (with its prerequisite) or BIO 359 or BIO 395.
3
Additional courses may be approved by SEE coordinator.

## Courses

## SEE 250. Introduction to Sustainability, Energy \& the Environment. 3

 HoursA multidisciplinary introduction to Sustainability, Energy and the Environment (SEE) and to the SEE minor. Emphasis on learning how to view complex issues from different disciplinary points of view, developing reading and critical thinking skills about current issues in sustainability, gaining an awareness of different ethical positions and how these influence the quest for solutions, and learning how scientific and sociopolitical processes work to investigate and address sustainability issues.

## SEE 301. Global Change \& Earth Systems. 3 Hours

Multidisciplinary introduction to the science of the earth system. Focus is on the interrelatedness of geological, biological, chemical and physical processes, and on methods used to understand both the past natural history and potential future scenarios for change in the earth system.

## SEE 303. Constructions of Place. 3 Hours

Multidisciplinary, arts-based course that explores the complex connections between our sense of place and the physical and environmental conditions that influence landscapes and communities.

## SEE 320. Cities \& Energy. 3 Hours

Interdisciplinary examination of the influence of energy on the urban environment since the Industrial Revolution, and how this relationship has affected every aspect of city life from infrastructure to culture (literature and film, in particular). Emphasis on the relationship between the development and design of cities and their impact on various forms of difference (e.g., race, class, and gender, among others), as well as the prospects for the future of cities and energy systems. Prerequisite(s): ENG 100, HST 103, or ASI 110.
SEE 390. Special Topics in Sustainability, Energy and the Environment.

## 1-3 Hours

Examination of a specific problem or topic relating to sustainability, energy and the environment at the regional, national, or global scale including particular topics relating to global sustainability policy and sustainable development goals, human rights and climate change and access to modern energy systems. Students will analyze the topic from multiple perspectives possibly including artistic, technical, scientific, social, economic, ethical, and faith-based. Students will apply interdisciplinary knowledge to characterize systems, resources, and stakeholders relevant to the particular problem or topic and discuss solutions to establish more resilient and sustainable systems. Prerequisite(s): SEE 250.

SEE 401. Sustainability Research I. 3 Hours
Interdisciplinary exploration of the issues of sustainability. The scientific, moral, spiritual, social, political, historical, ethical and economic dimensions of sustainability will be explored. Exploration of the foundations of ethical theory and their application to environmental issues. Students will pursue a research project with the primary focus on sustainability on campus. Prerequisite(s): PHL 103 or ASI 112 or ASI 120; completion of General Education Natural Science or CAP Natural Science Requirements: junior or senior standing.

## SEE 402. Sustainability Research II. 3 Hours

An interdisciplinary exploration of the issues of sustainability as they affect the Dayton community. Course will also explore political philosophy and the ethical foundations of public policy. Students will choose an in-depth community-based research project. Prerequisite(s): PHL 103 or ASI 112 or ASI 120; completion of General Education Natural Science or CAP Natural Science Requirements; junior or senior standing.

SEE 477. Sustainability, Energy \& Environment Honors Thesis Project. 3 Hours
First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with department chairpersons. Prerequisite(s): Approval of University Honors Program.
SEE 478. Sustainability, Energy \& Environment Honors Thesis Project. 3 Hours
Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.
SEE 490. Experiential Study in Sustainability, Energy and the Environment. 1-3 Hours
Experiential study of a topic in Sustainability, Energy and the Environment. Students will study a topic of their choosing in consultation with instructor or faculty advisor. Topics will be problem-driven and focused on developing sustainable solutions at the local, national, or global scale. Prerequisite(s): SEE 250.

## Theatre

Major:

- Bachelor of Arts, Theatre, Dance and Performance Technology (p. 287)

Minor:

- Theatre, Dance and Performance Technology (p. 289)

University of Dayton's Theatre, Dance, and Performance Technology Program provides a liberal arts tradition, creating performance with purpose through interdisciplinary discovery. We engage talent in the service of community, leading through the arts to problem-solve.

The theatre is where we discover who we are, affirm our values, aspire to be better, and seek solutions. It's where we play "what if?" in the face
of "who cares?" It's where we engage in collaborative, creative inquiry that reminds us what it is to be human, to be flawed, to be transformed. The theatre is the site of embodied democracy, where entertainment entertains emergent ideas - because we all have stories to tell.

The University's program provides the option of four theoretical and practical concentrations: acting, performance, technology, dance, and applied theatre - all informed by a Marianist tradition of community engagement and social justice. The minor is 15 credits and the Department of Communication also offers a concentration in theatre. With co-curricular, interdisciplinary, and experiential learning at the heart of the curriculum, performers and technicians learn by doing, serving and creating. They develop their character, find their light and lead.

## Faculty

Joseph M. Valenzano, III, Chairperson, Department of Communication Michelle Hayford, Program Director
Professor Emeritus: Anderson, Gilvary
Associate Professor: Hayford
Assistant Professor: Dunlevy
Lecturers: Evans, Jones, Welland, Yorke

## Bachelor of Arts, Theatre, Dance and Performance Technology (TDP) minimum 124 hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |  |
| :---: | :---: | :---: |
| REL 103 | Introduction to Religious and Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| SSC 200 | Social Science Integrated |  |
| Arts |  | 3 |
| Natural Sciences ${ }^{4}$ |  | 7 |
| Crossing Boundaries |  |  |


| Faith Traditions |  |
| :--- | :--- |
| Practical Ethical Action |  |
| Inquiry | variable |
| Integrative | credit |

Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice3
$\begin{array}{ll}\text { Major Capstone } & 0-3\end{array}$
Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.

3 Completed with ENG 200H or ASI 120.
4 Must include two different disciplines and accompanying lab. 5 U.S. History AP credit will not satisfy this requirement.

| Liberal Studies Curriculum |  |  |
| :---: | :---: | :---: |
| L2 Proficiency (Proficiency in a language other than English) |  | 0-11 |
| Literature (May include CAP Components) |  | 3 |
| Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) |  | 3 |
| Natural Sciences (Satisfies CAP Natural Science) |  | 11 |
| Social Sciences (Includes CAP Social Science) |  | 12 |
| Major Requirements |  | 36 |
| THR 105 | Theatre Appreciation (Satisfies CAP Arts) | 3 |
| $\begin{aligned} & \text { THR } 250 \\ & \text { or VAR } 250 \end{aligned}$ | Diversity in Creative \& Performing Arts Diversity in Creative \& Performing Arts | 3 |
| THR 304 | Movement for Everyone | 3 |
| $\begin{aligned} & \text { THR } 308 \\ & \text { or EGR } 308 \end{aligned}$ | Engineering for the Performing Arts Engineering for the Performing Arts | 3 |
| THR 310 | Acting for Everyone | 3 |
| THR 316 | Performance Company ${ }^{1}$ | 0 |
| THR 425 | Theatre Theory \& History | 3 |
| THR 499 | Creating New Works | 3 |
| Select one concentration: |  |  |
| Acting (ACT) |  |  |
| THR 320 | Voice \& Movement | 3 |
| THR 323 | Ensemble Acting | 3 |
| THR 345 | Devising Performance | 3 |
| Select 6 semester hours from: ${ }^{2}$ |  | 6 |
| THR 300 | Performance Practicum |  |
| THR 312 | Acting for the Camera |  |
| THR 344 or MUS 390 | Musical \& Opera Workshop ${ }^{3}$ Ensembles |  |
| THR 350 | Acting Styles |  |
| THR 354 | Kinetic Forms |  |
| THR 372 | Dance \& Physical Theatre Styles |  |
| THR 424 | Directing |  |


| Applied Theatre (APT) |  |  |
| :--- | :--- | :--- |
| THR 345 | Devising Performance | 3 |
| THR 352 | Applied Theatre | 3 |
| Select 9 semester hours from: ${ }^{2}$ |  | 9 |


| THR 300 | Performance Practicum |
| :--- | :--- |
| THR 313 | Social Justice \& Dramatic Literature |
| THR 314 | Costumes \& Textiles |
| THR 322 | Philosophy and Theatre/Dance: Performing <br> Human Identity |
| or PHL 322 | Philosophy and Theatre/Dance: Performing Human <br> Identity |
| THR 354 | Kinetic Forms |
| THR 380 | Power, Gender \& Performance |
| or POL 341 | Power, Gender \& Performance |

THR 417 Theatre in Education
or EDT 417 Theatre in Education

THR 424 Directing

| Dance (DNC) |  |  |
| :---: | :---: | :---: |
| THR 322 | Philosophy and Theatre/Dance: Performing Human Identity | 3 |
| or PHL 322 | Philosophy and Theatre/Dance: Performing Human Identity |  |
| THR 341 | Modern Dance | 2 |
| THR 345 | Devising Performance | 3 |
| THR 361 | Jazz Dance | 1 |
| THR 371 | Ballet | 2 |
| Select 4 semester | hours from: ${ }^{2}$ | 4 |
| MUS 233 | Eurhythmics |  |
| THR 300 | Performance Practicum |  |
| THR 320 | Voice \& Movement |  |
| THR 323 | Ensemble Acting |  |
| THR 344 or MUS 390 | Musical \& Opera Workshop ${ }^{3}$ Ensembles |  |
| THR 354 | Kinetic Forms |  |
| THR 372 | Dance \& Physical Theatre Styles |  |
| THR 424 | Directing |  |
| Performance Technology (PFT) |  |  |
| THR 311 | Design Concepts | 3 |
| Select 6 semester hours from Stage Management \& Design: |  | 6 |
| THR 306 | Stage Management |  |
| THR 307 | Light Design |  |
| THR 309 | Sound Design |  |
| THR 330 | Set Design |  |
| Select 6 semester hours from: ${ }^{\text {2,4 }}$ |  | 6 |
| THR 300 | Performance Practicum |  |
| THR 302 | Stage Makeup |  |
| THR 303 | Scenic Painting |  |
| THR 314 | Costumes \& Textiles |  |
| THR 345 | Devising Performance |  |
| THR 354 | Kinetic Forms |  |
| THR 424 | Directing |  |

## Theatre Studies (TST)

Select 15 semester hours from THR, including cross listed courses. 15
Course selection requires advisor and program director approval.
Breadth
ASI 150 Introduction to the University Experience 1
Total Hours to total at least 124

1 Seven semesters of the 0 credit THR 316 are required for THR majors to build community and provide professional development opportunities. program director.
3 MUS 390 must be the Opera Workshop section.
4 May also select from two courses not already taken from Stage Management \& Design listing.

## Minor in Theatre, Dance and Performance Technology (TDP)

| Theatre, Dance \& Performance Technology |  |  |
| :--- | :--- | ---: |
| THR 105 | Theatre Appreciation | 3 |
| THR 316 | Performance Company ${ }^{1}$ | 0 |
| Select an additional | 12 credits from any THR course | 12 |
| Total Hours | 15 |  |

1 Two semesters of THR 316 are required.
First Year
Fall
ASI 150
HST 103, PHL 103, or REL 103 (CAP Humanities
Commons)

| HST 103, PHL 103, or REL 103 (CAP Humanities | 3 THR 310 | 3 |
| :--- | :--- | ---: |
| Commons) |  | 0 |
| THR 105 (CAP Arts / Creative and Performing) | 3 THR 316 | 3 |
| CMM 100 (CAP Communication) | 3 MTH (CAP |  |
|  | Mathematics) |  |
| Language 101 | 4 Language | 4 |


| Second Year |  |  |
| :--- | :---: | ---: |
| Fall | Hours Spring | Hours |
| ENG 200 (CAP Writing Seminar) | $3-4$ SSC 200 |  |
|  | (CAP Social | 3 |
|  | Science) |  |
| THR 308 or EGR 308 (CAP Integrative) | 3 THR 250 |  |
|  | or VAR | 3 |
|  | 250 (CAP |  |
|  | Diversity |  |
|  | \& Social |  |
| THR 316 | Justice) | 3 |
| Social Science - intro level | 0 THR 304 | 0 |
| INSS (CAP Natural Science w/lab) | 3 THR 316 | 4 |
|  | 4 INSS (CAP | Natural |
|  | Science w/ |  |


| Third Year |  |  |
| :---: | :---: | :---: |
| Fall | Hours Spring | Hours |
| THR 316 | 0 THR 316 | 0 |
| THR 425 (CAP Advance History) | 3 THR <br> Concentration/ elective | 3 |
| THR Concentration/elective | 3 CAP Faith Traditions | 3 |
| INSS Natural Science | 3 CAP Practical Ethical Action | 3 |
| Literature | 3 Social Science 300/400 level | 3 |
| Social Science - elective | 3 General elective | 3 |


| Fourth Year |  |  |
| :---: | :---: | :---: |
| Fall | Hours Spring | Hours |
| THR 316 | 0 THR 316 | 0 |
| THR Concentration/elective | 3 THR 499 (Satisfies CAP Major Capstone) | 3 |
| THR Concentration/elective | 3 THR <br> Concentration/ elective | 3 |
| CAP Advanced Philosophy/Religious Studies | 3 CAP <br> Advanced Philosophy/ Religious Studies | 3 |
| CAP Inquiry | 3 General elective | 3 |
| General elective | 3 General elective | 3 |
|  | 15 | 15 |

## Total credit hours: 124-126

## Courses

## THR 105. Theatre Appreciation. 3 Hours

Experiential and co-curricular course designed to engage students and create an appreciation for and understanding of live theatre and performance through attendance at selected performances on the campus and in the community. Open to all University students.
THR 250. Diversity in Creative \& Performing Arts. 3 Hours
This course serves to introduce students to the interdisciplinary fields of visual and performing arts through a critical multicultural and social justice lens that foregrounds the appreciation of diversity and enables the expansion of personal cultural competencies. This Integrative and Diversity and Social Justice CAP course will also engage students in creating performance and/or art in response to diversity and social justice issues.
THR 251. Beginning Tap Dance. 2 Hours
Beginning course in the theory and practice of tap dance.
THR 261. Beginning Jazz Dance. 2-3 Hours
Beginning course in the theory and practice of jazz dance.
THR 271. Beginning Ballet. 2-3 Hours
Beginning course in the theory and practice of classical ballet technique.
THR 300. Performance Practicum. 1-3 Hours
Credit earned for faculty-supervised involvement in a mainstage production. Experiential credit may be earned in a variety of areas including acting, performance technology, dance, applied theatre, and theatre studies. Open to all university students, by permission of Director of Theatre Program. Audition may be required. Enrollment by permission of Director of Theatre Program.

## THR 302. Stage Makeup. 2 Hours

An experiential course where students learn the basic principles of the art and technique of stage makeup so that they may use them in the design and execution of makeup applications. Open to all university students.

## THR 303. Scenic Painting. 3 Hours

Exploration through experiential learning of the tools, techniques and terminology used in the craft of scenic painting. The student will learn fundamental and advanced scenic painting techniques with additional emphasis on faux painting techniques and trompe'l oeil painting. Open to all university students.

## THR 304. Movement for Everyone. 3 Hours

Movement course for non-dancers, athletes, and dancers alike, to learn the theories and practices of bodily awareness, movement, dance, and strength. This course will enhance students' embodied communication, expressive agility, strength and endurance, while providing an engagement with the arts and aesthetics.

## THR 306. Stage Management. 3 Hours

Investigation of the techniques, communication methodology, resources, and practices for the stage manager. The course examines various activities performed by stage managers in musicals, plays, dance, and operas. Emphasis on organizational and management practices common to most theatres. Development of skills in applying methods of stage management. Prerequisite(s): THR 311, THR 308.

## THR 307. Light Design. 3 Hours

A course in the art and practice of lighting design for the theatre. The course will include lighting equipment and control, elements of electricity, script analysis, design methodologies, additive and subtractive color theory, lighting for dance, musicals, plays and performance installations. Open to all university students. Prerequisite(s): THR 308, THR 311.

## THR 308. Engineering for the Performing Arts. 3 Hours

Experiential course exploring the best practices and upcoming trends in the materials, methods, and procedures used in engineering scenic environments for the performing arts, through the integration of the technical Theatre and Engineering disciplines. This course will provide students with practical experience in working with performance technology industry partners through the testing of emergent performance technology for product development and the uses of this technology to help support arts education needs in our community. Open to all university students.

## THR 309. Sound Design. 3 Hours

Study and application of designing sound for live theatrical productions. Through experiential learning, this course will cover the following principle areas: basic audio, theatrical recording techniques and equipment, musical and effects integration, theatre acoustics, designing sound, and sound reinforcement for live theatrical events. Open to all university students. Prerequisite(s): THR 308 and THR 311.

## THR 310. Acting for Everyone. 3 Hours

Study of the fundamentals of acting and how to apply them to real life situations to enhance communication skills and career preparation in all major fields of study; previous acting experience is not a pre-requisite. Open to all university students.

## THR 311. Design Concepts. 3 Hours

Survey of various backstage professional technical theatre positions in a theatrical production. Current theory is examined along with practical applications and techniques. Open to all university students. Prerequisite(s): THR 308 or by permission of the Program Director.

## THR 312. Acting for the Camera. 3 Hours

Study and practice of basic techniques of acting for the camera: multimedia platforms, film, and television. Emphasis on technical requirements of acting for the camera and the control of body and voice actors must exercise in these media. Prerequisite(s): THR 310.

## THR 313. Social Justice \& Dramatic Literature. 3 Hours

Survey of dramatic literature that engages issues pertaining to diversity and social justice. Survey may include domestic and global dramatic literatures that grapple with processes of identity, representation, and performing the "other.".

## THR 314. Costumes \& Textiles. 3 Hours

Introduction to the process of costume and textile design for theatre. Open to all university students.

## THR 316. Performance Company. 0 Hours

Weekly performance workshop. All Theatre, Dance, \& Performance Technology majors and minors are required to attend. Workshops will be experiential, adapted to student interests/needs, and material to be covered will include a variety of topics in acting, applied theatre, dance, performance technology, and theatre studies. May be repeated. Prerequisite(s): Theatre majors and minors only.

## THR 320. Voice \& Movement. 3 Hours

Study of voice and movement for the performer, using an integrated approach. Prerequisite(s): THR 310 or by permission of Program Director.

## THR 322. Philosophy and Theatre/Dance: Performing Human Identity. 3 Hours

An interdisciplinary and advanced philosophy course with two components: 1) theoretical, focusing on the philosophy of dance or theatre and the philosophy of human identity, and/or human flourishing, and 2) dance or theatre, where students will learn to use dance or theatre to express human identity. Repeatable for extra credit as topics change up to 6 semester hours. Prerequisite(s): PHL 103 or ASI 120 or equivalent.

## THR 323. Ensemble Acting. 3 Hours

Further study and practice of techniques introduced in Acting for Everyone. An emphasis on interaction, ensemble, group processes, and scene study. Open to all university students. Prerequisite(s): THR 310 or by permission of the Program Director.

## THR 330. Set Design. 3 Hours

Introduction to the art and practice of set design for the theatre. Study and projects will involve the development of conceptual approaches, research, sketches, script analysis, presentation techniques, and design for dance, musicals, plays and performance installations. Open to all university students. Prerequisite(s): THR 311, THR 308.

## THR 341. Modern Dance. 2 Hours

Study of the theory and practice of modern dance and technique. All levels welcome. Open to all students.

## THR 344. Musical \& Opera Workshop. 1 Hour

An experiential course where students rehearse and perform in a mainstage musical or opera production. Audition required. Open to all students. Fall only. Corequisite(s): MUS 390; additional rehearsals to prepare for production.

## THR 345. Devising Performance. 3 Hours

Applied theatre laboratory in devising performance techniques via inclass exercises to develop original ensemble-created performance. Prerequisite(s): THR 310 or by permission of Program Director.

## THR 350. Acting Styles. 3 Hours

Advanced study and exploration of acting fundamentals as they apply to various styles or specific historical periods. Study and practice of plays, manners, customs, voice, and movement could encompass Greek, Elizabethan, French Neoclassicism, Restoration, Realism, or Post Realistic genres, among many others. Open to all university students. Prerequisite(s): THR 310.
THR 351. Intermediate Tap Dance. 2 Hours
Intermediate course in the theory and practice of tap dance.

## THR 352. Applied Theatre. 3 Hours

Introduction to the practical applications of theatre and prepares the theatre practitioner to create performance for social justice, and engage in applied theatre work according to the best practices in applied theatre ethics. This course is a survey of theorists, theater ensembles, and performers who represent and create with communities in various contexts. This course will also put theory into practice as the student will engage in various applied theatre practices in collaboration with community partners.

## THR 354. Kinetic Forms. 3 Hours

Exploration of movement and visual performance of kinetic forms through the design, construction, and manipulation of puppets, kinetic sculpture, and masks. Open to all university students.

THR 361. Jazz Dance. 1 Hour
Study of the theory and practice of jazz dance and technique. All levels welcome. Open to all students.

## THR 370. Special Topics. 1-3 Hours

Study of special topics or themes in theatre, performance technology, dance, and applied theatre. May be repeated as topics change.

## THR 371. Ballet. 2 Hours

Study of the theory and practice of classical ballet technique. All levels welcome. Open to all students.

## THR 372. Dance \& Physical Theatre Styles. 1-3 Hours

Special topics in dance and movement, varying between specific dance modes and movement practices drawn from physical theatre and dance modalities.

## THR 380. Power, Gender \& Performance. 3 Hours

Consideration of performances of identity and advocacy at the intersection of political power and gender as constructive responses to gender inequality. Performance protests for gender equality, and cultural performances of gender are examined in historical case studies and current events.

## THR 417. Theatre in Education. 3 Hours

Theories and practices of educational drama and theatre as applied to the language arts. Attention given to the integration of creative drama and applied theatre practices to support speaking, thinking, writing, and reading. Co\#curricular and experiential immersion required.

## THR 424. Directing. 3 Hours

Study of the evolution of the modern director. Script interpretation as a basis for the development and execution of the production concept, directing for devised works, and experiential learning with practical directing experience in class may be covered. Prerequisite(s): THR 310.

## THR 425. Theatre Theory \& History. 3 Hours

Seminar course that examines theatre and performance with texts that hybridize conventional theatre history and performance studies with emphases on international performance history and cultural studies/ theories. This course considers historical, theoretical and play texts, in order to further the student's understanding of the application of theory to the practice and history of theatre. Plays are critically examined as primary sources informing theatrical historiography. Prerequisite(s): THR 105 \& HST 103.

## THR 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## THR 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## THR 490. Independent Study. 1-6 Hours

Individual research and report on topic of student's choice in the field of theatre and performance under direct supervision of faculty/staff. Repeatable for credit. Prerequisite(s): Permission of Program Director.

## THR 498. Internship. 1-6 Hours

Theatre, dance, performance technology, or applied theatre work experience with an approved organization. Prerequisite(s): Permission of Program Director.

## THR 499. Creating New Works. 3 Hours

Capstone course for all theatre, dance, and performance technology majors and communication/theatre (CTR) majors. Students will create an original work in an ensemble, taking on various roles of a creative team. The performance will be presented to the public, and documented for portfolio. Students will engage in professional development to prepare for entering various theatre, performance, dance, performance technology, entertainment, creative industry, and applied theatre fields. Co-requisite: Must be a theatre or CTR major completing their senior year of coursework.

## Women's and Gender Studies

Major:

- Bachelor of Arts, Women's and Gender Studies (p. 292)

Minor:

- Women's and Gender Studies (p. 293)

Women's and gender studies places the experiences and perspectives of women at the center of analysis and also considers how gender intersects with other factors, such as race and class, to shape all of our lives. Interdisciplinary in nature, and founded upon the integration of theory and practice, critique and imagination, women's and gender studies brings approaches from other disciplines and fields into conversation with each other and with critical theories about gender and power to address and improve the lives of women and, by extension, of children and men. Inspired by both feminist and Marianist traditions, the Women's and Gender Studies Program at UD seeks to promote:

- Integration, collaboration, and personal engagement in learning
- The development and dissemination of critical thinking for social justice
- The appreciation and protection of human dignity and diversity
- Leadership through responsibility and service to community

Students majoring in women's and gender studies must complete 34 semester hours, including at least ten semester hours in four core WGS courses and 24 semester hours of upper-division courses offered by other departments. For these additional 24 semester hours, students must complete nine semester hours in one area of concentration, six semester hours in each of two additional areas, and three semester hours in a fourth area.

The major also has a cultural diversity requirement of six semester hours. (These hours may be from courses that are also used to fulfill the area requirements.) Of the six hours, three must be from a course that emphasizes race, and/or that takes a multicultural approach, within a U.S. or European context; the other three must be from a course that focuses on a non-U.S./European context or that takes a comparative international approach.

Courses taken for the major may also count toward completion of the Liberal Studies Curriculum.

Students minoring in women's and gender studies must complete at least 15 semester hours, including one interdisciplinary core course (WGS 250 (http://catalog.udayton.edu/undergraduate/collegeofartsandsciences/ programsofstudy/womensandgenderstudies), WGS 310 (http:// catalog.udayton.edu/undergraduate/collegeofartsandsciences/ programsofstudy/womensandgenderstudies) or WGS 350 (http:// catalog.udayton.edu/undergraduate/collegeofartsandsciences/ programsofstudy/womensandgenderstudies)) and twelve hours in approved upper-division courses (300-level or above) from at least three different disciplines. Alternatively, minors may take two of the interdisciplinary core courses, and nine hours in approved upper-division courses from three different disciplines.

## Women's and Gender Studies Committee

Denise James (Philosophy), Director
Bennett (Religious Studies), Damasco (Roesch Library), Daprano (Health and Sport Science), DeAnda (Religious Studies), Fleischmann (History), Hayford (Theatre), Hudson (Political Science), Leming (Sociology, Anthropology, and Social Work), Merithew (History), Picca (Sociology, Anthropology, and Social Work), Potter (English), Small (Sociology, Anthropology, and Social Work), Vorachek (English).

## Bachelor of Arts, Women's and Gender Studies (WGS) minimum 124 hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |  |
| :--- | :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I $^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ | $0-3$ |  |


| Second-Year Writing Seminar ${ }^{3}$ | $0-3$ |
| :--- | ---: |
| ENG $200 \quad$ Writing Seminar II | 3 |
| Oral Communication |  |
| CMM $100 \quad$ Principles of Oral Communication | 3 |
| Mathematics | 3 |


| SSC 200 Social Science Integrated |  |
| :---: | :---: |
| Arts | 3 |
| Natural Sciences ${ }^{4}$ | 7 |
| Crossing Boundaries | variable <br> credit |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |
| Advanced Study | variable <br> credit |
| Philosophy and/or Religious Studies |  |
| Historical Studies ${ }^{5}$ |  |
| Diversity and Social Justice | 3 |
| Major Capstone | 0-3 |
| Completed with ASI 110 and ASI 120. |  |
| 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement. |  |
| 3 Completed with ENG 200 H or ASI 120. |  |
| 4 Must include two different disciplines and accompanying lab. <br> 5 U.S. History AP credit will not satisfy this requirement. |  |


| Liberal Studies Curriculum |  |  |
| :---: | :---: | :---: |
| Creative and Performing Arts (May include CAP Arts) |  | 3 |
| L2 Proficiency (Proficiency in a language other than English) |  | 0-11 |
| Literature (May include CAP Components) |  | 3 |
| Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) |  | 3 |
| Natural Sciences (Satisfies CAP Natural Science) |  | 11 |
| Social Sciences (Includes CAP Social Science) |  | 2 |
| Major Requirements |  | 34 |
| (May include CAP Components) |  |  |
| $\begin{aligned} & \text { WGS } 250 \\ & \text { or WGS } 350 \end{aligned}$ | Introduction to Women's and Gender Studies Feminist Social Change | 3 |
| WGS 310 | Feminist Theory \& Methodology | 3 |
| WGS 390 | Service Learning in Women's \& Gender Studies | 1-3 |
| WGS 490 | Senior Seminar in Women's \& Gender Studies (Satisfies CAP Major Capstone) | 3 |

## First area courses:

Second area courses:

Fourth area courses: ${ }^{3}$
Select three semester hours from the final area below 3
Areas: ${ }^{4}$
Literature and Arts

| CMS 415 | Gender and Communication |
| :--- | :--- |
| ENG 333 | Images of Women in Literature |
| ENG 335 | African American Literature |
| ENG 336 | Gender and Fiction |
| ENG 345 | Postcolonial Literature |
| MUS 315 | Music and Gender |

Select nine semester hours from one area below 9Second area courses:

Select six semester hours from a second area below 6
hours from a second area below ..... 6

Third area courses:

Select six semester hours from a third area below 6Fourth area courses: ${ }^{3}$Select three semester hours from the final area below3

| THR 380 | Power, Gender \& Performance |
| :---: | :---: |
| VAH 360 | Art History \& Feminism |
| History |  |
| HST 347 | Sex, Race \& Science |
| HST 350 | LGBTQ History |
| HST 351 | American Gender \& Women's History |
| HST 352 | Family History |
| HST 353 | History of Women in European Societies |
| HST 354 | History of Women \& Gender in the Middle East |
| HST 356 | Topics in Transnational Feminist History |
| HST 397 | History of Black Women |
| Philosophy and Religious Studies |  |
| PHL 307 | Philosophy and Feminist Thought |
| PHL 364 | Race, Gender and Philosophy |
| REL 471 | Women \& Religion |
| REL 472 | Ecology \& Religion |
| REL 474 | Women \& the Global Church |
| Social Sciences ${ }^{3}$ |  |
| ANT 306 | Culture \& Power |
| HSS 325 | Women in Sport |
| HSS 360 | Sport and Bodies |
| POL 340 | Gender, Women's Rights and Global Politics |
| POL 341 | Power, Gender \& Performance |
| PSY 443 | Women, Gender, and Psychology |
| PSY 462 | Human Sexuality |
| SOC 322 | Sex Roles \& Society |
| SOC 330 | Perspectives on Aging |
| SOC 331 | Marriages \& Families |
| SOC 332 | Gender and Society |
| SOC 333 | Sociology of Sexualities |
| SOC 339 | Social Inequality |
| SOC 432 | Structure of Privilege |
| SOC 360 | Sport and Bodies |
| SWK 325 | Child Abuse |
| SWK 327 | Parenting: Social Welfare Role |
| SWK 330 | Perspectives on Aging |
| SWK 370 | Social Welfare Policy |
| UDI 341 | Sexual Diversity |

Cultural Diversity Requirement ${ }^{5}$

| Select one U.S./Europe Multicultural course from: | 3 |  |
| :---: | :--- | :--- |
| ENG 335 | African American Literature |  |
| HST 351 | American Gender \& Women's History |  |
| HST 353 | History of Women in European Societies |  |
| HST 397 | History of Black Women |  |
| PHL 364 | Race, Gender and Philosophy |  |
| SOC 432 | Structure of Privilege |  |
| Select one Global (non U.S./Europe) course from: | 3 |  |


| ANT 306 | Culture \& Power |
| :--- | :--- |
| ENG 345 | Postcolonial Literature |
| HST 354 | History of Women \& Gender in the Middle East |
| HST 356 | Topics in Transnational Feminist History |
| POL 340 | Gender, Women's Rights and Global Politics |


| REL 471 | Women \& Religion |
| :--- | :--- |
| REL 474 | Women \& the Global Church |

## Breadth

ASI 150 Introduction to the University Experience 1

Total hours to total at least
1 Restricted to students with no more than six semester hours applicable to a WGS major or minor. This course counts toward the WGS major only if taken before any other WGS core course.
2 A major who has taken WGS 250 may also take WGS 350 in lieu of one of the required disciplinary courses. WGS 350 will be counted toward the area requirement that most reflects the course's content during the relevant term.
3 In order to achieve some balance in approach, students must complete at least six semester hours each in both social sciences (anthropology, political science, psychology, sociology, and social work) and humanities (literature, arts, history, philosophy, and religious studies) courses. For this reason, social sciences must normally serve as the first, second, or third area, and not as the fourth.
4 Other courses may be counted toward the major, with approval of the program director, and depending on topic and content during a given semester.
5 This requirement may be satisfied with courses that are also used to fulfill the area requirements. Of the six semester hours, three must be from a course that emphasizes race, and/or that takes a multicultural approach, within a U.S. or European context; the other three must be from a course that focuses on a non-U.S./European context or that takes a comparative international approach.

## Minor in Women's and Gender Studies (WGS)

## Women's and Gender Studies ${ }^{1}$

WGS $250 \quad$ Introduction to Women's and Gender Studies 3
or WGS 310 Feminist Theory \& Methodology
or WGS 350 Feminist Social Change
Select twelve semester hours from at least three different academic 12 disciplines (300/400 level) ${ }^{2}$
Total Hours
1 Students who wish to minor in Women's and Gender Studies should contact the director of the Women's and Gender Studies Program.
2 A student may, alternatively, take two of the indicated WGS core courses (WGS 250 (http://catalog.udayton.edu/ undergraduate/collegeofartsandsciences/programsofstudy/ womensandgenderstudies), WGS 310 (http://catalog.udayton.edu/ undergraduate/collegeofartsandsciences/programsofstudy/ womensandgenderstudies), WGS 350 (http://catalog.udayton.edu/ undergraduate/collegeofartsandsciences/programsofstudy/ womensandgenderstudies)) and three upper-level courses from three different disciplines.

## First Year

| Fall | Hours Spring | Hours |
| :--- | :---: | ---: |
| ASI 150 | 1 ENG 100 | 3,4 |
|  | (CAP |  |
|  | Humanities |  |
|  | Commons) |  |


| REL 103, HST 103, or PHL 103 (CAP Humanities | 3 PHL 103, REL | 3 | General Elective |
| :---: | :---: | :---: | :---: |
| Commons) | 103, or HST |  | 16 15 |
|  | 103 (CAP <br> Humanities) |  | Total credit hours: 126-128 |
| HST 103, PHL 103, or REL 103 (CAP Humanities Commons) | 3 CMM 100 | 3 | Courses |
|  | (CAP |  |  |
|  | Communication) |  | WGS 250. Introduction to Women's and Gender Studies. 3 Hours |
| PSY 101 (Social Science - intro level) | 3 INSS (CAP <br> Natural <br> Science w/ <br> lab) | 4 | Introduction to key concepts, themes, and debates in Women's and Gender Studies. Intersectional (studying gender as it intersects with other social identity categories such as race, class, and sexuality), multi- or |
| MTH 114 (CAP Mathematics) | 3 Language $141$ | 4 | interdisciplinary, and multicultural in approach. Restricted to students with no more than six semester hours applicable to a WGS major or |
| Language 101 | 4 |  | minor. |
|  | 17 | 17-18 | WGS 310. Feminist Theory \& Methodology. 3 Hours |
| Second Year |  |  | Exploration of the intersections of feminist epistemology, methodology, politics, and ethics. Consideration and comparison of a range of theories |
| Fall | Hours Spring | Hours |  |
| WGS 250 or 350 | 3 ENG 200 (CAP Writing Seminar) | 3-4 | about gender, power, and knowledge that have shaped the development of feminist and womanist thought, research, practice, and movement in |
| CAP Faith Traditions | 3 SSC 200 <br> (CAP Social <br> Science) | 3 | semester hours prior WGS credit. <br> WGS 350. Feminist Social Change. 3 Hours |
| INSS (CAP Natural Science w/lab) | 4 PSY 443 <br> (Satisfies CAP Diversity and Social Justice) | 3 | Exploration of the methods and priorities of feminist social change efforts in varying national, cultural, and/or religious contexts, including outside of the U.S. and Europe. Investigation of the nature, possibilities, and challenges of global/transnational feminist movement(s). |
| Social Science - elective | 3 PSY at 300 or 400 level | 3 | Prerequisite(s): WGS 150 or six semester hours prior WGS credit. |
| Language 201 or contextual course | 3 INSS Natural Science | 3 | WGS 380. Special Topics in Women's \& Gender Studies. 1-3 Hours Intensive examination of current thematic, theoretical, or methodological issues in the field of Women's and Gender Studies. Consult composite for topics. May be repeated as topic changes. Prerequisite(s): WGS 250 or |
|  | 16 | 15-16 |  |
| Fall | Hours Spring | Hours | WGS 310 or WGS 350 or six semester hours prior WGS credit. |
| ENG 333 | 3 ENG 336 | 3 | WGS 390. Service Learning in Women's \& Gender Studies. 1-3 Hours |
| CAP Arts / Creative and Performing | 3 HST 347 | 3 | Individualized placements in community organizations that enable |
| REL 471 (or CAP Advanced Philosophy/Religious | 3 PHL 307 | 3 | students to apply and enrich their formal studies by engaging in service |
| Studies) | (or CAP |  | work that addresses women's needs and/or advances social justice |
|  | Advanced |  | in relation to gender. May be done as an independent or group study |
|  | Philosophy/ |  | under the direction of a WGS faculty member May also be done in |
|  | Religious |  | under the direction of a WGS faculty member. May also be done in |
|  | Studies) |  | conjunction with another course. May be repeated up to a maximum of |
| CAP Integrative | 3 HST 351 <br> (or CAP | 3 | three semester hours. Prerequisite(s): WGS 250 or WGS 310 or WGS 350; permission of program director. |
|  | Advanced |  |  |
|  | Historical |  | WGS 477. Honors Thesis Project. 3 Hours |
|  | Studies) |  | First of two courses leading to the selection, design, investigation, and |
| Literature (may include major course) | 3 General elective | 3 | completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the |
|  | 15 | 15 | University Honors Program with permission of the program director |
| Fourth Year |  |  | and departmental chairperson. Students pursuing an interdisciplinary |
| Fall | Hours Spring | Hours | thesis topic may register for three semester hours each in two |
| WGS 310 | 3 WGS 490 <br> (Satisfies CAP Major Capstone) | 3 | separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program. <br> WGS 478. Honors Thesis Project. 3 Hours |
| WGS 390 | 1 CMS 415 (Satisfies CAP Diversity and Social Justice) | 3 | Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the |
| ANT 306 | 3 General elective | 3 | program director and departmental chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours |
| CAP Practical Ethical Action | 3 General elective | 3 | each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477 and approval of University |
| CAP Inquiry | 3 General elective | 3 | Honors Program. |

WGS 480. Independent Study in Women's \& Gender Studies. 3 Hours
Individual investigations of special topics in the field of Women's and Gender Studies under faculty direction. May be repeated under special circumstances. No more than six semester hours of WGS 480 may count toward the major. Prerequisite(s): WGS 250 or WGS 310 or WGS 350;
approval of program director.
WGS 490. Senior Seminar in Women's \& Gender Studies. 3 Hours
Concentration on a particular topic or problem in Women's and Gender Studies, with focus on critical theories, methodologies, ethics and practices appropriate for advanced feminist research. Emphasis on integration (e.g. of feminist theory, methods, and practice) and interdisciplinarity. May require students either to work collaboratively on a single research project or to apply certain theories or methods central to the seminar in their exploration of individual projects. May be repeated as topics change. Prerequisite(s): WGS 250 or WGS 350, WGS 310.

# SCHOOL OF BUSINESS ADMINISTRATION 

John D. Mittelstaedt, Dean<br>John R. Sparks, Associate Dean<br>Harvey G. Enns, Associate Dean

## Mission

The School of Business Administration is a learning community committed in the Catholic and Marianist tradition to educating the whole person and to connecting learning and scholarship with leadership and service in an innovative business curriculum designed to prepare ethical leaders for successful careers in a global business environment.

Through the curriculum and co-curriculum of the School, students develop the ability to integrate learning across disciplines, apply the theory they are learning to real business problems, and lead with ethics and integrity. Success in business requires an understanding of human values and the society in which business operates as well as mastery of the various areas of business. For this reason, the undergraduate curriculum includes three areas of coursework:

- A foundation in the liberal arts (which includes the University Common Academic Program)
- A firm grounding in the common body of business knowledge (core business requirements)
- Specialization in a business major


## Academic Programs

The School of Business Administration offers a Bachelor of Science in Business Administration degree with majors and minors in:

- Accounting (p. 299)
- Business Economics (p. 303)
- Entrepreneurship (p. 319)
- Finance (p. 304)
- International Business Management (p. 321)
- Management Information Systems (p. 310)
- Marketing (p. 323)
- Operations and Supply Management (p. 312)

Minors are also available in:

- Business Administration (p. 302)
- Business Analytics (p. 314)
- Business Intelligence (p. )
- Cyber-Security (p. )
- Studies in Design and Entrepreneurship in China (p. 302)*
*All Studies in Design and Entrepreneurship in China minor courses must be taken at the China Institute to count towards minor.

Double majors and minors in business administration programs, and also in non-business programs, are available. A maximum of seven hours of coursework can double count between double majors and a major and a minor. Interested students should consult with their academic advisor in the SBA Undergraduate Advising Office for details.

A Bachelor of Science in Business Administration with a major in accounting, coupled with an MBA degree is also available. This program normally requires a fifth year of study. Students must apply and qualify for admission into graduate school during their fourth year in order to participate.

## BWISE

Business Wisdom through International, Service and Experiential Education (BWISE)

To provide students in the School of Business Administration with the necessary skills for success upon graduation, all students will be required to complete two of the following three educational components, critical for success in both the global business environment and as contributing citizens of their communities:

1. International Competence - demonstrated by completing one of the following options:
a. Education abroad completing a minimum of 3 semester credit hours or
b. International Internship or
c. Successfully complete 2 of the following internationally focused courses: INB 302, INB elective, MGT 403, MKT 440, FIN 450, ECO 461, or any UD taught foreign language course.
2. Service and Civic Engagement
a. Participation in a campus Service and Social Action Club, or
b. Participation in a civic engagement/service learning ongoing program
3. Experiential
a. Significant employment in a student's field of study approved by the Department Chair in the student's major or the Assistant Dean for Discover Business students or
b. Manager in Flyer Enterprises for two semesters or
c. Approved student proposal that incorporates significant experiential activity or
d. Other approved equivalent activity

See an Academic Advisor before planning or completing any service activity.

## Curriculum Overview

The undergraduate curriculum for students earning a BS in Business Administration includes three areas of coursework:

- A foundation in the liberal arts (which includes the University Common Academic Program)
- A firm grounding in the common body of business knowledge (core business requirements)
- Specialization in a business major

All business students follow essentially the same curriculum during their first and second years, regardless of major. This curriculum consists of a common set of liberal arts and core business requirements with the first year mostly devoted to liberal arts requirements.

In the third and fourth years, all business students also take a common set of upper level liberal arts and core business requirements in addition to courses to complete their chosen major.

For information on majors and minors offered by the School of Business Administration and their requirements, visit the Programs of Study link.

Each major requires several hours of general electives, typically 0-12 hours depending upon the major and choice of courses in the Common Academic Program. Students often use these general electives to support an additional major or minor.

Students need 125 hours to graduate, with 54 hours at the upper level (300-400). Only 6 hours of the required courses in business disciplines can be taken at other schools for transfer credit.

Students should consult with their academic advisor in the SBA Undergraduate Advising Office in addition to tracking their own progress towards degree requirements.

Common Academic Program (CAP)

Oral Communication $100 \quad 3$

| Mathematics | 3 |
| :--- | :--- |

Social Science 3
SSC 200 Social Science Integrated

## Arts

| Natural Sciences ${ }^{4}$ | 7 |
| :--- | :---: |
| Crossing Boundaries | varia |
|  | cred |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |

Advanced Study

| Philosophy and/or Religious Studies |  |
| :--- | ---: |
| Historical Studies ${ }^{5}$ |  |
| Diversity and Social Justice | 3 |
| Major Capstone | $0-3$ |

Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

## SBA Core Curriculum

| ACC 207 | Introduction to Financial Accounting | 3 |
| :--- | :--- | :--- |
| ACC 208 | Introduction to Managerial Accounting | 3 |
| BIZ 101 | Business Education Planning | 1 |
| BIZ 102 | Introduction to Business | 3 |
| DSC 210 | Statistics for Business I | 3 | credit

variable credit

| DSC 211 | Statistics for Business II | 3 |
| :--- | :--- | :--- |
| ECO 203 | Principles of Microeconomics | 3 |
| ECO 204 | Principles of Macroeconomics | 3 |
| ENG 372 | Business and Professional Writing | 3 |
| FIN 301 | Introduction to Financial Management | 3 |
| MGT 201 | Legal Environment of Business | 3 |
| MGT 301 | Organizational Behavior | 3 |
| MGT 490 | Managing the Enterprise | 3 |
| MTH 128 | Finite Mathematics | 3 |
| MTH 129 | Calculus for Business | 3 |
| MIS 301 | Information Systems in Organizations | 3 |
| MKT 301 | Principles of Marketing | 3 |
| OPS 301 | Survey of Operations \& Supply Management | 3 |
| PHL 313 | Business Ethics | 3 |
| or REL 368 | Christian Ethics \& the Business World |  |
| ECO elective $(300 / 400$ level) | 3 |  |
| BWISE requirement | 0 |  |

## Major Requirements

For courses required for the major, visit program descriptions in
Programs of Study.

## General Electives

Majors have 0-12 hours of general electives depending upon the major and choice of courses in the Common Academic Program. Many students use the general elective hours to support an additional major or minor.

## Degree Requirements

1. The candidate must successfully complete all course requirements for variablehe $B S$ in Business Administration including:
a. courses in the liberal arts required by the University Common Academic Program
b. courses in business and liberal arts required for all School of Business Administration (SBA) students;
c. courses required to complete a major in the SBA.
courses attempted in the student's major except for the courses that are part of the SBA core.
2. In addition to those courses which must be taken under Option 1, a student may take a maximum of 12 semester hours of general electives under Option 2 within the hours required for graduation in the degree program. A student may take any course beyond the minimum hours required for graduation in the degree program under Option 2. All courses that are used to fulfill the Common Academic Program, Business, major, minor and competency requirements must be taken under Option 1.
3. The candidate has the responsibility of meeting degree requirements for the BS in Business Administration. Therefore, the student should be thoroughly familiar with the degree requirements and with his or her progress towards meeting those requirements.
4. Students must complete the BWISE requirements.

## Study Abroad Programs

Students in the School of Business Administration (SBA) may participate in the University of Dayton Summer Study Abroad Programs as well as Semester Exchange Programs with partners throughout the world.
Details on both these programs can be found at www.udayton.edu/ edabroad and brief descriptions are provided below. Students may also study abroad at universities that are not affiliated with the University of Dayton as long as they receive prior written approval from the UD Center for International Programs and their academic advisor.

The University of Dayton China Institute offers full semesters of study in China for fall and spring semesters as well as a summer program. Learn more at www.udayton.edu/china_institute.

## Summer Programs

A variety of summer programs are available for students to consider, each with its own theme and location. For example, students can travel to Europe, South America, Asia or Africa. Most of these programs are conducted during two separate five-week summer terms. Shorter twoweek trips are also available during summer and the Intersession (winter break). The programs are taught by UD faculty and offer students the opportunity to complete required and theme-based elective courses in settings such as England, Spain, Italy, Germany, China and more. Students participating in Summer Study Abroad register to take at least two classes ( 6 credit hours) plus a 1-credit cultural immersion minicourse in a summer session. Participants will complete work equivalent to that of courses taken on campus, with the added requirement of applying their studies to the site they are visiting.

Accepted students are required to participate in a comprehensive orientation and preparation class in which features about their destination country are studied along with University safety and security procedures and other pre-departure details. Students on academic or behavioral probation are not permitted to participate in any University study abroad program. All interested students are encouraged to meet with their advisor or the Study Abroad Director well in advance of any travel.

## Semester Exchange Programs

Students may also wish to spend an extended time studying overseas.
For those students, UD provides several opportunities to take classes with one of our foreign exchange partners throughout the world. Exchanges can be undertaken either during the Fall or Spring semesters, and students will live and study with other domestic and international students at our foreign exchange partner institutions. Courses are
typically taught in English, although some partners have foreign language requirements. To ensure courses taken during a semester exchange transfer to UD, students must seek approval by advisors in the Center for International Programs (CIP) as well as their SBA advisor before undertaking an exchange.

## Planning for Education Abroad

Students should ideally begin planning during their first year for participation in a study abroad program, determining which courses are normally offered and then holding those courses for their international experience and completing any necessary prerequisites prior to the program. If pre-approved by SBA advisors, the courses taken abroad will then count for the student's degree program, keeping the student on track to graduate on time or even ahead of schedule.

For more information please contact:
Heather Schieman, Education Abroad Advisor
Center for International Programs
Rike 211
937-229-1251
hschieman1@udayton.edu

## Transfer Students

## External Transfers

Candidates for admission from other accredited colleges or universities must be in good academic standing in the colleges or universities from which they are transferring and submit a complete application in accordance with UD admissions policies. Students must have a minimum 2.7 GPA and have successfully completed a college level math class. For more information please visit the School of Business website (http:// business.udayton.edu).

## Internal Transfers

Students must first attend an initial internal transfer meeting with an Academic Advisor in the School of Business Administration. Stop in the SBA Undergraduate Advising Office in Miriam Hall 108 to schedule this initial SBA internal transfer meeting.

## Minimum Requirements:

1. Minimum cumulative UD GPA of 2.7
2. Successful completion of an appropriate UD Math course, such as a UD Calculus class, a C+ or higher in MTH 116 or MTH 128, or a B- or higher in MTH 207. Math courses taken at another college or university will not be considered.

## Programs of Study

To learn more about the available programs in the School of Business Administration,
explore the departments:

- Accounting (p. 299)
- Business Interdisciplinary Studies (p. 302)
- Economics and Finance (p. 302)
- Management and Marketing (p. 319)
- Management Information Systems, Operations Management, and Decision Sciences (p. 310)


## Accounting

Major:

- Bachelor of Science in Business Administration, Accounting (p. 299)

Minor:

- Accounting (p. 300)

Our mission is to educate distinctive accounting students by providing high quality educational programs that combine theory and practice within a Catholic and Marianist environment. We are committed to educating the whole person by integrating learning, scholarship, leadership, and service preparing our graduates to add value to employers and society.

In addition to other requirements, an accounting major must earn credit in seven upper-level accounting courses: ACC 303, ACC 305, ACC 306, ACC 341, ACC 401, ACC 408, and ACC 420. For students electing to complete a combined BSBA with a major in accounting and a MPAcc or MBA, ACC 408 may be waived and replaced by MBA 603A. ACC 303, 401, 408 and 420 require a minimum grade of "C-". ACC 305, ACC 306 and ACC 341 require a minimum grade of " $C$ ". ACC 305 requires a minimum of "B-" in ACC 207 and ACC 208 and passing of accounting entrance exam. Students should consult with their academic advisor about selecting accounting and other elective courses appropriate to particular career goals. Students should also consult their advisor or the department chairperson about opportunities for professional work-experience, double majors and minors, foreign exchange opportunities, and requirements for professional examinations (e.g., CPA).

Ohio and numerous other states require 150 semester hours to become a CPA. The MPAcc program is particularly useful in this regard. Consult the department chairperson or an advisor for more information.

## Faculty

Donna Street, Chairperson and Mahrt Chair in Accounting Professors Emeriti: Burrows, Clark, Eley, Fioriti, Greenlee, Roehm, Rosenzweig
Professors: Castellano, Street
Associate Professor: Archambeault, Ramamoorti, Webber Assistant Professors: Calvin, Grilliot, M. Keune, T. Keune, Zelazny Lecturers: Stangel, Stover

## Bachelor of Science in Business Administration, Accounting (ACC) minimum 125 hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$


| Mathematics | 3 |
| :---: | :---: |
| Social Science | 3 |
| SSC 200 Social Science Integrated |  |
| Arts | 3 |
| Natural Sciences ${ }^{4}$ | 7 |
| Crossing Boundaries | variable credit |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |
| Advanced Study | variable credit |
| Philosophy and/or Religious Studies |  |
| Historical Studies ${ }^{5}$ |  |
| Diversity and Social Justice | 3 |
| Major Capstone | 0-3 |
| 1 Completed with ASI 110 and ASI 120. |  |
| 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement. |  |
| 3 Completed with ENG 200H or ASI 120. |  |
| 4 Must include two different disciplines and accompanying lab. <br> 5 <br> U.S. History AP credit will not satisfy this requirement. |  |

## SBA Core Curriculum

| ACC 207 | Introduction to Financial Accounting | 3 |
| :--- | :--- | :--- |
| ACC 208 | Introduction to Managerial Accounting | 3 |
| BIZ 101 | Business Education Planning | 1 |
| BIZ 102 | Introduction to Business | 3 |
| DSC 210 | Statistics for Business I | 3 |
| DSC 211 | Statistics for Business II | 3 |
| ECO 203 | Principles of Microeconomics | 3 |
| ECO 204 | Principles of Macroeconomics | 3 |
| ENG 372 | Business and Professional Writing | 3 |
| FIN 301 | Introduction to Financial Management | 3 |
| MGT 201 | Legal Environment of Business | 3 |
| MGT 301 | Organizational Behavior | 3 |
| MGT 490 | Managing the Enterprise | 3 |
| MTH 128 | Finite Mathematics | 3 |
| MTH 129 | Calculus for Business | 3 |
| MIS 301 | Information Systems in Organizations | 3 |
| MKT 301 | Principles of Marketing | 3 |
| OPS 301 | Survey of Operations \& Supply Management | 3 |
| PHL 313 | Business Ethics | 3 |
| or REL 368 | Christian Ethics \& the Business World | 3 |
| ECO elective (300/400 level) | 0 |  |
| BWISE requirement | 3 |  |

Major Requirements ..... 24
ACC 303 Managerial Accounting ..... 3
ACC 305 Intermediate Financial Accounting I Part I ..... 4
ACC 306 Intermediate Financial Accounting II Part II ..... 3
ACC 341 Accounting Information Systems I ..... 3

| ACC 408 | Advanced Financial Accounting (Satisfies CAP | 3 | FIN 301 | 3 |
| :---: | :---: | :---: | :---: | :---: |
|  | Major Capstone) ${ }^{1}$ |  | MIS 301 | 3 |
| ACC 420 | Federal Income Taxation | 4 | OPS 301 | 3 |
| Academic electives to bring total to at least 125 credits |  |  | CAP Adv. HST Studies | 3 |
| May be waived for students electing to complete a MPAcc, or a combined BSB with a major in Accounting and an MBA, by completing MBA 603A. Consult an advisor of the chair of the department for details. |  |  | PHL 313 or REL 368 | 3 3 |
|  |  |  |  | ${ }^{31}$ |
|  |  |  | Fourth Year | urs |
|  |  |  | ACC 401 | 4 |
|  |  |  | ACC 408 | 3 |
| Minor in Accounting (ACC) |  |  | ACC 420 | 4 |
|  |  |  | ENG 372 | 3 |
| Accounting (business majors) |  |  | MGT 490 (Satisfies CAP Integrative) | 3 |
| ACC 305 | Intermediate Financial Accounting \| Part | | 4 | CAP Adv. PHLREL | 3 |
| ACC 306 | Intermediate Financial Accounting II Part II | 3 | CAP Div. \& SJ | 3 |
| Select two ACC electives ${ }^{1}$ |  | 6-8 | ECO Elective | 3 |
| Total Hours |  | 13-15 |  | 29 |
| Accounting (non-business majors) |  |  | Total credit hours: $125-126$ |  |
| ACC 207 | Introduction to Financial Accounting | 3 | Courses |  |
| ACC 208 | Introduction to Managerial Accounting ${ }^{2}$ | 3 |  |  |
| ACC 305 | Intermediate Financial Accounting \| Part | | 4 | ACC 200. Introduction to Ac | unting concepts, |
| ACC 306 | Intermediate Financial Accounting \|| Part II | 3 | terminology, purposes, and | he nonbusiness student. Not |
| Select two ACC electives |  | 6-8 | open to students in the Scho | dministration or to those |
| Total Hours |  |  | with credit in ACC 207. |  |

In consultation with the department chairperson.
2 Prerequisite must be taken.

| First Year | Hours |
| :--- | ---: |
| BIZ 101 | 1 |
| BIZ 102 | 3 |
| CMM 100 (Satisfies CAP Oral Communication) | 3 |
| ECO 203 | 3 |
| ECO 204 | 3 |
| ENG 100 (CAP Humanities Commons) | 3 |
| HST 103 (CAP Humanities Commons) | 3 |
| MTH 128 | 3 |
| MTH 129 (Satisfies CAP Mathematics) | 3 |
| PHL 103 (CAP Humanities Commons) | 3 |
| REL 103 (CAP Humanities Commons) | 3 |
| CAP Natural Science | 3 |
|  | 34 |
| Second Year | 3 |
| ACC 207 | 3 |
| ACC 208 | 3 |
| DSC 210 | 3 |
| DSC 211 | 3 |
| ENG 200 | 3 |
| MGT 301 | 3 |
| MGT 201 | 306 |
| MKT 301 | 3 |
| SSC 200 | 3 |
| CAP Natural Science \& Lab 305 | 3 |
|  | 3 |
| Third Year | 3 |

ACC 207. Introduction to Financial Accounting. 3 Hours
Introduction to financial accounting concepts, procedures, and terminology. The accounting framework for recording transactions and reporting to parties external to the organization.

## ACC 208. Introduction to Managerial Accounting. 3 Hours

Management use of accounting data in planning and controlling organization activities; cost accounting and analysis of data for management decision making. Prerequisite(s): ACC 207, BIZ 102 for business majors, BIZ 100 for non-business majors.
ACC 300A. Principles of Financial Accounting. 1.5 Hour An introduction to the concepts and procedures underlying financial accounting and financial statements, and the use of financial accounting information for decision making. Credit may not be earned for both ACC 300A and either ACC 200 or ACC 207. Prerequisite(s): Engineering major; sophomore standing; permission of department chairperson.
ACC 300B. Principles of Managerial Accounting. 1.5 Hour An introduction to the concepts underlying the preparation and use of accounting data by managers as they plan, control, and make decisions within an organization. Credit may not be earned for both ACC 300B and ACC 208. Prerequisite(s): ACC 300A; engineering major; sophomore standing; permission of department chairperson.

## ACC 303. Managerial Accounting. 3 Hours

The production, dissemination, and interpretation of financial and nonfinancial information for use within an organization. Information for planning, decision making, and control. Study of typical cost accounting systems in various organizations. Prerequisite(s): (ACC 207, ACC 208, with minimum grades of ' $B-$-'; and passing of accounting entrance exam) or permission of department chairperson.

ACC 305. Intermediate Financial Accounting I Part I. 4 Hours
Part I (part II in ACC 306) of a comprehensive treatment of financial accounting concepts, principles, and procedures used in the preparation and analysis of financial statements. Prerequisite(s): (ACC 207, ACC 208, with minimum grades of ' $B$-'; and passing of accounting entrance exam) or permission of department chairperson.

## ACC 306. Intermediate Financial Accounting II Part II. 3 Hours

Part II of comprehensive treatment of financial accounting concepts, principles, and procedures used in the preparation and analysis of financial statements. Prerequisite(s): ACC 305 with a minimum grade of 'C'.

## ACC 341. Accounting Information Systems I. 3 Hours

Study of designs of accounting systems, including their impact on management decision making and control. Emphasis on (1) a systems approach to the flow of data, (2) system internal control, and (3) computer applications in accounting. Prerequisite(s): ACC 305 with a minimum grade of 'C'; MIS 301.

## ACC 401. Auditing Principles. 4 Hours

Study of the concepts, standards, and procedures used to judge and report on the degree of correspondence between quantifiable information and established criteria; the ethical, regulatory, and professional responsibilities of the auditor and introduction to internal, operational, and governmental auditing. Prerequisite(s): ACC 306 with a minimum grade of 'C'; ACC 341 with a minimum grade of ' $C$ '.

## ACC 404. Advanced Strategic Cost Management. 3 Hours

Study of processes focused on strategic cost management. Topics include balanced scorecards, activity-based costing management, target costing, lean accounting, six sigma, environmental accounting, and performance measurement and control systems. Prerequisite(s): (ACC 303; OPS 301) with a minimum grade of ' $C$ '.

## ACC 408. Advanced Financial Accounting. 3 Hours

Study of advanced financial accounting topics including consolidated financial statements and accounting for business combinations, multinational subsidiaries, and foreign currency transactions. A case based practical role play experience as an accountant and a case based analysis addressing fraud and the consequences of unethical behavior and the important role accountants play in protecting the public interest and serving society in general are integrated into the course. Satisfies the accounting capstone requirement for accounting majors and serves as evidence of the culmination of the Common Academic Program. Prerequisite(s): ACC 306 with a minimum grade of C or permission of Department Chairperson; Senior standing.

## ACC 412A. Contemporary Issues in Accounting. 3 Hours

Seminar covering emerging or controversial issues for the student who has a strong accounting background. Topics include the business and financial situations that underlie accounting problems and controversies, alternative accounting techniques which are accepted or proposed, and the consequences of various accounting practices. Prerequisite(s): ACC 306 and permission of instructor.

## ACC 412B. International Accounting. 3 Hours

Study of current topics in international accounting. This course will typically include a week or more of study outside of the U.S. that will include lectures and relevant site visits. In addition to normal tuition, there may be travel and other costs and fees. Foreign locations, countries, topics, and duration may vary. Prerequisite(s): ACC 306 and permission of instructor.

## ACC 412C. International Accounting-IFRS Certificate and Research. 3

 HoursThis class includes a comprehensive study of International Financial Reporting Standards (IFRS). Students will complete the Institute of Chartered Accountants in England and Wales' (ICAEW) IFRS learning and assessment program and upon successful completion earn an IFRS certificate from this globally recognized professional accountacy body. Effective Fall 2013: minimum 3.0 cummulative and major gpa required. Prerequisite(s): ACC 408 with a C or better and permission of the instructor.

## ACC 412D. International Accounting-IFRS Certificate and Research. 3

 HoursThis class is for NON-UD degree seeking students. The class includes a comprehensive study of International Financial Reporting Standards (IFRS). Students will complete the Institute of Chartered Accountants in England and Wales' (ICAEW) IFRS learning and assessment program and upon successful completion earn an IFRS certificate from this globally recognized professional accountancy body. Prerequisite(s): ACC 408 or MBA 603A, and permission of instructor.

## ACC 420. Federal Income Taxation. 4 Hours

Study of federal income tax laws and their application to individuals, partnerships, and corporations. Develop research techniques for federal income tax issues as they relate to preparation of federal individual income tax preparation. The historical, social, economic, and political influence on taxation laws are emphasized. Consideration is given to legal, moral, business, and personal factors involved in taxation. Prerequisite(s): ACC 305 with a minimum grade of ' $C$ ' or permission of department chairperson.

## ACC 421. Taxes and Business Strategy. 3 Hours

Primary emphasis is given to analyzing tax planning opportunities for individuals and businesses through the use of in-depth tax research projects. This course builds upon the Federal Income Taxation course to further develop tax policy considerations and discusses possible tax reform. The course provides an introduction to several advanced taxation topics including tax exemption organizations, state and local taxation, international taxation and estate and gift taxation. Prerequisite(s): ACC 420 or permission of instructor.

## ACC 441. Accounting Information Systems II. 3 Hours

Examination of accounting systems with exposure to systems design and evaluation, complex spreadsheet applications, decision support systems, and data base management applications. Prerequisite(s): ACC 341 or permission of instructor.

## ACC 491. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of program director and chairperson.

## ACC 492. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of program director and chairperson.

## ACC 497. Professional Work Experience. 0-3 Hours

Supervised accounting work experience in association with a participating public accounting, industrial, commercial, educational, health-care, or governmental organization. May be used for general elective credit only. Option two grading only. Maximum of three credits toward graduation requirements. Permission of chairperson required.

ACC 499. Independent Study in Accounting. 1-6 Hours Individual research in accounting topics under the guidance and direction of an accounting faculty member. A formal, detailed proposal must be completed and approved by the department chair. Prerequisite(s): Senior status in accounting; permission of department chairperson.

## Business Interdisciplinary Studies

Minors:

- Business Administration (p. 302)
- Studies in Design and Entrepreneurship in China (p. 302)


## Minor in Business Administration (BUS)

The interdisciplinary minor in Business Administration is offered for students who are not in the School of Business Administration.

The minor in Business Administration is a valuable program for nonbusiness majors who intend to pursue careers in business or want to prepare for an MBA program.

The minor in Business Administration is available to non-business majors only. The course requirements are listed below. Note that additional prerequisites may apply to some of the course selections which would increase the total number of hours needed to complete the minor.

| ACC 200 | Introduction to Accounting |  |
| :---: | :--- | ---: |
| or ACC 207 |  |  |
| \& ACC 208 | Introduction to Financial Accounting |  |
| ECO 203 | and Introduction to Managerial Accounting |  |
| Select four courses from: | 3 |  |
| FIN 301 | Introduction to Financial Management |  |
| or FIN 229 | Corporate Finance | 3 |
| MGT 201 | Legal Environment of Business |  |
| MGT 229 | Introduction to Entrepreneurship | 12 |
| MGT 300 | Survey of Organizational Behavior |  |
| MIS 300 | Survey of Management Information Systems |  |
| or MIS 302 | Systems Thinking in Organizations |  |
| MKT 300 | Survey of Marketing |  |
| OPS 300 | Introduction to Operations \& Supply Management |  |
| Total Hours |  | 18 |

## Studies in Design and Entrepreneurship in China (DEC)

Graduates seeking to work in the Asia-Pacific region can benefit from a combination of skills, including 1) a deep appreciation and understanding of the creative process as well as the ability to recognize beauty in art and industrial design; 2) knowledge of business practices and methodologies including market identification and testing as well as new venture creation and financing; and 3) recognition of the product engineering process including technical feasibility, prototyping, and materials and weight engineering. This minor, co-sponsored by the College of Arts and Sciences (CAS), the School of Business Administration (SBA), and the School of Engineering (SOE), and the University of Dayton China Institute (CI), and offered formally by the School of Business seeks to create this unique combination in students in a learning laboratory environment in Asia. A core focus for each of the courses offered is sustainable economic development, so that students
learn to recognize difficult challenges facing rapidly industrializing countries and apply creative solutions to some of these problems.

| Minor in Studies in Design and Entrepreneurship in China ${ }^{1}$ |  |  |
| :--- | :--- | ---: |
| SSC 200 | Social Science Integrated | 3 |
| PHL 320 | Philosophy of Art | 3 |
| MGT 318 | Fundamentals of New Venture Creation | 3 |
| EGR 299 | Innovation Design \& Entrepreneurship | 3 |
| Total Hours |  | 12 |

1 All 4 courses must be taken at the China Institute to count towards minor.

## Business Courses

BIZ 100. Survey of Business. 3 Hours
An introduction to business topics for non-business majors that include accounting, economics, entrepreneurship, finance, marketing, management, information systems, operations, and the global marketplace. Business ethics, social responsibility, and professionalism will also be examined. Students will develop individual plans for completing the BWISE (Business Wisdom through International, Service, and Experiential) graduation requirement. BIZ 100 will satisfy the BIZ 102 requirement for students transferring into the School of Business Administration.

## BIZ 101. Business Education Planning. 1 Hour

Introduction to the School of Business Administration, the University and educational planning.

## BIZ 102. Introduction to Business. 3 Hours

Exploration of the functions of businesses in contemporary global society. Students will learn to recognize and analyze an organization as an integrated entity. This course introduces students to the fundamentals of Problem Solving, Business Communications, Marketing, Entrepreneurship, Operations Management, Management Information Systems, Accounting, Finance, Management and Human Resources. A focus on the use of Excel in business applications is introduced. Upon completion, students will be able to demonstrate an understanding of business concepts as a foundation for studying other business subjects. This course is a pre-requisite for all School of Business Principles (designated as 301 level) courses.

BIZ 294. Special Topics in the School of Business Administration. 3

## Hours

Special Topics in the School of Business Administration.

## BIZ 400. Dean's Leadership Lab. 1-6 Hours

Dean's Leadership Lab.
BIZ 497. Lab Work Experience. 1-6 Hours

## Interdisciplinary-Bus Courses

## Economics and Finance

Majors:

- Bachelor of Science in Business Administration, Business Economics (p. 303)
- Bachelor of Science in Business Administration, Finance (p. 304)
- Bachelor of Science in Business Administration, Finance-Investment Management Emphasis (p. 305)

Minors:

- Business Economics (p. )
- Finance (p. 305)

The Department of Economics and Finance offers majors in business economics and finance for students in the School of Business Administration. Finance majors also have the ability to earn an (optional) emphasis in investment management. The department also offers majors in economics (p. 164) and applied mathematical economics (p. 209) for students in the College of Arts and Sciences (search these majors to view their requirements). Minors in economics, business economics, and finance are available to all students.

## Faculty

Tony Caporale, Chairperson
Professors: Caporale, Chen, Ruggiero, F. A. Wang
Associate Professors: Chang, Collier, Mohan, Poitras, Zhang
Assistant Professors: Fulkerson, Haskell, Schutte, J. Wang, Williams, Yan Lecturers: Douglas, John, Kapusta, Shimmin

## Business Economics

Economics teaches students to think analytically about problems that arise in business, politics, and everyday life. The business economics major offers students the strength of economic theory combined with a focus in an area of applied business and develops the student's quantitative skills by requiring course work in econometrics or forecasting. The major is excellent preparation for a wide range of employment opportunities in business, government, and education. It also prepares students for graduate study in law, public policy, and business. Students who wish to pursue graduate study in economics should supplement the major with additional mathematics courses or major in applied mathematical economics.

In addition to other requirements, a major in business economics requires: ECO 203-204 (with a grade of C or better), ECO 340 or 346, ECO 410 or 441, ECO 490, 6 additional semester hours of economics electives, and a breadth requirement, which is a total of 6 additional semester hours of courses in economics electives, or mathematics or business courses from the approved list. See the department office for the approved breadth requirement courses.

## Faculty

Tony Caporale, Chairperson
Edmund B. O'Leary Professor of Economics: Ruggiero
Professors: Caporale, Ruggiero
Associate Professors: Collier, Poitras
Assistant Professors: Haskell, J. Wang, Williams
Lecturer: John

## Bachelor of Science in Business Administration, Business Economics (ECB) minimum 125 hours



| ENG 200 Writing Seminar II |  |
| :---: | :---: |
| Oral Communication | 3 |
| CMM 100 Principles of Oral Communication |  |
| Mathematics | 3 |
| Social Science | 3 |
| SSC 200 Social Science Integrated |  |
| Arts | 3 |
| Natural Sciences ${ }^{4}$ | 7 |
| Crossing Boundaries | variable credit |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |
| Advanced Study | variable credit |

Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice 3
Major Capstone 0-3

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

## SBA Core Curriculum

| ACC 207 | Introduction to Financial Accounting | 3 |
| :---: | :---: | :---: |
| ACC 208 | Introduction to Managerial Accounting | 3 |
| BIZ 101 | Business Education Planning | 1 |
| BIZ 102 | Introduction to Business | 3 |
| DSC 210 | Statistics for Business I | 3 |
| DSC 211 | Statistics for Business II | 3 |
| ECO 203 | Principles of Microeconomics | 3 |
| ECO 204 | Principles of Macroeconomics | 3 |
| ENG 372 | Business and Professional Writing | 3 |
| FIN 301 | Introduction to Financial Management | 3 |
| MGT 201 | Legal Environment of Business | 3 |
| MGT 301 | Organizational Behavior | 3 |
| MGT 490 | Managing the Enterprise | 3 |
| MTH 128 | Finite Mathematics | 3 |
| MTH 129 | Calculus for Business | 3 |
| MIS 301 | Information Systems in Organizations | 3 |
| MKT 301 | Principles of Marketing | 3 |
| OPS 301 | Survey of Operations \& Supply Management | 3 |
| $\text { PHL } 313$ <br> or REL 368 | Business Ethics <br> Christian Ethics \& the Business World | 3 |
| ECO elective (300/400 level) |  | 3 |
| BWISE requirement |  | 0 |
| Major Requirements ${ }^{1}$ |  | 18 |
| $\begin{aligned} & \text { ECO } 340 \\ & \text { or ECO } 346 \end{aligned}$ | Managerial Economics <br> Intermediate Microeconomic Analysis | 3 |


| ECO 410 | Business \& Economic Forecasting <br> or ECO 441 | Econometrics |
| :--- | :--- | :--- |
| ECO 490 | Senior Seminar in Applied Economics (Satisfies <br> CAP Major Capstone) | 3 |

## Academic electives to bring total to at least 125 credits

## Minor in Business Economics (ECB)

## Business Economics

| Business Majors |  |  |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { ECO } 340 \\ & \text { or ECO } 346 \end{aligned}$ | Managerial Economics Intermediate Microeconomic Analysis | 3 |
| $\begin{aligned} & \text { ECO } 410 \\ & \text { or ECO } 441 \end{aligned}$ | Business \& Economic Forecasting Econometrics | 3 |
| Select two ECO | ctives (300/400 level) | 6 |
| Total Hours |  | 12 |
| Non-Business Majors |  |  |
| ECO 203 | Principles of Microeconomics | 3 |
| ECO 204 | Principles of Macroeconomics | 3 |
| $\begin{aligned} & \text { ECO } 340 \\ & \text { or ECO } 346 \end{aligned}$ | Managerial Economics Intermediate Microeconomic Analysis | 3 |
| $\begin{aligned} & \text { ECO } 410 \\ & \text { or ECO } 441 \end{aligned}$ | Business \& Economic Forecasting Econometrics | 3 |
| Select two ECO electives (300/400 level) |  | 6 |
| Total Hours |  | 18 |

## Finance

The finance major provides students with a working understanding of the financial decision-making process, how financial markets function, and the acquisition and management of capital. A student may choose a general finance curriculum or specialize in courses relating to investment analysis and portfolio management, financial institutions and services, or corporate financial management. Students will be prepared for a variety of careers in business and in the government sector with work in areas such as financial analysis, capital budgeting, banking, mergers and acquisitions, working capital management, real estate, and insurance. A major in finance is also excellent preparation for graduate studies in business administration or corporate and securities law.

In addition to other requirements, the major in finance consists of FIN 360, and FIN 401 or FIN 460 ; six semester hours of 400 level finance electives; and six additional semester hours of 300 or 400 level finance electives. Finance majors must earn at least a C+ in FIN 301, Introduction to Financial Management. One of the electives may come from:ACC 305, ECO 415, ECO 488 or MTH 490.

Finance Major with Investment Management Emphasis

3 The objective of the Investment Management Emphasis is to provide better guidance on finance course selection to our students interested in a career in investment management. Investment management is the professional management of assets on behalf of a client. These assets can be publicly traded securities (stocks, bonds, and derivatives), commodities, real estate or foreign currencies. An investment manager acts as a fiduciary agent and her main occupation is to help her clients' meet their specified investment goals. An investment manager can work for or on behalf of a financial institution (insurance companies, mutual funds, hedge funds, pension funds, corporations, brokerage firms, investment banks, and non-profits) or a private investor. Money managers, financial advisors, traders, and analysts are all part of the investment management industry. The services provided by financial managers include financial statement analysis, asset and portfolio selection, and evaluation of investment performance.

To earn the Investment Management Emphasis, the courses selected for the finance major should fulfill the following three requirements:

1. FIN 470 (Fixed Income Securities) or FIN 480 (Options and Futures Markets)
2. FIN 460 (Portfolio Management and Security Analysis)
3. One course from the following list (if not already taken):

- FIN 470 (Fixed Income Securities)
- FIN 480 (Options and Futures Markets)
- FIN 479 (Seminar in Bond Portfolio Management)
- FIN 481 (Fundamental and Technical Trading)
- FIN 482 (Energy Markets)
- FIN 484 (Advanced Trading Techniques)
- FIN 493 (Seminar in Investments)


## Faculty

Tony Caporale, Chairperson
William J. Hoben Professor of Finance: Chen
Professors: Chen, F. A. Wang
Associate Professors: Chang, Mohan, Zhang
Assistant Professors: Fulkerson, Schutte, Yan
Lecturers: Douglas, Kapusta, Shimmin

## Bachelor of Science in Business Administration, Finance (FIN) minimum 125 hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |  |
| :---: | :---: | :---: |
| REL 103 | Introduction to Religious and Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |


| Arts | 3 |
| :--- | :---: |
| Natural Sciences ${ }^{4}$ | 7 |
| Crossing Boundaries | variable |
|  | credit |

ECO 415
MTH $490 \quad$ Game Theory with Business Applications
Finance majors must earn a C+ or better in FIN 301.

| Faith Traditions |  |
| :--- | :--- |
| Practical Ethical Action |  |
| Inquiry | variabl |
| Integrative | credit |
| Advanced Study |  |

Investment Management Emphasis Requirements 9

| FIN 470 | Fixed Income Securities | 3 |
| :--- | :--- | :---: |
| or FIN 480 | Options \& Futures Markets |  |
| FIN 460 |  <br> Security Analysis | 3 |
| Select one FIN elective (if not already taken): | 3 |  |


| Historical Studies ${ }^{5}$ | 3 |
| :--- | ---: |
| Diversity and Social Justice | $0-3$ |
| Major Capstone |  |

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

| SBA Core Curriculum |  |  |
| :--- | :--- | :--- |
| ACC 207 | Introduction to Financial Accounting | 3 |
| ACC 208 | Introduction to Managerial Accounting | 3 |
| BIZ 101 | Business Education Planning | 1 |
| BIZ 102 | Introduction to Business | 3 |
| DSC 210 | Statistics for Business I | 3 |
| DSC 211 | Statistics for Business II | 3 |
| ECO 203 | Principles of Microeconomics | 3 |
| ECO 204 | Principles of Macroeconomics | 3 |
| ENG 372 | Business and Professional Writing | 3 |
| FIN 301 | Introduction to Financial Management | 3 |
| MGT 201 | Legal Environment of Business | 3 |
| MGT 301 | Organizational Behavior | 3 |
| MGT 490 | Managing the Enterprise | 3 |
| MTH 128 | Finite Mathematics | 3 |
| MTH 129 | Calculus for Business | 3 |
| MIS 301 | Information Systems in Organizations | 3 |
| MKT 301 | Principles of Marketing | 3 |
| OPS 301 | Survey of Operations \& Supply Management | 3 |
| PHL 313 | Business Ethics | 3 |
| or REL 368 | Christian Ethics \& the Business World |  |
| ECO elective (300/400 level) | 3 |  |
| BWISE requirement | 0 |  |


| Major Requirements ${ }^{1}$ | 18 |  |
| :--- | :--- | ---: |
| FIN 360 | Investments | 3 |
| FIN 401 | Finance Capstone: Advanced Financial Analysis | 3 |
| or FIN 460 | Finance Capstone: Portfolio Management \& Security |  |

Select two FIN electives (400 level) 6

Select two FIN electives (300-400 level), one may be from: 6

## Business Economics

First Year Hours
BIZ 101 1

BIZ 1023
CMM 100 (Satisfies CAP Oral Communication) 3
ECO 203 3,4
ECO 204 3
ENG 100 (CAP Humanities Commons) 3,4
HST 103 (CAP Humanities Commons) 3
MTH 128
MTH 129 (Satisfies CAP Mathematics) 3
PHL 103 (CAP Humanities Commons) 3

| REL 103 (CAP Humanities Commons) | 3 |
| :--- | ---: |
| CAP Natural Science | 3 |
|  | $34-36$ |
| Second Year | Hours |
| ACC 207 | 3 |
| ACC 208 | 3 |
| DSC 210 | 3 |
| DSC 211 | 3 |
| ECO 340 or 346 | 3 |
| ENG 200 | $3-4$ |
| MGT 201 | 3 |
| FIN 301 | 3 |
| SSC 200 | 3 |
| CAP Natural Science \& Lab | 4 |
|  | $31-32$ |
| Third Year | Hours |
| ECO 410 or 441 | 3 |
| MIS 301 | 3 |
| MGT 301 | 3 |
| MKT 301 | 3 |
| OPS 301 | 3 |
| ECO 300-400 Electives | 3 |
| CAP ADV PHL/Div. \& SJ | 3 |
| CAP Faith Trad./Adv. HST | 3 |
| CAP Arts Study | 3 |
|  | 3 |
| Fourth Year | 3 |
| ECB major breadth elective | 3 |
| ENG 372 | 3 |
| ECO 490 (Satisfies CAP Major Capstone) | 3 |
| MGT 490 (Satisfies CAP Integrative) | 3 |
| General Electives | 3 |
| PHL 313 or REL 368 | 3 |
|  | 3 |
|  | 3 |

Total credit hours: 125-128

## Finance

| First Year | Hours |
| :--- | ---: |
| BIZ 101 | 1 |
| BIZ 102 | 3 |
| CMM 100 (Satisfies CAP Oral Communication) | 3 |
| ECO 203 | 3,4 |
| ECO 204 | 3 |
| ENG 100 (CAP Humanities Commons) | 3,4 |
| HST 103 (CAP Humanities Commons) | 3 |
| MTH 128 | 3 |
| MTH 129 (Satisfies CAP Mathematics) | 3 |
| PHL 103 (CAP Humanities Commons) | 3 |
| REL 103 (CAP Humanities Commons) | 3 |
| CAP Natural Science | 3 |
|  | $34-36$ |
| Second Year | Hours |
| ACC 207 | 3 |
| ACC 208 | 3 |
| DSC 210 | 3 |
| DSC 211 | 3 |
| ENG 200 | $3-4$ |
| MGT 201 | 3 |
| MKT 301 | 3 |
| SSC 200 | 3 |
| CAP Natural Science \& Lab | 4 |


| CAP Arts Study | 3 |
| :--- | ---: |
|  | $31-32$ |
| Third Year | Hours |
| FIN 301 ${ }^{\text {min. C+ required) }}$ | 3 |
| FIN 360 | 3 |
| FIN 300-400 Elective | 3 |
| MGT 301 | 3 |
| MIS 301 | 3 |
| OPS 301 | 3 |
| CAP ADV PHL/Div. \& SJ | 3 |
| CAP Faith Trad./Adv. HST | 3 |
| ENG 372 | 3 |
| ECO 300-400 Elective | 3 |
|  | 30 |
| Fourth Year | Hours |
| FIN 401 or 460 | 3 |
| FIN 300-400 Elective | 3 |
| FIN 400 Electives | 6 |
| MGT 490 (Satisfies CAP Integrative) | 3 |
| General Electives | 12 |
| PHL 313 or REL 368 | 3 |

Total credit hours: 125-128

## Finance with Investment Management Emphasis

| First Year | Hours |
| :--- | ---: |
| BIZ 101 | 1 |
| BIZ 102 | 3 |
| ENG 100 (CAP Humanities Commons) | 3,4 |
| ECO 203 | 3,4 |
| ECO 204 | 3 |
| HST 103 (CAP Humanities Commons) | 3 |
| PHL 103 (CAP Humanities Commons) | 3 |
| REL 103 (CAP Humanities Commons) | 3 |
| MTH 128 | 3 |
| MTH 129 (Satisfies CAP Mathematics) | 3 |
| CMM 100 (Satisfies CAP Oral Communication) | 3 |
| CAP Component (generally CAP Arts or CAP Natural | 3 |
| Sciences) |  |
|  | $34-36$ |
| Second Year | Hours |
| ACC 207 | 3 |
| ACC 208 | 3 |
| DSC 210 | 3 |
| DSC 211 | 3 |
| ECO Elective | 3 |
| ENG 200 | $3-4$ |
| FIN 301 | 3 |
| MGT 201 | 3 |
| SSC 200 | $31-32$ |
| CAP Components | 3 |
|  | 3 |
| Third Year | 3 |
| MGT 301 | 3 |
| MIS 301 | 3 |
| OPS 301 | 3 |
| MKT 301 | 3 |
| FIN 360 | 313 or REL 368 |
| PHL | 3 |


| FIN Electives (see major requirements for choices) | 6 |
| :--- | ---: |
| CAP Components or General Electives | 6 |
|  | 30 |
| Fourth Year | Hours |
| FIN 460 | 3 |
| ENG 372 | 3 |
| FIN 470 or 480 | 3 |
| FIN Elective from the Investment Management list | 3 |
| MGT 490 (Satisfies CAP Integrative) | 3 |
| CAP Components or General electives | 15 |
| *See DegreeWorks to ensure one of FIN courses |  |
| taken is an approved Major Capstone course. | 30 |

Total credit hours: 125-128

## Economics Courses

ECO 203. Principles of Microeconomics. 3,4 Hours
An introduction to consumer and producer behavior in a market economy, demand and supply, pricing and firm behavior under perfect and imperfect competition, and the distribution of income. Discussion of current topics in microeconomics may be included.

## ECO 204. Principles of Macroeconomics. 3 Hours

Introductory economic analysis of the macroeconomy; the determination of gross national product, employment, inflation and the interest rate in the U.S. economy. Government policy, money and banking, and international trade are analyzed.

## ECO 340. Managerial Economics. 3 Hours

Application of economic models to managerial decision making. Topics include demand analysis, forecasting demand, short-run cost analysis, long-run cost and production functions, pricing, and risk and uncertainty. May not get credit for both ECO 340 and ECO 346. ECB, ECO, MTE majors \& minors only. Prerequisite(s): ECO 203.

## ECO 346. Intermediate Microeconomic Analysis. 3 Hours

Analysis of the theory of consumer behavior, production theory, equilibrium of the firm, price determination in various market structures, distribution of income, allocation of resources, and welfare economics. May not get credit for both ECO 346 and ECO 340. ECO, ECB, and MTE majors and minors only. Prerequisite(s): ECO 203.

## ECO 347. Intermediate Macroeconomic Analysis. 3 Hours

National income accounting and the determination of the level of income and employment; classical, Keynesian, and post-Keynesian models; private, government, and foreign sectors; theories of inflation and economic growth. ECO, ECB, and MTE majors and minors only. Prerequisite(s): ECO 204, ECO 203.

## ECO 390. Antitrust Economics. 3 Hours

Study of how economic analysis has been applied in the interpretation of the antitrust statutes. Examines major anti-trust laws and relevant case law; reviews economic theories of market behavior. Prerequisite(s): ECO 203.

## ECO 410. Business \& Economic Forecasting. 3 Hours

Forecasting techniques, including ARIMA time series models, econometric models, moving averages, exponential smoothing, and time series decomposition, are used to forecast business and economic variables. Data sources, selection of appropriate forecasting tools and models, and evaluation of forecast results are studied. Prerequisite(s): ECO 203, ECO 204; Statistics (DSC 211 or MTH 207 or MTH 367 or MTH 411).

ECO 415. Game Theory with Business Applications. 3 Hours Introductory course in strategic decision making; provides a thorough discussion of the basic techniques of applied game theory and of systematic thinking in making business decisions. Among the topics covered with applications to business are equilibrium strategies, understanding situations involving conflict and cooperation, auction design and bidding strategy, and bargaining and negotiations. Prerequisite(s): ECO 203.

## ECO 435. Economics of the Environment. 3 Hours

Introduction to the economics of the global environment including an analysis of market failure as a cause of environmental degradation. Topics covered include cost-benefits analysis, criteria for public investment, regulation of the environment, and the sustainable global environment. Prerequisite(s): ECO 203.

## ECO 441. Econometrics. 3 Hours

Training in the art of making economic measurements from empirical data using regression analysis as the principle tool; use of computer software to estimate and test regression equations; interpretation of results using statistical inference. Prerequisite(s): ECO 203, ECO 204,[one of the following DSC 211, MTH 207, MTH 367, or MTH 411].

## ECO 442. Money \& Banking. 3 Hours

Principles of money and monetary systems; commercial banking and the role of the Federal Reserve System; monetary theory and policy; the mechanism of international payments. Prerequisite(s): ECO 203, ECO 204.

## ECO 445. Public Finance. 3 Hours

The economic aspects of government finance at the local, state, and especially the national level; the behavioral effects of various taxes, efficiency in spending, the changing role of the U.S. government, fiscal policy, and intergovernmental revenue and expenditure programs; emphasis on relating analytical tools to current developments.
Prerequisite(s): ECO 203, ECO 204.

## ECO 460. Economic Development \& Growth. 3 Hours

Study of various dynamic economic theories of growth and structural change; the role of particular factors of production and related noneconomic variables in the development process, primarily, though not exclusively, of Third World nations. Prerequisite(s): ECO 203, ECO 204.

## ECO 461. International Economics. 3 Hours

Major issues surrounding international trade and finance, the economic interdependence of nations and businesses, essential theoretical and empirical tools necessary to monitor and analyze international economic phenomena, and the application of these tools to contemporary business problems and issues. Prerequisite(s): ECO 203, ECO 204.

## ECO 471. Labor Economics. 3 Hours

Theory of labor supply and demand, human capital theory, and the process by which wages are determined in various factor markets; applications to topics of unemployment, unions, migration, discrimination, and skill differentials. Prerequisite(s): ECO 203, ECO 204.

## ECO 480. Sports Economics. 3 Hours

The application of economic analysis to the sports industry. Examines demand and efficiency in the product market; the labor market for professional athletes and mechanisms for restricting competition in that market; problems in achieving an efficient allocation of resources in the sports industry. Prerequisite(s): ECO 203.

## ECO 485. Urban \& Regional Economics. 3 Hours

Treatment of certain theoretical concepts such as location theory and theories of land use and land rent; an economic interpretation for the existence of cities; applying economic analysis to the problems of traffic congestion, pollution, race, poverty, and urban sprawl. Prerequisite(s): ECO 203.

ECO 488. Production Economics \& Performance Evaluation. 3 Hours Intermediate course in theoretical and applied microeconomic production theory; provides a thorough discussion of the basic techniques of applied production theory and performance evaluation of decision making units. Topics include returns to scale, technical and allocative efficiency, benchmarking, environmental costs, and programming. Prerequisite(s): ECO 203.

## ECO 490. Senior Seminar in Applied Economics. 3 Hours

The capstone seminar course is required for all Economics and Business Economics majors. Students apply economic analysis to topics of interest through projects, presentations, and group discussion, as directed by the instructor. The course provides students the opportunity to extend their proficiency in theoretical, mathematical, and statistical methods learned in previous economics courses through practical application.Typically offered during the spring semester. Economics or Business Economics majors only. Prerequisite(s): 12 semester hours in Economics, including one (1) of the following: ECO 441 or ECO 410. Senior standing only.

## ECO 491. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

## ECO 492. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

## ECO 494. Seminar. 3 Hours

Subject varies from time to time. May be taken more than once if topic changes. Prerequisites to be announced.

## ECO 496. Cooperative Education. 3 Hours

Optional full-time work period off campus alternating with study period on campus. Does not count toward economics major. Permission of chairperson required. Economics or Business Economics majors only. Prerequisite(s): Permission of department chairperson.

## ECO 497. Internship for General Elective Credit. 1-3 Hours

Practical work experience associated with career development and career exploration relating to the student's major. Permission of the department chair or designee required. Does not replace economics courses for the economics major. Economics or Business Economics majors only. Prerequisite(s): Forty-five semester hours of credit.

## ECO 498. Independent Study in Economics. 1-6 Hours

Directed readings and research in selected fields of economics. The number of semester hours will depend on the amount of work chosen. The course will involve periodic discussions with faculty and other students in the course. May be taken more than once for additional credit. Prerequisite(s): 3.0 GPA in economics with a minimum of nine semester hours in economics; nomination by faculty; permission of the department chairperson.

## Finance Courses

FIN 229. Corporate Finance. 3 Hours
Studies link between corporate finance, financial markets and stockholder gains or losses.

## FIN 300. Survey of Financial Management. 3 Hours

Principles and techniques used by business firms in managing and financing their current and fixed assets; sources of funds within the capital markets; determinants of the financial structure; analytical techniques. Prerequisite(s): (ACC 200 or ACC 207 or [ACC 300A and ACC 300B]); (ECO 203 or 204); Non-business majors only.

## FIN 301. Introduction to Financial Management. 3 Hours

Principles and techniques used by business firms in managing and financing their current and fixed assets; sources of funds within the capital markets; determinants of the financial structure; analytical techniques. Prerequisite(s): (BIZ 100 or BIZ 102 or BAI 151); (ACC 200 or ACC 207 or [ACC 300A and ACC 300B]); (ECO 203 or 204); business majors only.

## FIN 315. Spreadsheet Modeling in Finance. 3 Hours

This lab course focuses on building financial models in Excel. Students will learn to construct models for practical, real-world applications that cover simple examples such as cash flow and ratio analysis to more complicated models of bond pricing, stock valuation and option pricing. In the process, students will master basic Excel skills and more advanced useful techniques. Prerequisite(s): FIN 300 or FIN 301.

## FIN 330. Insurance \& Risk Management. 3 Hours

Study of the basic concepts of business and personal risks from the standpoint of creation, identification, reduction, elimination, and evaluation of risks; the use of insurance in meeting problems of risk. Prerequisite(s): FIN 300 or FIN 301.

## FIN 336. Principles of Real Estate. 3 Hours

Survey of real estate industry with emphasis on its structure, regulation, growth, needs, financing, and future. Analysis of the methods for determining land use and evaluation of the theories of city development. Prerequisite(s): FIN 300 or FIN 301.

## FIN 340. Personal Financial Consulting. 3 Hours

This course introduces students to the concepts and practical implementation of professional financial planning, with a focus on the fundamentals of asset and income protection, capital accumulation, retirement planning, and estate planning. Emphasis is on integrating these elements into a comprehensive personal financial plan. The course also addresses client interactions, professional ethics and standards, the regulatory environment, and the business of financial planning. Prerequisite(s): FIN 300 or FIN 301.

## FIN 360. Investments. 3 Hours

The principles and techniques used by the investor in selecting securities, emphasis on the stock and bond markets; security valuation methods leading to the selection of individual issues; portfolio theory. Prerequisite(s): FIN 300 or FIN 301, with minimum grade of C+.

## FIN 371. Financial Markets \& Institutions. 3 Hours

Study of financial markets and financial institutions, including the Federal Reserve, interest rate theories, money and capital market securities, interest rate futures, options and swaps, international financial markets, such as commercial banking, insurance, and investment banking. Prerequisite(s): FIN 300 or FIN 301, with minimum grade of C+.

FIN 401. Finance Capstone: Advanced Financial Analysis. 3 Hours This course creates a capstone experience for finance majors interested in pursuing a career in corporate finance. Topics introduced in FIN301 and FIN360 (prerequisites) as well as in Accounting 207 and Economics 203 and 204, are integrated into the financial analysis required to successfully play the simulation FinGame5.0. Students run a single product firm and must analyze current and estimated quarterly data to make decisions about capital budgeting proposals (efficiency projects as well as capital expansion); production scheduling; product pricing; dividend policy; capital structure; and short term financing. Prerequisite(s): FIN 360.
FIN 402. Mergers, Acquisitions, Capital Restructuring \& Corporate Governance. 3 Hours
In depth study of company valuation techniques and the influence of the governance structure - the CEO, President, and the Board of Directors - on company value. Prerequisite(s): FIN 360 .

## FIN 450. International Business Finance. 3 Hours

Introduction to problems facing financial management of international companies, including foreign exchange risk, working capital and capital budgeting decisions for multinational corporations, international financing, accounting and control. Prerequisite(s): FIN 300 or FIN 301.
FIN 460. Finance Capstone: Portfolio Management \& Security Analysis. 3 Hours
Advanced valuation theory and security analysis; portfolio construction, evaluation, and management. Senior status required. Prerequisite(s): FIN 360.

## FIN 470. Fixed Income Securities. 3 Hours

Introduction to the analytical/computational techniques for pricing fixed income securities, interest rate derivatives, and implementing effective portfolio strategies to control interest rate risk and enhance return. Prerequisite(s): FIN 360 or FIN 371.

## FIN 471. Management of Financial Institutions. 3 Hours

Integrated and comprehensive analysis of financial institutions that include depository institutions, insurance companies, securities firms, and investment companies. Prerequisite(s): FIN 371.

FIN 475. Commercial Bank Management. 3 Hours
Explores the environment in which banks must operate, the financial statements of banks, and a thorough study of bank management topics which include: asset-liability management, the investment portfolio, sources of funds, and the loan portfolio. Prerequisite(s): FIN 360 or FIN 371.

## FIN 479. Seminar in Bond Portfolio Management. 3 Hours

Theory and practice in active bond portfolio management. Literature and practical issues related to managing a bond fund. Seminar format; students are divided into teams, each responsible for a specific sector of the fixed income market. Prerequisite(s): FIN 360 or FIN 371.

## FIN 480. Options \& Futures Markets. 3 Hours

Study of options, futures, and other derivatives fundamentals, trading strategies, hedging, speculation, and arbitrating, pricing theories, and market regulations. Prerequisite(s): FIN 360 or FIN 371.
FIN 481. Introduction to Technical Trading. 3 Hours
The art and science of speculative foreign exchange trading, focusing on spot trading of Euros. Students implement a trading plan in a real foreign exchange environment under a set risk management policy. Students learn to watch the market, analyze profitable situations, and produce winning trades. Prerequisite(s): FIN 360.

## FIN 482. Energy Markets. 3 Hours

Energy market portfolio skills: physicality of natural gas market, natural gas pricing, natural gas portfolio transactions including hedging, basic risk management. VaR simulation produced, power pricing and risk management, weather hedging, credit derivatives and their use in energy. Oil basics and pricing a tolling agreement. Prerequisite(s): FIN 360.

## FIN 484. Advanced Trading Techniques. 3 Hours

Topics include appropriate leverage, when to take profits, when to have a stop loss, and hedging strategies. Students will learn to write short-term trading plans encompassing fundamental news events and technical charting, then implement a longer view. Each student is expected to open a real micro account from $\$ 300-\$ 500$. Prerequisite(s): FIN 481.

## FIN 490. Special Topics in Finance. 3 Hours

Subject varies from time to time. May be taken more than once if the topic changes. Prerequisite(s): FIN 301.

## FIN 491. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

## FIN 492. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

## FIN 493. Seminar in Investments. 3 Hours

Application of investment theory and techniques in a real-world setting. Students manage a funded portfolio in terms of establishing objectives, selecting securities to buy (sell), and evaluating portfolio performance. Emphasis is placed upon attempting to identify undervalued common stocks. Admission to the course is limited and must be approved by the instructor. Prerequisite(s): FIN 360 and permission of department chair.

## FIN 494. Sem-Comm, Drvt\&Eq Trad. 3 Hours

Application of derivatives trading strategies and financial data mining techniques based on equity, futures, options, and swaps in a real-world setting. Simulated derivatives trading using professional trading platform and strategies. Admission to the course is limited. Prerequisite(s): FIN 301.

## FIN 496. Cooperative Education. 3 Hours

Optional full-time work period off campus alternating with study period on campus. (See Chapter X; consult Cooperative Education Office for details.) Does not count toward finance major. Finance majors only. Prerequisite(s): Permission of department chairperson.

## FIN 497. Internship for General Elective Credit. 1-3 Hours

Practical work experience associated with career development and career exploration relating to the student's major. Permission of department chair or designee required. Does not replace finance courses for the finance major. Finance majors only. Prerequisite(s): Forty-five semester hours of credit.

## FIN 498. Independent Study in Finance. 1-6 Hours

Directed readings and research in selected fields of finance. The number of semester hours will depend on the amount of work chosen. The course will involve periodic discussions with other students and faculty in the program. May be taken more than once for additional credit. Prerequisite(s): 3.0 GPA in Finance; minimum of nine semester hours in Finance; nomination by faculty; permission of department chairperson.

# Management Information Systems, Operations Management, and Decision Sciences 

Majors:

- Bachelor of Science in Business Administration, Management Information Systems (p. 310)
- Bachelor of Science in Business Administration, Operations and Supply Management (p. 312)

Minors:

- Business Analytics (p. 314)
- Business Intelligence (p. 311)
- Cyber-Security (p. 311)
- Management Information Systems (p. 312)
- Operations and Supply Management (p. 313)

The Department of Management Information Systems, Operations Management and Decision Sciences offers courses in several quantitative and systems areas, a major and a minor in management information systems, a major and minor in operations and supply management, and minors in business analytics, business intelligence and cyber-security.

## Faculty

Jayesh Prasad, Chairperson
Professor Emeritus and Distinguished Service Professor: Bohlen
Professors Emeriti: Amsden, Hoffer, Ferratt
Sherman-Standard Register Professor of Cyber-security Management:
Salisbury
Sherman-Standard Register Associate Professor of MIS: Wynn
Niehaus Chair in Operations Management: Kanet
Professors: Dunne, Enns, Gorman, Kanet, Prasad, Salisbury, Wells
Associate Professors: Jacobs, Wynn
Assistant Professors: Chen, Nittala, Raman
Visiting Assistant Professor: Hvalshagen
Lecturers: Edelmann, Hall, Wagner

## Management Information Systems

The MIS major at the University of Dayton is designed primarily to develop business systems analysts. These professionals analyze and design information systems in business organizations and marshal resources (i.e. manage projects) to bring the systems development effort to successful completion. MIS professionals also facilitate the successful operation and maintenance of organizational information systems.

The major is comprised of eighteen hours of required courses which make up the MIS core and six hours of elective courses taken for breadth. Optionally, this breadth requirement can be satisfied by completing a related minor - currently Business Intelligence or Cyber Security - or by completing a double major in another business discipline.
Related minors will change from time to time, reflecting the dynamic nature of the MIS discipline. Students should meet with their advisor to decide whether to opt for elective courses, a related minor, or a doublemajor consistent with their interests and career goals.

## Faculty

Jayesh Prasad, Chairperson

Professor Emeritus and Distinguished Service Professor: Bohlen Professors Emeriti: Amsden, Hoffer, Ferratt
Sherman-Standard Register Professor of Cyber-security Management: Salisbury
Sherman-Standard Register Associate Professor of MIS: Wynn Niehaus Chair in Operations Management: Kanet
Professors: Dunne, Enns, Gorman, Kanet, Prasad, Salisbury, Wells
Associate Professors: Jacobs, Wynn
Assistant Professors: Chen, Nittala, Raman
Visiting Assistant Professor: Hvalshagen
Lecturers: Edelmann, Hall, Wagner

# Bachelor of Science in Business Administration, Management Information Systems (MIS) minimum 125 hours 

| Common Academic Program (CAP) |  |
| :---: | :---: |
| *credit hours will vary depending on courses selected |  |
| First-Year Humanities Commons ${ }^{1}$ | 12 |
| HST 103 The West \& the World |  |
| REL 103 Introduction to Religious and Theological Studies |  |
| PHL 103 Introduction to Philosophy |  |
| ENG 100 Writing Seminar ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ | 0-3 |
| ENG 200 Writing Seminar II |  |
| Oral Communication | 3 |
| CMM 100 Principles of Oral Communication |  |
| Mathematics | 3 |
| Social Science | 3 |
| SSC 200 Social Science Integrated |  |
| Arts | 3 |
| Natural Sciences ${ }^{4}$ | 7 |
| Crossing Boundaries | variable credit |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |
| Advanced Study | variable credit |
| Philosophy and/or Religious Studies |  |
| Historical Studies ${ }^{5}$ |  |
| Diversity and Social Justice | 3 |
| Major Capstone | 0-3 |
| 1 Completed with ASI 110 and ASI 120. |  |
| 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement. |  |
| 3 Completed with ENG 200H or ASI 120. |  |
| 4 Must include two different disciplines and accompanying lab. <br> U.S. History AP credit will not satisfy this requirement. |  |

SBA Core Curriculum

| ACC 207 | Introduction to Financial Accounting | 3 |
| :--- | :--- | :--- |
| ACC 208 | Introduction to Managerial Accounting | 3 |
| BIZ 101 | Business Education Planning | 1 |


| BIZ 102 | Introduction to Business | 3 |
| :--- | :--- | :--- |
| DSC 210 | Statistics for Business I | 3 |
| DSC 211 | Statistics for Business II | 3 |
| ECO 203 | Principles of Microeconomics | 3 |
| ECO 204 | Principles of Macroeconomics | 3 |
| ENG 372 | Business and Professional Writing | 3 |
| FIN 301 | Introduction to Financial Management | 3 |
| MGT 201 | Legal Environment of Business | 3 |
| MGT 301 | Organizational Behavior | 3 |
| MGT 490 | Managing the Enterprise | 3 |
| MTH 128 | Finite Mathematics | 3 |
| MTH 129 | Calculus for Business | 3 |
| MIS 301 | Information Systems in Organizations | 3 |
| MKT 301 | Principles of Marketing | 3 |
| OPS 301 | Survey of Operations \& Supply Management | 3 |
| PHL 313 | Business Ethics | 3 |
| or REL 368 | Christian Ethics \& the Business World |  |
| ECO elective (300/400 level) | 3 |  |
| BWISE requirement | 0 |  |

## Major Requirements

| MIS 150 | Professional Development Experiences in Information Systems | 0 |
| :---: | :---: | :---: |
| MIS 305 | Introduction to Business Applications: Problem Solving with Visual Tools | 1 |
| MIS 325 | Programming for Business Systems | 4 |
| MIS 380 | Systems Analysis \& Re-Engineering | 3 |
| MIS 381 | Principles of Project Management | 1 |
| MIS 385 | Systems Implementation with Database Management Systems | 3 |
| MIS 465 | MIS Project I-Analysis \& Design in Teams (This course and MIS 475 together satisfy CAP Major Capstone.) | 3 |
| MIS 475 | MIS Project II-Design \& Implementation in Teams (This course and MIS 465 together satisfy CAP Major Capstone.) | 3 |
| Breadth courses through electives, related minors, or double majors. |  | 6 |

Total Hours 24

## Electives Option

Select two courses from:

| MIS 366 | Business Intelligence |
| :--- | :--- |
| MIS 368 | Principles of Information Security Management |
| MIS 430 | Telecommunications \& Networking |
| MIS 460 | Advanced Web Development |
| MIS 467 | Data Warehousing |
| MIS 468 | Internet Security |
| MIS 499 | Independent Study in Management Information <br>  <br> Systems |

## Related Minor Option

Complete requirements for one of these two minors: (1) Business Intelligence or (2) Cyber Security

## Double Major Option

Complete the requirements for any other SBA major.

## Academic electives to bring total to at least 125 credits <br> Minor in Business Intelligence (BIN)

| Minor in Business Intelligence |  |  |
| :---: | :---: | :---: |
| Business Majors |  |  |
| MIS 305 | Introduction to Business Applications: Problem Solving with Visual Tools | 1 |
| MIS 366 | Business Intelligence | 3 |
| MIS 385 | Systems Implementation with Database Management Systems | 3 |
| MIS 467 | Data Warehousing | 3 |
| MIS elective ${ }^{1}$ |  | 3 |
| Total Hours |  | 13 |
| Choose from DSC 375, ECO 410, ECO 441, MIS 368, MIS 460, MKT 436 or as approved by the coordinator. MIS majors must selec six semester hours from this list instead of three. |  |  |

Non-Business Majors
MIS 300 Survey of Management Information Systems 3 or MIS 301 Information Systems in Organizations
MIS 305 Introduction to Business Applications: Problem 1 Solving with Visual Tools
MIS 366 Business Intelligence 3
MIS 385 Systems Implementation with Database 3 Management Systems
Data Warehousing 3

| MIS 467 | Data Warehousing | 3 |
| :--- | :--- | :--- |
| MIS elective | 3 |  |

Total Hours 16

1 Choose from DSC 375, ECO 410, ECO 441, MIS 368, MIS 360, MKT 436 or as approved by the coordinator.

## Minor in Cyber-Security (CSM)

## Minor in Cyber-Security

Business Majors

| MIS 305 | Introduction to Business Applications: Problem <br>  <br>  <br> Solving with Visual Tools | 1 |
| :--- | :--- | ---: |
| MIS 368 | Principles of Information Security Management | 3 |
| MIS 430 | Telecommunications \& Networking | 3 |
| MIS 468 | Internet Security | 3 |
| $300 / 400$ MIS elective ${ }^{1}$ | 3 |  |
| Total Hours | 13 |  |

Non-Business Majors
$\left.\begin{array}{llr}\text { MIS 300 } & \begin{array}{l}\text { Survey of Management Information Systems } \\ \text { or MIS 301 }\end{array} & 3 \\ \text { Information Systems in Organizations }\end{array}\right]$

1 Any 300/400 MIS course
except MIS 491, MIS 492, MIS 497, MIS 498, MIS 499 or as approved by the coordinator. MIS majors must select from courses that are not required for the major.

## Minor in Management Information Systems (MIS)

Minor in Management Information Systems

| Business Majors |  |  |
| :--- | :--- | :--- |
| MIS 305 | Introduction to Business Applications: Problem <br> Solving with Visual Tools | 1 |
| MIS 380 | Systems Analysis \& Re-Engineering | 3 |
| MIS 381 | Principles of Project Management | 1 |
| MIS 385 | Systems Implementation with Database <br> Management Systems | 3 |
| Two 300/400 level courses ${ }^{1}$ | 6 |  |
| Total Hours | 14 |  |

1 Select six additional semester hours: at least three hours must be a 300 or 400 level MIS course (excluding MIS 491, MIS 492 , MIS 497, MIS 498, and MIS 499); three additional hours may be either from the list of approved relevant major courses or another 300 or 400 level MIS course (excluding those listed above). A relevant major course is one that features concepts intended to bridge between the MIS minor and the student's major. For the list of approved relevant major courses see the MIS minor coordinator. Other courses may be taken with approval of the MIS minor coordinator, in consultation with the student's major advisor(s). Currently approved relevant major courses are: ACC 401, DSC 375, ECO 410,ECO 441, MKT 436, and OPS 350.

Non-Business Majors

| MIS 300 | Survey of Management Information Systems <br> or MIS 301 | 3 |
| :---: | :--- | :---: |
| MIS 305 | Introduction to Business Applications: Problem <br> Solving with Visual Tools | 1 |
| MIS 380 | Systems Analysis \& Re-Engineering | 3 |
| MIS 381 | Principles of Project Management | 1 |
| MIS 385 | Systems Implementation with Database <br> Management Systems | 3 |
| Two 300/400 level courses ${ }^{1}$ | 6 |  |
| Total Hours |  | 17 |

1 Select six additional semester hours: at least three hours must be a 300 or 400 level MIS course (excluding MIS 491, MIS 492 , MIS 497, MIS 498, and MIS 499); three additional hours may be either from the list of approved relevant major courses or another 300 or 400 level MIS course (excluding those listed above). A relevant major course is one that features concepts intended to bridge between the MIS minor and the student's major. For the list of approved relevant major courses see the MIS minor coordinator. Other courses may be taken with approval of the MIS minor coordinator, in consultation with the student's major advisor(s). Currently approved relevant major courses are: ACC 401, DSC 375, ECO 410,ECO 441, MKT 436, and OPS 350.

## Operations and Supply Management

The operations and supply management program offered by the Department of Management Information Systems, Operations Management, and Decision Sciences includes a major and a minor in operations and supply management (OPS).

Students who major or minor in operations and supply management learn how to manage the core operations of an organization. These core operations use the human, technical, and financial resources of the organization to create goods and services for customers. Operations managers apply technical and quantitative tools and techniques, together with behavioral skills, to manage the transformation of inputs into outputs desired by customers. Operations managers participate in these transformation processes in many different roles, including:

- Process improvement analyst
- Quality assurance analyst
- Purchasing manager
- Production/inventory manager
- Warehouse manager
- Service facility manager
- Operations consultant

The OPS program is selective. UD students wishing to declare an OPS major must have an overall GPA of 2.8 or higher. Moreover, to declare and/or remain in the program students must earn a grade of $B$ - or higher in the introductory course (OPS 301) and DSC 211. Exceptions to these requirements must be approved by the Department Chair.

In addition to other requirements, the major in Operations and Supply Management requires OPS 350, Business Process Management; DSC 375, Management Science; OPS 401, Operations Planning and Control; OPS 480, Supply Chain Management Strategies; OPS 485, Capstone OPS Project I; OPS 495, Capstone OPS Project II; and six semester hours of OPS electives (at least 3 hours of electives in either OPS-or-DSCdesignated courses, or permission of Department Chair).

Students who major in OPS are encouraged to consider the many OPS co-op and internship opportunities with regional firms through association with UD's Career Services. Although not a requirement, most students do combine such experiences with their program of study in OPS. Experience shows that co-oping or interning in an OPS-related assignment affords students a richer appreciation of the applicability of their coursework and adds to the already strong position OPS grads enjoy in the job market. Normally the co-op experience requires an additional year to complete the degree, but because of the flexibility in course requirements, with advanced planning it is quite possible to complete a co-op and graduate in OPS within four years.

A minor in operations and supply management is available to students who want to acquire basic skills in this area and understand that doing so will enhance their ability to manage operations in any functional area of a business. A minor in operations and supply management consists of twelve hours for students in the School of Business Administration and 21 hours for non-business students.

## Faculty

Jayesh Prasad, Chairperson
Professor Emeritus and Distinguished Service Professor: Bohlen
Professors Emeriti: Amsden, Hoffer, Ferratt
Sherman-Standard Register Professor of Cyber-security Management: Salisbury

Sherman-Standard Register Associate Professor of MIS: Wynn Niehaus Chair in Operations Management: Kanet Professors: Dunne, Enns, Gorman, Kanet, Prasad, Salisbury, Wells Associate Professors: Jacobs, Wynn Assistant Professor: Chen, Nittala, Raman Visiting Assistant Professors: Hvalshagen Lecturers: Edelmann, Hall, Wagner

## Bachelor of Science in Business Administration, Operations and Supply Management (OPS) minimum 125 hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |


| Second-Year Writing Seminar $^{3}$ | $0-3$ |
| :--- | :---: |
| ENG $200 \quad$ Writing Seminar II $^{201}$ |  |

Oral Communication 3

| CMM 100 | Principles of Oral Communication |
| :---: | :---: |
| Mathematics | 3 |

Social Science 3

| SSC 200 | Social Science Integrated |  |
| :--- | :--- | :--- |
| Arts | 3 |  |

Natural Sciences ${ }^{4} \quad 7$

Crossing Boundaries

ECO 204 Principles of Macroeconomics 3
ENG 372 Business and Professional Writing 3
FIN 301 Introduction to Financial Management 3
MGT 201 Legal Environment of Business 3
MGT 301 Organizational Behavior 3
MGT $490 \quad$ Managing the Enterprise 3
MTH 128 Finite Mathematics 3
MTH $129 \quad 3$
MIS 301 Information Systems in Organizations 3
MKT $301 \quad 3$
OPS 301 Survey of Operations \& Supply Management 3
PHL 313 Business Ethics 3
or REL 368 Christian Ethics \& the Business World
ECO elective (300/400 level) 3
BWISE requirement 0
Major Requirements 24
DSC 375 Management Science 3
OPS 350 Business Process Management 3
OPS 401 Operations Planning \& Control 3
OPS 480 Supply Chain Management Strategies 3
OPS 485 Capstone Operations \& Supply Management 1
Project I (This course and OPS 495 together
satisfy CAP Major Capstone.)
OPS 495 Capstone Operations \& Supply Management 5
Project II (This course and OPS 485 together satisfy CAP Major Capstone.)
OPS electives

## Minor in Operations and Supply Management (OPS)

Operations and Supply Management variab credit

| Business Majors |  | 3 |
| :--- | :--- | :--- |
| DSC 375 | Management Science | 3 |
| OPS 350 | Business Process Management | 3 |
| OPS 401 | Operations Planning \& Control |  |
| or OPS 480 | Supply Chain Management Strategies |  |

Select three semester hours from DSC, OPS, MIS, or IET ${ }^{1} 3$
Total Hours 12

1 Approved by the department chairperson.
Non-Business Majors

| DSC 210 | Statistics for Business I | 3 |
| :--- | :--- | :--- |
| DSC 211 | Statistics for Business II | 3 |
| DSC 375 | Management Science | 3 |
| OPS 300 | Introduction to Operations \& Supply Management | 3 |
| or OPS 301 | Survey of Operations \& Supply Management |  |
| OPS 350 | Business Process Management | 3 |
| OPS 401 | Operations Planning \& Control | 3 |


| Select three semester hours from DSC, OPS, MIS, or IET ${ }^{1}$ | 3 |
| :--- | ---: |
| Total Hours | 21 |

Approved by department chairperson.

## Decision Sciences

The Department of Management Information Systems, Operations Management, and Decision Sciences offers courses in several quantitative and systems areas, a major and a minor in management information systems (see MIS), a major and minor in operations and supply management (see OPS), and minors in business analytics, business intelligence and cyber-security

Decision sciences is the study of analysis, quantitative methodologies, and their application to the functional and behavioral problems of any organization. The major areas of study include applied statistics, operations research, and production and operations management. All business students take three decision sciences and operations management courses as part of their core business coursework.

The minor in business analytics (BAN) offers business majors and other students an opportunity to develop their skills in the quantitative methods which support managerial decision making. A minor in business analytics consists of 21 semester hours for non-business majors and 12 hours for business majors.

Specific courses in other areas (e.g. mathematics) may be used. See department chairperson for approval

## Faculty

Jayesh Prasad, Chairperson
Professor Emeritus and Distinguished Service Professor: Bohlen
Professors Emeriti: Amsden, Hoffer, Ferratt
Sherman-Standard Register Professor of Cyber-security Management:
Salisbury
Sherman-Standard Register Associate Professor of MIS: Wynn
Niehaus Chair in Operations Management: Kanet
Professors: Dunne, Enns, Gorman, Kanet, Prasad, Salisbury, Wells
Associate Professors: Jacobs, Wynn
Assistant Professors: Chen, Nittala, Raman
Visiting Assistant Professor: Hvalshagen
Lecturers: Edelmann, Hall, Wagner

## Minor in Business Analytics (BAN)

A minor in Business Analytics consists of 12 hours for students in the School of Business Administration and 21 for non-business students.

| Business Analytics |  |  |
| :--- | :--- | ---: |
| Business Majors |  | 3 |
| DSC 375 | Management Science | 3 |
| OPS 350 | Business Process Management |  |
| Select six semester hours from DSC, MIS, or OPS (300/400 level) ${ }^{1,2}$ | 6 |  |
| Total Hours |  | 12 |

1 In addition to courses used to satisfy the requirements of any other major or minor. Approval of the department chairperson.
2 OPS majors must select nine additional semester hours instead of six.

Non-Business majors

| DSC 210 | Statistics for Business I | 3 |
| :--- | :--- | ---: |
| DSC 211 | Statistics for Business II | 3 |
| DSC 375 | Management Science | 3 |
| MIS 300 | Survey of Management Information Systems | 3 |
| or MIS 301 | Information Systems in Organizations |  |
| OPS 300 | Introduction to Operations \& Supply Management | 3 |
| or OPS 301 | Survey of Operations \& Supply Management |  |
| OPS 350 | Business Process Management | 3 |
| Select three semester hours from DSC, OPS or MIS (300/400 level) | 3 |  |
| Total Hours |  | 21 |

## Management Information Systems

| First Year | Hours |
| :---: | :---: |
| MIS 150 | 0 |
| BIZ 101 | 1 |
| BIZ 102 | 3 |
| CMM 100 (Satisfies Cap Oral Communication) | 3 |
| ECO 203 | 3,4 |
| ECO 204 | 3 |
| ENG 100 (CAP Humanities Commons) | 3,4 |
| HST 103 (CAP Humanities Commons) | 3 |
| MTH 128 | 3 |
| MTH 129 (Satisfies CAP Mathematics) | 3 |
| PHL 103 (CAP Humanities Commons) | 3 |
| REL 103 (CAP Humanities Commons) | 3 |
| CAP Natural Science | 3 |
|  | 34-36 |
| Second Year | Hours |
| ACC 207 | 3 |
| ACC 208 | 3 |
| DSC 210 | 3 |
| DSC 211 | 3 |
| ENG 200 | 3-4 |
| MIS 301 | 3 |
| MIS 305 | 1 |
| MGT 201 | 3 |
| SSC 200 | 3 |
| CAP Natural Science and Lab | 4 |
| MGT 301 | 3 |
|  | 32-33 |
| Third Year | Hours |
| FIN 301 | 3 |
| MIS 325 | 4 |
| MIS 380 | 3 |
| MIS 381 | 1 |
| MIS 385 | 3 |
| MKT 301 | 3 |
| OPS 301 | 3 |
| CAP Adv PHL/REL | 3 |
| PHL 313 or REL 368 | 3 |
| CAP Arts | 3 |
| CAP Adv. HST | 3 |
|  | 32 |
| Fourth Year | Hours |
| MIS Electives/Breadth Requirements | 6 |
| ENG 372 | 3 |
| MGT 490 (Satisfies CAP Integrative) | 3 |
| MIS 465 | 3 |


| MIS 475 (Satisfies CAP Major Capstone) | 3 |
| :--- | :--- |
| CAP Faith Trad. | 3 |
| CAP Div. \& SJ | 3 |
| ECO Elective | 3 |

Total credit hours: 125-128

## Operations Management

| First Year | Hours |
| :---: | :---: |
| BIZ 101 | 1 |
| BIZ 102 | 3 |
| MTH 128 | 3 |
| MTH 129 (Satisfies CAP Mathematics) | 3 |
| ENG 100 (CAP Humanities Commons) | 3,4 |
| REL 103 (CAP Humanities Common) | 3 |
| HST 103 (Cap Humanities Common) | 3 |
| PHL 103 (CAP Humanities Common) | 3 |
| ECO 203 | 3,4 |
| ECO 204 | 3 |
| CMM 100 (Satisfies CAP Oral Communication) | 3 |
| CAP Natural Science | 3 |
|  | 34-36 |
| Second Year | Hours |
| ACC 207 | 3 |
| ACC 208 | 3 |
| DSC 210 | 3 |
| DSC 211 | 3 |
| ENG 200 | 3-4 |
| MGT 201 | 3 |
| OPS 301 | 3 |
| SSC 200 | 3 |
| MGT 301 | 3 |
| CAP Natural Science \& Lab | 4 |
|  | 31-32 |
| Third Year | Hours |
| DSC 375 | 3 |
| FIN 301 | 3 |
| MKT 301 | 3 |
| MIS 301 | 3 |
| OPS 350 | 3 |
| OPS Elective | 3 |
| CAP Adv. HST | 3 |
| Adv. PHL/REL | 3 |
| CAP Arts | 3 |
| PHL 313 or REL 368 | 3 |
|  | 30 |
| Fourth Year | Hours |
| MGT 490 (Satisfies CAP Integrative) | 3 |
| OPS 401 | 3 |
| OPS 480 | 3 |
| OPS 485 | 1 |
| OPS 495 (Satisfies CAP Major Capstone) | 5 |
| OPS Elective | 3 |
| ENG 372 | 3 |
| ECO Elective | 3 |
| CAP Faith Trad | 3 |
| CAP Div. \& SJ | 3 |
|  | 30 |

## Decision Sciences Courses

DSC 210. Statistics for Business I. 3 Hours
Basic concepts of statistics including descriptive statistics, probability, probability distributions, and estimation. Prerequisite(s): MTH 128, MTH 129; BIZ 100, BIZ 102 or BAI 103L (may be taken as a corequisite).

## DSC 211. Statistics for Business II. 3 Hours

Tests of hypotheses, analysis of variance, Chi-square tests, simple and multiple regression and correlation. Use of computer software for statistical data analysis. Prerequisite(s): BAI 103L or BIZ 100 or BIZ 102; DSC 210; MTH 129.

## DSC 313. Advanced Business Statistics. 3 Hours

Selected topics from advanced statistics with emphasis on business applications. Prerequisite(s): DSC 211 or equivalent.

## DSC 375. Management Science. 3 Hours

Quantitative modeling applications for managerial analysis and decision making. Develops skills to analyze and solve problems using computerbased mathematical modeling in a wide variety of business decision situations involving business functional areas such as accounting, economics, finance, human resources, marketing, management information systems, and operations management. Topics include constrained modeling techniques, simulation, and multi-criteria decision making. Prerequisite(s): DSC 211; OPS 301 or OPS 300 (may be taken as a corequisite).

## DSC 410. Decision Theory. 3 Hours

Introduction to the analysis of decisions under uncertainty. Topics include structuring of the decision process, Bayesian decision theory, and multicriteria decision making. Prerequisite(s): DSC 211 or equivalent.
DSC 415. Simulation Modeling \& Analysis. 3 Hours
Introduction to simulation models in support of business decision making. Emphasis on building and analyzing models in a variety of applications, including manufacturing and service systems. Study and use of a simulation language. Prerequisite(s): DSC 211; DSC 375 recommended.

## DSC 435. Analysis of Factory Systems. 3 Hours

Concepts and techniques for the analysis, design, and management of factory production systems. Work-flow layout, scheduling techniques, stochastic process models, simulations, and computerized factory models Prerequisite(s): DSC 375, OPS 301.
DSC 491. Honors Thesis. 3 Hours
Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

## DSC 492. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

## DSC 494. Seminar in Decision Sciences. 3 Hours

Study of selected topics or issues in applied statistics, quantitative business analysis, and production and operations management. Topics vary from time to time. May be taken more than once if topics change. Title will reflect topics covered in a particular offering.

DSC 497. Laboratory Work Experience. 1-6 Hours
Under faculty sponsorship and in association with a participating industrial, commercial, educational, health-care, or governmental organization, practical experience in work associated with the student's minor concentration. (See internship coordinator for details.) Does not satisfy MIS elective. Permission of chairperson required. Prerequisite(s): Permission of department chairperson.
DSC 498. Cooperative Education. 3 Hours
Optional full-time work period off campus alternating with study period on campus. Prerequisite(s): Permission of department chairperson.
DSC 499. Independent Study in Decision Sciences. 1-6 Hours Research in conjunction with a faculty member on a subject within the general area of decision sciences. Normally open only to juniors and seniors who have attained a cumulative grade-point average of 3.0 or above. Permission of chairperson required. Prerequisite(s): Permission of department chairperson.

## Management Info Systems Courses

MIS 150. Professional Development Experiences in Information Systems. 0 Hours
Participation in experiences to promote development of practical knowledge, career networks, and professional skills relevant to the field of information systems.
MIS 203L. Introduction to Spreadsheets. 1 Hour
Introduction to electronic spreadsheet software (e.g., Microsoft Excel) skills. Prerequisite(s): BIZ 100 or BIZ 102 or permission.
MIS 220. Exploring Careers in Information Systems. 1 Hour Designed to immerse students into the contemporary issues of management information systems. Site visits and guest lectures from management information systems leaders. Priority given to first and second year students. Satisfactory/No Credit. Prerequisite(s): Permission of department chairperson.
MIS 300. Survey of Management Information Systems. 3 Hours Introduction to management information systems concepts, terminology, purposes, and applications for the nonbusiness student. Not open to students in the School of Business Administration or to those with credit in MIS 301. Permission of department chairperson required. Prerequisite(s): (BAI 103L or BIZ 100 or BIZ 102 or CPS 111); junior standing.

## MIS 301. Information Systems in Organizations. 3 Hours

Survey of theory and applications of computer-based information systems in organizations. The role of information in organizational processes, current information technology, decision support systems, and end-user computing and distributed processing systems. Sophomores are encouraged to take this course during their second term. Prerequisite(s): BIZ 100 or BIZ 102 OR (ACC 207; (ACC 208 or ACC 200) (may be taken as a corequisite); ECO 203; (BAI 103L or CPS 111)).
MIS 302. Systems Thinking in Organizations. 3 Hours
Focus on understanding systems thinking, decision making, and information systems in organizations. Learn general systems concepts, system diagramming tools, and different approaches to systems thinking as a mode of inquiry. Compare modes of inquiry. Develop a learning community to build knowledge. Apply knowledge by (1) analyzing organizations as systems and the information systems and technologies used to support decision making and (2) suggesting improvements. Prerequisite(s): Completed 45 semester hours.

MIS 303L. Using Spreadsheets in Business. 1 Hour
Use of electronic spreadsheets (e.g., Microsoft Excel) as a tool to support business decision making. Prerequisite(s): BIZ 100 or BIZ 102 or MIS 203L or permission.
MIS 305. Introduction to Business Applications: Problem Solving with Visual Tools. 1 Hour
Introduction to basic programming structures, graphical user interface design, and other tools using a visual programming language such as Visual Basic.net. Prerequisite(s): BIZ 100 or BIZ 102 or BAI 103L or equivalent.

## MIS 307L. Developing Spreadsheet Applications. 1 Hour

Application of computer programming concepts to the spreadsheet environment. Development of full-featured spreadsheet applications. Prerequisite(s): MIS 303L, MIS 305.

## MIS 325. Programming for Business Systems. 4 Hours

Process of software development for business system implementation. Fundamental object-oriented programming concepts include program design, documentation, development, and testing of computer solutions for business problems using a modern programming language, such as Java. Prerequisite(s): MIS 305.

## MIS 360. E-Commerce Processes \& Technology. 3 Hours

Introduction to information systems technologies and techniques that enable business-to-business and business-to-consumer electronic relationships. Development of interactive websites with an introduction to client- and server-side scripting and simple database access. Prerequisite(s): (MIS 300 or MIS 301); (MIS 305 or equivalent); (BAI 103L or equivalent HTML knowledge).

## MIS 366. Business Intelligence. 3 Hours

The use of computer-based data analysis tools to support managers in problem solving and decision making. Prerequisite(s): DSC 211; MIS 300 or MIS 301. Corequisite(s): MIS 385.

MIS 368. Principles of Information Security Management. 3 Hours Addresses issues relevant to creating a systematic information assurance, compliance control structure and systematic security procedures. Information security policy, assets, physical and logical information resource security, business continuity, and compliance with relevant security standards are covered. Prerequisite(s): MIS 300 or MIS 301.

## MIS 380. Systems Analysis \& Re-Engineering. 3 Hours

Concepts, methods, techniques, and tools needed to initiate a systems development project and to conduct the requirements collection, analysis, and structuring activities of systems development. Structured life cycle and alternatives. Re-engineering business processes through information systems. Prerequisite(s): MIS 300 or MIS 301; MIS 385 (may be taken as a corequisite); Business majors only or permission of department chairperson. Corequisite(s): MIS 381.

## MIS 381. Principles of Project Management. 1 Hour

Introduction to project management concepts and ideas. Possible use of an existing team project from another course to learn principles of scheduling, team management, client management, etc., emphasizing best project management practices. Prerequisite(s): MIS 300 or MIS 301.

MIS 385. Systems Implementation with Database Management Systems. 3 Hours
Concepts, techniques, and tools to convert a logical system design into a working application using a relational DBMS. File and data structures, logical and physical database design, security and data integrity, file design and processing. DBMS functions, SQL, 3GL and 4GL access to databases, linkage to WWW pages, database architectures, CASE. Prerequisite(s): MIS 300 or MIS 301; MIS 305 (may be taken as a corequisite).

MIS 410. Object-Oriented Analysis \& Design. 3 Hours
Introduction to object-oriented concepts and techniques for analyzing and designing systems. Systems development project using an objectoriented CASE tool. Prerequisite(s): MIS 301 or permission of instructor; MIS 305 recommended.
MIS 420. Expert \& Knowledge-Based Systems. 3 Hours
Introduction to artificial intelligence and expert and knowledge-based systems; knowledge acquisition, implementation, and validation; advanced topics; applications to business. Use of expert system software. Prerequisite(s): BAI 103L or equivalent; DSC 375 recommended.

MIS 425. Information for Total Quality. 3 Hours
Theory and practice of total quality management (TQM); applications of TQM in the information systems function, information system requirements for TQM programs. Prerequisite(s): MIS 301; OPS 301.

## MIS 430. Telecommunications \& Networking. 3 Hours

Introduction to computer-based communication networks, underlying concepts; basic hardware components and operating systems; network architectures and protocols; data integrity and security; message routing; network management. Prerequisite(s): MIS 368 (may be taken as corequisite).

## MIS 460. Advanced Web Development. 3 Hours

Study of web development concepts and techniques. Design and development of dynamic web-sites using technologies such as ASP.NET. Prerequisite(s): MIS 305 or equivalent.
MIS 461. E-Business. 3 Hours
Models of how to conduct business electronically. Topics include different forms of e-business, products and services provided on the Internet, how to combine electronic business with brick-and-mortar business, and keys to success for electronically enhanced businesses. Prerequisite(s): MIS 301.

## MIS 465. MIS Project I-Analysis \& Design in Teams. 3 Hours

First of a two-course sequence. Team participation/management and project management skills. Apply these skills in teams to perform an analysis and preliminary re-design of an existing organization's information system. Emphasis on written and oral communications, including team-prepared reports and presentations. Offered fall semester only. Prerequisite(s): MIS 325, MIS 380, MIS 381, MIS 385.

## MIS 467. Data Warehousing. 3 Hours

Purpose, design, implementation, and effective use of data warehouses and data warehousing technologies. Topics include data warehouse design, data marts, data quality management, extract-transform-load process, and business intelligence. Prerequisite(s): MIS 300 or MIS 301, MIS 385.

## MIS 468. Internet Security. 3 Hours

This course provides students with an understanding of both defensive and offensive issues of information security. The course includes instruction on information security theory, psychological operations, hacking, viruses, and systems management. The course emphasizes security for e-commerce on the Internet. Prerequisite(s): MIS 430.

MIS 475. MIS Project II-Design \& Implementation in Teams. 3 Hours Continuation of MIS 465. With its organizational client, each team carries its project as far as possible toward final design and actual implementation. Students are guided to reflect about how their UD educational experience has influenced understanding of their major in terms of vocation. Emphasis on written and oral communications, including team-prepared reports and presentations. Offered spring semester only. Prerequisite(s): MIS 150, MIS 465.

## MIS 491. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

## MIS 492. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.
MIS 494. Seminar in Management Information Systems. 1-4 Hours Study of selected technical and/or organizational issues in information systems. Topics vary from time to time. May be taken more than once if topics change. Title will reflect topics covered in a particular offering.

## MIS 497. Laboratory Work Experience. 1-6 Hours

Under faculty sponsorship and in association with a participating industrial, commercial, educational, health-care, or governmental organization; practical experience in work associated with the student's major concentration. (See internship coordinator for details.) Prerequisite(s): Permission of department chairperson.

## MIS 498. Cooperative Education. 1-6 Hours

Optional full-time work period off campus alternating with study period on campus. (See Chapter X; consult Cooperative Education Office for details.) Prerequisite(s): Permission of department chairperson.
MIS 499. Independent Study in Management Information Systems. 1-6 Hours
Research in conjunction with a faculty member on a subject within the general area of management information systems. Open only to juniors or seniors who have attained a cumulative grade point average of 3.0 or above. Prerequisite(s): Permission of department chairperson.

## Operations Management Courses

OPS 220. Experiences in Operations \& Supply Management. 1 Hour Designed to immerse students into the contemporary issues of operations and supply management. Site visits and guest lectures from operations management leaders. Priority given to first and second year students. Satisfactory/No Credit. Prerequisite(s): Permission of department chairperson.

OPS 300. Introduction to Operations \& Supply Management. 3 Hours Concepts and OPS software-based techniques of designing, implementing, managing, and improving operations in manufacturing and service organizations, including project management, services systems design, resource allocation modeling, facility location, layout, aggregate planning, scheduling, and material requirements planning. Survey of major OPS strategies such as: just-in-time production, total quality management, business process reengineering, synchronous manufacturing, enterprise resource planning, and supply chain management. Not open to students in the School of Business Administration or to those with credit in OPS 301. Student must show aptitude in quantitative materials. Prerequisite(s): (BAI 103L or BIZ 100 or BIZ 102 or equivalent); (MTH 128, MTH 129 or equivalent); junior standing; permission of department chairperson; DSC 210 or equivalent; DSC 211 or equivalent recommended.
OPS 301. Survey of Operations \& Supply Management. 3 Hours Concepts and OPS software-based techniques of designing, implementing, managing, and improving operations in manufacturing and service organizations, including project management, service systems design, resource allocation modeling, facility location, layout, aggregate planning, scheduling, and material requirements planning. Survey of major OPS strategies such as: just-in-time production, total quality management, business process reengineering, synchronous manufacturing, enterprise resource planning, and supply chain management. Prerequisite(s): (BIZ 100 or BIZ 102 or BAI 151); DSC 211 (may be taken as a corequisite).

## OPS 350. Business Process Management. 3 Hours

Analytical and empirical tools for evaluation of operations in manufacturing/service firms. Analytical methods may include flow diagrams, Little's Law, queuing theory, theoretical flow times, critical path networks, resource capacity, and estimates of system flow. Empirical methods include quality sampling and discrete event simulation. Students receive training in simulation software. Projects or case studies require creative problem solving for realist business problems. Prerequisite(s): DSC 211; OPS 301 or OPS 300 (may be taken as a corequisite); Business majors only or permission of department chairperson.

## OPS 401. Operations Planning \& Control. 3 Hours

Concepts and techniques in the planning and control of operations. Advanced treatment topics include: forecasting for operations, operations sequencing and scheduling, inventory and production control, production planning system design, MRP/ERP, warehouse management, purchasing and physical distribution, balanced attention to technical as well as the managerial aspects of operations planning and control. Prerequisite(s): DSC 375.

## OPS 413. Project Management. 3 Hours

Broad coverage of technical and human management issues in projects. Emphasis on project planning, scheduling, tracking, and close-down. Task time and cost estimation and description. Use of computer software. Team building and other aspects of managing project teams. Prerequisite(s): OPS 301.

OPS 430. Quality \& Just in Time Manufacturing. 3 Hours
The concepts of just-in-time manufacturing, total quality system, and statistical process control. Projects, tours, and guest speakers. Prerequisite(s): OPS 301.

## OPS 440. Continuous Improvement. 3 Hours

Theory and practice of continuous improvement especially as applied in manufacturing; comparison to the traditional operations management approach, tools and techniques, the KAIZEN approach. Prerequisite(s): OPS 301.

## OPS 480. Supply Chain Management Strategies. 3 Hours

Concepts, analytical techniques, and solution methods for designing and managing integrated supply chains. Strategic issues of integrated supply chain design and management, including inventory management, logistics network design, distribution systems, strategic alliances, value of information for centralized decisions and risk-pooling, information technology and decision support, and international supply chain management. Prerequisite(s): DSC 375; OPS 350 (may be taken as a corequisite).

## OPS 481. Principles of Procurement. 3 Hours

Examination of strategic issues in procurement, purchasing documents and processes, the procurement cycle, supplier management programs, negotiations, sourcing, and value analysis. Prerequisite(s): OPS 301.
OPS 485. Capstone Operations \& Supply Management Project I. 1 Hour This course centers on the preparation for an experiential operations improvement project. Students evaluate real-world project proposals from clients, develop clear understanding of operations improvement opportunities, and select projects at hand. Student teams learn about process improvement project design and develop well-defined project plans for execution in OPS 495. Students taking OPS 485 in the fall must take OPS 495 in the subsequent spring semester. Corequisite(s): OPS 401, OPS 480.

## OPS 491. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent and original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

## OPS 492. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original, research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

## OPS 494. Seminar in Operations \& Supply Management. 3 Hours

 Study of selected topics or issues in operations management. Topics vary from time to time. May be taken more than once if topics change. Title will reflect topics covered in a particular offering.OPS 495. Capstone Operations \& Supply Management Project II. 5 Hours This course centers on the execution of an experiential project applying operations and supply management concepts and techniques to practical problems with faculty supervision. Student teams address significant operational problems and opportunities in real-world service and manufacturing firms. Teams write recommendation/implementation reports and make presentations of their work. Students are guided to reflect about how their UD educational experience has influenced understanding of their major in terms of vocation. Prerequisite(s): OPS 401, OPS 480, OPS 485.

OPS 497. Laboratory Work Experience. 1-6 Hours
Under faculty sponsorship and in association with a participating industrial, commercial, educational, health-care, government, or other organization, practical experience in work associated with the student's major. (See internship coordinator for details.) May satisfy OPS elective, with chairperson approval.

## OPS 498. Cooperative Education. 1-6 Hours

Optional full-time work period off campus alternating with study period on campus. (See Chapter X; consult Cooperative Education Office for details). Permission of chairperson required.
OPS 499. Independent Study in Operations \& Supply Management. 1-6 Hours
Research in conjunction with a faculty member on a subject within the general area of operations management. Normally open only to juniors and seniors who have attained a cumulative grade-point average of 3.0 or above. Permission of chairperson required.

## Management and Marketing

Majors:

- Bachelor of Science in Business Administration, Entrepreneurship (p. 319)
- Bachelor of Science in Business Administration, International Business Management-Global Markets Emphasis (p. 321)
- Bachelor of Science in Business Administration, International Business Management-Human Resources Emphasis (p. 321)
- Bachelor of Science in Business Administration, Marketing (p. 323)
- Bachelor of Science in Business Administration, Marketing-Sales Management Emphasis (p. 323)
- Bachelor of Science in Business Administration, Marketing-Product Innovation Emphasis (p. 323)

Minors:

- Entrepreneurship (p. 320)
- International Business Management (p. 322)
- Marketing (p. )

The Management program offered by the Management/Marketing Department includes a major or minor in two distinct areas: International Business Management and Entrepreneurship. The department also offers a major or a minor in Marketing.

## Faculty

Jay Janney, Chairperson
Professors: Bickford, Kiewitz, Lau, Sweeney
Associate Professors: Janney, Meek, Sullivan
Assistant Professors: Hanek, Joo, Marshall
Lecturers: Lewis, Miller, Parker, Zavakos

## Marianist in Residence: Forlani

Adjunct Faculty: Beil, Bernal-Olson, Bowman, Drayer, Dudon, Hutchinson, June, Kohls, Ruehle, Sandner, Willenbrink, Wood

## Entrepreneurship

Students majoring or minoring in Entrepreneurship will develop an understanding of how a business enterprise is conceived, launched, and sustained. The curriculum teaches students how to identify viable business opportunities and explores how such opportunities are
transformed into new ventures. Additional emphasis is placed on how entrepreneurial ventures:

- Successfully compete for financial resources
- Successfully identify and reach their target markets
- Successfully establish business processes, systems, and controls to manage small and growth-oriented ventures.

Students apply to and are accepted into the Entrepreneurship major second semester of Freshman year. The Entrepreneurship major curriculum begins Sophomore year with a two-course sequence in MGT 220 and MGT 221 (taken over an academic year), after which students take MGT 320 and MGT 321. This sequencing of courses means it is very important for students interested in majoring in Entrepreneurship to pay attention to the admissions process. Non-SBA students interested in the Entrepreneurship major cannot be admitted until they are officially transferred into the SBA.

A key feature of the Entrepreneurship major is the Sophomore Experience in which student teams create micro-businesses and actually run them during their sophomore year. This experience includes seminars with faculty and entrepreneurs who work with students to develop the essential knowledge, skills, and abilities for successfully running a microbusiness. Another key feature is the senior capstone seminar in which students work as consultants with an entrepreneur to solve an actual problem within an existing entrepreneurial business. Entrepreneurship majors can also participate in the:

- Everest Real Estate Challenge (open to ENT majors only)
- E.A.T.T. - Entrepreneurs At The Table
- Flyer Angels (a student-run angel fund open to ENT majors only)
- JEM - Junior Entrepreneurship Majors
- UD Flyer Pitch Competition (open to all students, all majors - see https://www.udayton.edu/business/academics/undergraduate/ management_and_marketing/udbpc/index.php

Students can also obtain a minor in Entrepreneurship. For both business and non-business majors, the minor in Entrepreneurship consists of twelve semester hours. The minor may be achievable without course prerequisites depending on the electives chosen.

## Bachelor of Science in Business Administration, Entrepreneurship (ENT) minimum 125 hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1} 12$

| HST 103 | The West \& the World |  |
| :---: | :---: | :---: |
| REL 103 | Introduction to Religious and Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| SSC 200 | Social Science Integrated |  |


Major Requirements 18

| MGT 220 | Entrepreneurship Sophomore Experience I (Must <br> be taken first semester Sophomore Year) | 2 |
| :--- | :--- | :--- |
| MGT 221 | Entrepreneurship Sophomore Experience II (Must <br> be taken second semester Sophomore Year) | 1 |
| MGT 320 | New Venture Creation | 3 |
| MGT 321 | Financing Entrepreneurial Ventures | 3 |
| MGT 430 | Senior Seminar in Entrepreneurship (Satisfies CAP <br> Major Capstone) | 3 |


| MGT 402 | Leadership \& Motivation |
| :---: | :---: |
| MKT 412 | Advanced Selling Skills in High Technology Industries |
| MKT 413 | Value Analysis in Major Sales Engagements |
| MGT 420 | Entrepreneurial Marketing |
| MGT 421 | Small Business Management |
| MGT 422 | Business Plans for Emerging Firms |
| MGT 423 | Human Resource Management in the Emerging Firm |
| MGT 424 | Family Business Management |
| MGT 425 | Franchising |
| MGT 429 | Current Issues in Entrepreneurship |
| MKT 435 | New Product Development |

Academic electives to bring total to at least $\mathbf{1 2 5}$ credits

## Minor in Entrepreneurship (ENT)

## Entrepreneurship

| MGT 318 | Fundamentals of New Venture Creation | 3 |
| :---: | :---: | :---: |
| MGT 319 | Fundamentals of Entrepreneurial Finance | 3 |
| Select two course | from: ${ }^{1}$ | 6 |
| MGT 402 | Leadership \& Motivation |  |
| MKT 412 | Advanced Selling Skills in High Technology Industries |  |
| MGT 414 | Multinational Corporate Management |  |
| MGT/MKT 420 | Entrepreneurial Marketing |  |
| MGT 421 | Small Business Management |  |
| MGT 422 | Business Plans for Emerging Firms |  |
| MGT 423 | Human Resource Management in the Emerging Firm |  |
| MGT 424 | Family Business Management |  |
| MGT 425 | Franchising |  |
| MGT 429 | Current Issues in Entrepreneurship |  |
| MKT 413 | Value Analysis in Major Sales Engagements |  |
| MKT/MGT 420 | Entrepreneurial Marketing |  |
| MKT 435 | New Product Development |  |
| Total Hours |  | 12 |

1 A student minoring in entrepreneurship may petition the department chair to substitute other management courses in place of one, but not two, of these electives. The request will be considered in light of the student's overall academic program and career intention. It is recommended that the student speak to the department to determine the course offerings schedule.

Non-Business Majors

| MGT 318 | Fundamentals of New Venture Creation | 3 |
| :---: | :--- | :---: |
| MGT 319 | Fundamentals of Entrepreneurial Finance | 3 |
| MGT 300 | Survey of Organizational Behavior | 3 |
| Select one course | from: | 3 |
| MGT 402 | Leadership \& Motivation |  |
| MKT 412 | Advanced Selling Skills in High Technology |  |
|  | Industries |  |
| MGT 420 | Entrepreneurial Marketing |  |


| MGT 421 | Small Business Management |
| :---: | :--- |
| MGT 422 | Business Plans for Emerging Firms |
| MGT 423 | Human Resource Management in the Emerging <br>  <br>  <br> MGT 424 |
| Firm |  |

## International Business Management

Students majoring in International Business Management (IBM) will build global leadership competencies by acquiring a deeper understanding of global business and cultural practices while at the same time building a leadership skill set. Upon graduation, students will possess a breadth of business knowledge and abilities enabling them to assess complex problems in global business settings and to lead the implementation of effective, innovative, and transformative solutions.
Features of the Major:

- Exposure to international business academic training
- Bookend experience that launches students into the major and concludes with an experiential learning experience
- Leadership skills built via coursework, hands-on exercises, examination of personal assets/strengths and putting both into practice with application of knowledge and skills to applied problems.
- Project management skills obtained by working on case studies and hands-on projects throughout the major
- Global Markets Emphasis majors are required to complete an on-theground international learning experience.


## Emphasis in Global Markets or Human Resource Management

IBM students must choose either the Global Markets Emphasis or Human Resource Management Emphasis. The Global Markets Emphasis is best suited for students who wish to pursue the highest level of global literacy and understanding of international markets in terms of opportunities to sell and buy goods and services. The Human Resource Management Emphasis is best suited for students who wish to focus their major on further development of leadership and management skills that best help organizations to position, motivate, and reward human capital globally.

## Bachelor of Science in Business Administration, International Business Management (IBM) minimum 125 hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :---: | :--- |
| REL 103 | Introduction to Religious and Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |
| Second-Year Writing Seminar |  |


| Social Science | 3 |
| :--- | :---: |
| SSC 200 | Social Science Integrated |
| Arts | 3 |
| Natural Sciences | 7 |
| Crossing Boundaries | variable <br> credit |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry | variable |
| Integrative | credit |

Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice 3
Major Capstone 0-3
Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

## SBA Core Curriculum

| ACC 207 | Introduction to Financial Accounting | 3 |
| :---: | :---: | :---: |
| ACC 208 | Introduction to Managerial Accounting | 3 |
| BIZ 101 | Business Education Planning | 1 |
| BIZ 102 | Introduction to Business | 3 |
| DSC 210 | Statistics for Business I | 3 |
| DSC 211 | Statistics for Business II | 3 |
| ECO 203 | Principles of Microeconomics | 3 |
| ECO 204 | Principles of Macroeconomics | 3 |
| ENG 372 | Business and Professional Writing | 3 |
| FIN 301 | Introduction to Financial Management | 3 |
| MGT 201 | Legal Environment of Business | 3 |
| MGT 301 | Organizational Behavior | 3 |
| MGT 490 | Managing the Enterprise | 3 |
| MTH 128 | Finite Mathematics | 3 |
| MTH 129 | Calculus for Business | 3 |
| MIS 301 | Information Systems in Organizations | 3 |
| MKT 301 | Principles of Marketing | 3 |
| OPS 301 | Survey of Operations \& Supply Management | 3 |
| $\begin{aligned} & \text { PHL } 313 \\ & \text { or REL } 368 \end{aligned}$ | Business Ethics <br> Christian Ethics \& the Business World | 3 |
| ECO elective (300 | /400 level) | 3 |
| BWISE requirem |  | 0 |
| Major Requirements |  |  |
| INB 302 | Survey of International Business | 3 |
| MGT 403 | Cross-Cultural Management | 3 |
| INB 450 | International Business Management Capstone | 3 |
| Global Markets Emphasis or Human Resource Management Emphasis |  | 9 |


| Select an emphasis from: |  |  |
| :---: | :---: | :---: |
| Global Markets Emphasis |  |  |
| Select two courses from: |  | 6 |
| INB 350 | Doing Business in Emerging Markets |  |
| INB 351 | Doing Business in Latin America |  |
| INB 352 | Doing Business in Asia |  |
| INB 353 | Doing Business in Europe |  |
| INB 354 | Doing Business in Africa |  |
| INB 357 | Export Management |  |
| Select one course from: |  | 3 |
| ACC 412 | International Accounting |  |
| FIN 450 | International Business Finance |  |
| MKT 440 | Global Marketing |  |
| International learning experience requirement. |  |  |
| Human Resource Management Emphasis |  |  |
| MGT 350 | Managerial Skills | 3 |
| MGT 423 | Human Resource Management in the Emerging Firm | 3 |
| Select one course from: |  | 3 |
| MGT 402 | Leadership \& Motivation |  |
| MGT 404 | Group Dynamics, Team Processes \& Decision Making |  |
| MGT 405 | Employee Training \& Development |  |

Academic electives to bring total to at least 125 credits

## Minor in International Business Management (IBM)

| International Business Management |  |  |
| :--- | :--- | :--- |
| Business Majors |  | 3 |
| INB 302 | Survey of International Business | 3 |
| MGT 403 | Cross-Cultural Management | 6 |
| Select two courses from: |  |  |


| ACC 412 | International Accounting |
| :--- | :--- |
| FIN 450 | International Business Finance |
| INB 350 | Doing Business in Emerging Markets |
| INB 351 | Doing Business in Latin America |
| INB 352 | Doing Business in Asia |
| INB 353 | Doing Business in Europe |
| INB 354 | Doing Business in Africa |
| INB 357 | Export Management |
| MGT 350 | Managerial Skills |
| MGT 402 | Leadership \& Motivation |
| MGT 404 | Group Dynamics, Team Processes \& Decision |
| MGT 405 | Making |
| MGT 423 | Humployee Training \& Development |
| MKT 440 | Firm |
| Total Hours |  |

## Non-Business Majors

12
Total Hours

MGT 300 Survey of Organizational Behavior

| INB 302 | Survey of International Business | 3 |
| :---: | :---: | :---: |
| MGT 403 | Cross-Cultural Management | 3 |
| Select two courses from (pre-requisites may apply): |  | 6 |
| ACC 412 | International Accounting |  |
| FIN 450 | International Business Finance |  |
| INB 350 | Doing Business in Emerging Markets |  |
| INB 351 | Doing Business in Latin America |  |
| INB 352 | Doing Business in Asia |  |
| INB 353 | Doing Business in Europe |  |
| INB 354 | Doing Business in Africa |  |
| INB 357 | Export Management |  |
| MGT 350 | Managerial Skills |  |
| MGT 402 | Leadership \& Motivation |  |
| MGT 404 | Group Dynamics, Team Processes \& Decision Making |  |
| MGT 405 | Employee Training \& Development |  |
| MGT 423 | Human Resource Management in the Emerging Firm |  |
| MKT 440 | Global Marketing |  |
| Total Hours |  | 15 |

## Marketing

A student with a major or minor in Marketing learns systematic ways for identifying, understanding, and satisfying consumer and organizational needs. Courses in the major are designed to instill in students an appreciation for both the total marketing process as well as specialized marketing activities such as:

- Purchasing
- Sales
- Retailing
- Brand management
- Marketing research

They likewise focus on how to integrate the marketing process with the objectives of the organization, the functions of the economy, and the constraints of society from national and global perspectives. Students learn to apply conceptual principles and quantitative techniques in their study of consumer and business markets with the goal of becoming informed, skilled, and competent marketing professionals. Marketing majors also have the option to earn an emphasis in Sales Management or Product Innovation as part of their major. To earn either emphasis, majors must select all three of their electives from a required list of marketing courses that focus on sales or product innovation. Both emphases are very attractive to many prospective employers. The marketing program also competes annually in the National Collegiate Sales Competition. Marketing majors wishing to participate in the competition apply to be on the UD team in the fall.

Marketing majors frequently combine their academic studies with either a co-op or internship work experience. General elective credit for such experiences is approved on a case-by-case basis with the criteria being the nature of the experience and its degree of integration into the student's academic program as well as successful completion of internship/co-op preparation activities required by the department.

## Faculty

Jay Janney, Chairperson

Professors: Pan, Sparks
Associate Professors: Durmusoglu, Wells Assistant Professors: Chaudhuri, Dugan, Hirunyawipada, Zhang Lecturers: Dickey, Krystofik
Adjunct Faculty: Blanford, Clarke, Cupp, Eifert, Holden, Klein, Lechner, Sinnott,

## Bachelor of Science in Business Administration, Marketing (MKT) minimum 125 hours

| Common Academic Program (CAP) |  |
| :---: | :---: |
| *credit hours will vary depending on courses selected |  |
| First-Year Humanities Commons ${ }^{1}$ | 12 |
| HST 103 The West \& the World |  |
| REL 103 Introduction to Religious and Theological Studies |  |
| PHL 103 Introduction to Philosophy |  |
| ENG 100 Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ | 0-3 |
| ENG 200 Writing Seminar II |  |
| Oral Communication | 3 |
| CMM 100 Principles of Oral Communication |  |
| Mathematics | 3 |
| Social Science | 3 |
| SSC 200 Social Science Integrated |  |
| Arts | 3 |
| Natural Sciences ${ }^{4}$ | 7 |
| Crossing Boundaries | variab |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |
| Advanced Study | variab |
| Philosophy and/or Religious Studies |  |
| Historical Studies ${ }^{5}$ |  |
| Diversity and Social Justice | 3 |
| Major Capstone | 0-3 |

Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

## SBA Core Curriculum

| ACC 207 | Introduction to Financial Accounting | 3 |
| :--- | :--- | :--- |
| ACC 208 | Introduction to Managerial Accounting | 3 |
| BIZ 101 | Business Education Planning | 1 |
| BIZ 102 | Introduction to Business | 3 |
| DSC 210 | Statistics for Business I | 3 |
| DSC 211 | Statistics for Business II | 3 |
| ECO 203 | Principles of Microeconomics | 3 |


| ECO 204 | Principles of Macroeconomics | 3 |
| :--- | :--- | :--- |
| ENG 372 | Business and Professional Writing | 3 |
| FIN 301 | Introduction to Financial Management | 3 |
| MGT 201 | Legal Environment of Business | 3 |
| MGT 301 | Organizational Behavior | 3 |
| MGT 490 | Managing the Enterprise | 3 |
| MTH 128 | Finite Mathematics | 3 |
| MTH 129 | Calculus for Business | 3 |
| MIS 301 | Information Systems in Organizations | 3 |
| MKT 301 | Principles of Marketing | 3 |
| OPS 301 | Survey of Operations \& Supply Management | 3 |
| PHL 313 | Business Ethics | 3 |
| or REL 368 | Christian Ethics \& the Business World | 3 |
| ECO elective (300/400 level) | 0 |  |

Major Requirements 18


Product Innovation Emphasis
MKT $435 \quad$ New Product Development
MKT 437 Advanced New Product Development
Advanced New Product Development
MKT 350 Digital Marketing
3
or MKT 430 Brand Management
or MKT 436 Marketing Intelligence
1 A student can select three MKT electives or an emphasis in Sales Management or Product Innovation.
2 MIS 467 may be selected only by MIS and MKT double majors.

## Academic electives to bring total to at least 125 credits

## Minor in Marketing (MKT)

## Marketing

Business Majors

| ${\text { Select four MKT electives }(300 / 400 \text { level })^{1}}^{12}$ |  |
| :--- | :--- |
| Total Hours | 12 |

## Non-Business Majors

MKT $300 \quad$ Survey of Marketing 3

| Select four MKT electives $(300 / 400 \text { level })^{1}$ | 12 |
| :--- | :--- |
| Total Hours |  |

1 In a pattern selected in consultation with an academic advisor.

- Entrepreneurship (p. 324)
- International Business Management with a Global Markets Emphasis (p. 324)
- International Business Management with a Human Resource Management Emphasis (p. 325)
- Marketing (p. 325)
- Marketing with a Sales Management Emphasis (p. 325)
- Marketing with a Product Innovation Emphasis (p. 326)


## Entrepreneurship

| First Year | Hours |
| :---: | :---: |
| BIZ 101 | 1 |
| BIZ 102 | 3 |
| CMM 100 (Satisfies CAP Oral Communication) | 3 |
| ECO 203 | 3,4 |
| ECO 204 | 3 |
| ENG 100 (CAP Humanities Commons) | 3 |
| HST 103 (CAP Humanities Commons) | 3 |
| MTH 128 | 3 |
| MTH 129 (Satisfies CAP Mathematics) | 3 |
| PHL 103 (CAP Humanities Commons) | 3 |
| REL 103 (CAP Humanities Commons) | 3 |
| CAP Natural Science | 3 |
|  | 34-35 |
| Second Year | Hours |
| ACC 207 | 3 |
| ACC 208 | 3 |
| DSC 210 | 3 |
| DSC 211 | 3 |
| ENG 200 | 3-4 |
| MGT 201 | 3 |
| MGT 220 (Must be taken first semester) | 2 |
| MGT 221 (Must be taken second semester) | 1 |
| MGT 301 | 3 |
| MKT 301 | 3 |
| SSC 200 | 3 |
|  | 30-31 |
| Third Year | Hours |
| ECO 300-400 Elective | 3 |
| FIN 301 | 3 |
| MGT 320 | 3 |
| MGT 321 | 3 |
| MIS 301 | 3 |
| OPS 301 | 3 |
| CAP Natural Science \& Lab | 4 |
| CAP ADV PHL/Div. \& SJ | 3 |
| CAP Faith Trad./Adv. HST | 3 |
| CAP Arts Study | 3 |
|  | 31 |
| Fourth Year | Hours |
| ENT Electives | 6 |
| ENG 372 | 3 |
| MGT 430 | 3 |
| MGT 490 (Satisfies CAP Integrative) | 3 |
| General Electives | 12 |


| PHL 313 or REL 368 | 3 |
| :--- | ---: |
|  | 30 |

Total credit hours: 125-127

## International Business Management with a Global Markets Emphasis

| First Year | Hours |
| :---: | :---: |
| BIZ 101 | 1 |
| BIZ 102 | 3 |
| CMM 100 (Satisfies CAP Oral Communication) | 3 |
| ECO 203 | 3,4 |
| ECO 204 | 3 |
| ENG 100 (CAP Humanites Commons) | 3,4 |
| HST 103 (CAP Humanites Commons) | 3 |
| MTH 128 | 3 |
| MTH 129 (Satisfies CAP Mathematics) | 3 |
| PHL 103 (CAP Humanites Commons) | 3 |
| REL 103 (CAP Humanites Commons) | 3 |
| CAP Natural Science | 3 |
|  | 34-36 |
| Second Year | Hours |
| ACC 207 | 3 |
| ACC 208 | 3 |
| DSC 210 | 3 |
| DSC 211 | 3 |
| ENG 200 | 3-4 |
| INB 302 | 3 |
| MGT 201 | 3 |
| MGT 301 | 3 |
| MKT 301 | 3 |
| SSC 200 | 3 |
|  | 30-31 |
| Third Year | Hours |
| ECO 460 or 461 | 3 |
| FIN 301 | 3 |
| INB Elective | 3 |
| MIS 301 | 3 |
| OPS 301 | 3 |
| CAP ADV PHL/Div. \& SJ | 3 |
| CAP Faith Trad./Adv. HST | 3 |
| CAP Arts Study | 3 |
| CAP Natural Science \& Lab | 4 |
| ENG 372 | 3 |
|  | 31 |
| Fourth Year | Hours |
| INB 450 | 3 |
| MGT 403 | 3 |
| MGT 490 (Satisfies CAP Integrative) | 3 |
| MKT 440, FIN 450, or ACC 412C | 3 |
| General Electives | 12 |
| INB Elective | 3 |
| PHL 313 or REL 368 | 3 |
|  | 30 |

Total credit hours: 125-128

## International Business Management with a Human Resource Management Emphasis

| First Year | Hours |
| :---: | :---: |
| BIZ 101 | 1 |
| BIZ 102 | 3 |
| CMM 100 (Satisfies CAP Oral Communication)) | 3 |
| ECO 203 | 3,4 |
| ECO 204 | 3 |
| ENG 100 (CAP Humanities Commons) | 3,4 |
| HST 103 (CAP Humanities Commons) | 3 |
| MTH 128 | 3 |
| MTH 129 (Satisfies CAP Mathematics) | 3 |
| PHL 103 (CAP Humanities Commons) | 3 |
| REL 103 (CAP Humanities Commons) | 3 |
| CAP Natural Science | 3 |
|  | 34-36 |
| Second Year | Hours |
| ACC 207 | 3 |
| ACC 208 | 3 |
| DSC 210 | 3 |
| DSC 211 | 3 |
| ENG 200 | 3-4 |
| INB 302 | 3 |
| MGT 201 | 3 |
| MGT 301 | 3 |
| MKT 301 | 3 |
| SSC 200 | 3 |
|  | 30-31 |
| Third Year | Hours |
| ECO 460 or 461 | 3 |
| FIN 301 | 3 |
| MGT 350 | 3 |
| MIS 301 | 3 |
| ENG 372 | 3 |
| OPS 301 | 3 |
| CAP ADV PHL/Div. \& SJ | 3 |
| CAP Faith Trad./Adv. HST | 3 |
| CAP Arts Study | 3 |
| CAP Natural Science \& Lab | 4 |
|  | 31 |
| Fourth Year | Hours |
| INB 450 | 3 |
| MGT 402, 404, or 405 | 3 |
| MGT 423 | 3 |
| MGT 403 | 3 |
| MGT 490 (Satisfies CAP Integrative) | 3 |
| General Electives | 12 |
| PHL 313 or REL 368 | 3 |
|  | 30 |

Total credit hours: 125-128

## Marketing

| First Year | Hours |
| :--- | ---: |
| BIZ 101 | 1 |
| BIZ 102 | 3 |
| CMM 100 (Satisfies CAP Oral Communication) | 3 |
| ECO 203 | 3,4 |
| ECO 204 | 3 |



Total credit hours: 125-126

## Marketing with a Sales Management Emphasis

| First Year | Hours |
| :--- | ---: |
| BIZ 101 | 1 |
| BIZ 102 | 3 |
| CMM 100 (Satisfies CAP Oral Communication) | 3 |
| ECO 203 | 3,4 |
| ECO 204 | 3 |
| ENG 100 (CAP Humanities Commons) | 3 |
| HST 103 (CAP Humanities Commons) | 3 |
| MTH 128 | 3 |
| MTH 129 (Satisfies CAP Mathematics) | 3 |
| PHL 103 (CAP Humanities Commons) | 3 |
| REL 103 (CAP Humanities Commons) | 3 |
| CAP Component (generally CAP Natural Science or | 3 |
| CAP Arts) | $34-35$ |
|  | Hours |
| Second Year | 3 |


| ACC 208 | 3 |
| :--- | ---: |
| DSC 210 | 3 |
| DSC 211 | 3 |
| ENG 200 | $3-4$ |
| MGT 201 | 3 |
| MGT 301 | 3 |
| MKT 301 | 3 |
| SSC 200 | 3 |
| CAP Component or General Elective | 3 |
|  | $30-31$ |
| Third Year | Hours |
| ECO Elective | 3 |
| FIN 301 | 3 |
| MIS 301 | 3 |
| MKT 310 | 3 |
| MKT 450 | 6 |
| OPS 301 | 3 |
| CAP Components and/or General Electives | 10 |
|  | 31 |
| Fourth Year | Hours |
| MGT 490 (Satisfies CAP Integrative) | 3 |
| ENG 372 | 3 |
| MKT 411 | 3 |
| MKT 412, 413, MGT 313, or MIS 467 | 3 |
| MKT 455 | 30 |
| PHL 313 or REL 368 (Satisfies CAP Practical Ethical | 3 |
| Action and Adv Studies in PHL/REL) | 3 |
| CAP Components and/or General Electives | 3 |
|  | 3 |
| Tal | 3 |

Total credit hours: 125-127

## Marketing with a Product Innovation Emphasis

| First Year | Hours |
| :--- | ---: |
| BIZ 101 | 1 |
| BIZ 102 | 3 |
| CMM 100 (Satisfies CAP Oral Communication) | 3 |
| ECO 203 | 3,4 |
| ECO 204 | 3 |
| ENG 100 (CAP Humanities Commons) | 3 |
| HST 103 (CAP Humanities Commons) | 3 |
| MTH 128 | 3 |
| MTH 129 (Satisfies CAP Mathematics) | 3 |
| PHL 103 (CAP Humanities Commons) | 3 |
| REL 103 (CAP Humanities Commons) | 3 |
| CAP Component (generally CAP Natural Science or | 3 |
| CAP Arts) | $34-35$ |
|  | Hours |
| Second Year | 3 |
| ACC 207 | $30-31$ |
| ACC 208 | 3 |
| DSC 210 | 3 |
| DSC 211 | 3 |
| ENG 200 | 3 |
| MGT 201 | 3 |
| MGT 301 | 301 |
| SSC 200 | 3 |
| CAP Component or General Elective | 3 |
|  | 3 |


| Third Year | Hours |
| :--- | ---: |
| ECO Elective | 3 |
| FIN 301 | 3 |
| MIS 301 | 3 |
| MKT 450 | 6 |
| MKT 435 | 3 |
| OPS 301 | 3 |
| Cap Components and/or General Electives | 10 |
|  | 31 |
| Fourth Year | $30 u r s$ |
| MGT 490 (Satisfies CAP Integrative) | 3 |
| MKT 437 | 3 |
| MKT 455 | 3 |
| PHL 313 or REL 368 (Satisfies CAP Practical Ethical | 3 |
| Action and Adv Studies in PHL/REL) | 12 |
| CAP Components and/or General Electives | 3 |
| ENG 372 | 27 |

Total credit hours: 122-124

## Management Courses

## MGT 201. Legal Environment of Business. 3 Hours

Survey of the legal environment in which businesses operates. Includes overview of legal system and judicial processes and coverage of constitutional principles for U.S. legal system, ways to resolve legal disputes, forms of business organization, legal issues relevant to employment, legal responsibility of businesses to clients and customers, and liability issues. Prerequisite(s): Sophomore standing.

## MGT 220. Entrepreneurship Sophomore Experience I. 2 Hours

First of two-course sequence. Designed to immerse Entrepreneurship major into the dynamics of starting and running a micro-business. Focuses on identifying market need, researching financial viability of business venture to meet that need, and marshaling the resources (among them, financial, human, technical, and motivational) to launch the business. Overall 2.7 GPA. Prerequisite(s): Entrepreneurship major; sophomore standing.
MGT 221. Entrepreneurship Sophomore Experience II. 1 Hour Continuation of MGT 220. Focuses on growing and running the microbusiness throughout the academic year with planned liquidation or shutdown by the end of the academic year. Entrepreneurship majors. Overall 2.7 GPA required. Prerequisite(s): ACC 207 and MGT 220.
MGT 229. Introduction to Entrepreneurship. 3 Hours
An overview of entrepreneurship for students not taking a major offered by the School of Business Administration. An introductory course that allows students to learn about business start-ups while exploring their related interests and aptitudes. Students use creative and critical thinking skills to develop a product/service idea and evaluate its viability. Prerequisite(s): Sophomore status.

## MGT 300. Survey of Organizational Behavior. 3 Hours

Survey of Organizational Behavior for non business majors. The course focuses on studying the behaviors of individuals and groups in organizational settings - referred to as Organizational Behavior. The course operates under the assumption that it is people who power organizational performance, competitive advantage and long-term financial success - hence successful managing behavior is organizations is crucial for organizational success. In this spirit the course takes a strategic approach to OB as it provides a big-picture framework helping you appreciate and understand the value of $O B$ to organizational performance and to your future career. Topics include interpersonal communication, leadership, decision making, conflict management, and teams. Prerequisite(s): Sophomore standing; non-business majors only.

## MGT 301. Organizational Behavior. 3 Hours

Study of individual, group, and team behavior in organizations as they interact to achieve both personal and organizational goals. Topics include individual differences, interpersonal communication, leadership, decision-making, reward systems, conflict management, and work groups and teams. Prerequisite(s): BIZ 100 or BIZ 102 or BAI 151; Sophomore standing.

## MGT 313. Negotiation. 3 Hours

Course integrates conceptual understanding with practical application of negotiation and examines cultural and gender differences in negotiation, influence of personality traits, the negotiation process, and different ways in which to negotiate. Demonstrated knowledge, skills and abilities are part of course requirements. Prerequisite(s): MGT 301 or MGT 300 or MKT 301 or MKT 300; Junior standing.

## MGT 314. Survey of Human Resources. 3 Hours

Survey course designed to familiarize students with the major functional areas in human resources including planning, recruitment and selection, training and development, compensation, benefits, safety, and employee relations. Course develops framework for understanding the roles of HR professional, issues faced by managers and supervisors, and application of sound management theory to these issues. Prerequisite(s): Sophomore standing.

## MGT 318. Fundamentals of New Venture Creation. 3 Hours

Fundaments of New Venture Creation for non-Entrepreneurship majors. Overview of the concepts and aspects involving creation of new business ventures, new product development, and innovation within existing companies now popularly called corporate venturing. Topics include entry strategies, creating high potential opportunities, entrepreneurial finance, business plan development, entrepreneurial marketing, the legal structures of new businesses, and government programs for assisting entrepreneurial firms. Does not count towards Entrepreneurship major. Prerequisite(s): Sophomore standing.
MGT 319. Fundamentals of Entrepreneurial Finance. 3 Hours
Fundamentals of entrepreneurial finance for non-ENT majors. Focuses on financial aspects of starting, growing, and harvesting entrepreneurial ventures. Includes assessments of various sources of capital for small and growth businesses with emphasis placed on how common financing deals are structured, common financing pitfalls, and various legal documentation used to consummate financial transactions. Does not count towards Entrepreneurship major. Prerequisite(s): Pre- or corequisite: MGT 318; Sophomore standing.

## MGT 320. New Venture Creation. 3 Hours

Overview of the concepts and aspects involving creation of new business ventures, new product development, and innovation within existing companies (e.g., corporate venturing). Topics include entry strategies, creating high potential opportunities, entrepreneurial finance, business plan development, entrepreneurial marketing, the legal structures of new businesses, and government programs for assisting entrepreneurial firms. Open to Entrepreneurship majors only with overall 2.7 GPA. Prerequisite(s): MGT 221.

## MGT 321. Financing Entrepreneurial Ventures. 3 Hours

Focuses on financial aspects of starting, growing, and harvesting entrepreneurial ventures. Includes assessments of various sources of capital for small and growth businesses with emphasis placed on how common financing deals are structured, common financing pitfalls, and various legal documentation used to consummate financial transactions. Fall sections open to Entrepreneurship majors only with overall 2.7 GPA . Prerequisite(s): ACC 207; FIN 301; Pre-req or Co-req MGT 320.

## MGT 350. Managerial Skills. 3 Hours

Course focuses on knowledge, skills and abilities in oral and written communication, decision-making, and facilitation of conflict management and group/team management. Demonstrated working competencies are required to complete the course. Prerequisite(s): Sophomore standing.

## MGT 401. Organizational Design, Culture \& Change. 3 Hours

Course focused at the organizational level of analysis that includes design of organizations, development of organizational culture, and other issues of organizational change. Topics include processes for organizational design and change, power, and information processing. Prerequisite(s): MGT 301 or MGT 300.

## MGT 402. Leadership \& Motivation. 3 Hours

An in-depth study of individual and group/team motivation in an organizational setting through examination of individual, organizational, and societal influences on motivation. Focus is on how leaders can understand, and then affect, motivation through a variety of mechanisms. Prerequisite(s): MGT 301 or MGT 300.

## MGT 403. Cross-Cultural Management. 3 Hours

Study of general cross-cultural differences and development of cross-cultural frameworks in decision-making, negotiation, conflict management, communication, and general business relations. Primary emphasis is on understanding how and why cultures differ and how such differences can be managed. Prerequisite(s): MGT 301 or MGT 300.

MGT 404. Group Dynamics, Team Processes \& Decision Making. 3 Hours In-depth study of group formation, team design, and diagnosis with emphasis on developing and maintaining different types of groups and teams. Course focuses on leaders' knowledge, skills and abilities to work effectively with teams and groups. Prerequisite(s): MGT 301 or MGT 300.

## MGT 405. Employee Training \& Development. 3 Hours

Focuses on training and learning methods and models, career paths, and self-improvement methods within the balance of organizational, job, and individual needs. Additional emphasis on systematic development and evaluation of training programs and role of organizational leader in ensuring employee training and development. Prerequisite(s): MGT 301 or MGT 300; junior standing.

## MGT 409. Current Issues in Leadership. 3 Hours

Selected topics that consider and analyze current problems and emerging issues in Leadership and in the Leader's role in promoting effective organizational change and development. Prerequisite(s): MGT 301 or MGT 300.

## MGT 421. Small Business Management. 3 Hours

Course addresses unique characteristics of small businesses (e.g., resource limitations, family participation) and grapples with ways to overcome the "liability of smallness." Coverage includes effect of macrotrends (e.g., changing technology and globalization) on small business, review of topics from functionally-oriented courses, examination of how functional models such as pricing models can be modified for small business use, and ways for small business to identify and exploit weaknesses of larger, better financed competitors. Prerequisite(s): ACC 200 or 208; MGT 201.

## MGT 422. Business Plans for Emerging Firms. 3 Hours

This course explores multiple business models for launching a new venture. Business models are examined in terms of the type of product/ service being offered as well as the goals of the entrepreneur, firm growth, and time to market. The benefits and costs of different types of business plans will be examined relative to the opportunities that students may wish to pursue. Students taking this course must have a potential business opportunity in mind. Prerequisite(s): MGT 318 and MGT 320; permission of department chairperson.
MGT 423. Human Resource Management in the Emerging Firm. 3 Hours This course explores issues unique to the human resource management (HRM) needs and challenges facing entrepreneurs and their firms. Emphasis is placed on how entrepreneurs can create effective HRM systems in the areas of staffing, recruitment and selection, compensation, motivations, and employee development. Care will be given to address the changes in HRM needs as the firm evolves through several transitional stages. Prerequisite(s): MGT 301 or MGT 300.

## MGT 424. Family Business Management. 3 Hours

This course explores topics relevant to entrepreneurs within the family business environment. Specific topics examined will include how family businesses emerge and evolve as well as the unique challenges often found in family business context (e.g., dealing with family conflicts, how to motivate and evaluate employees when a mix of family and nonmembers are involved, and planning for succession). Prerequisite(s): MGT 318 or MGT 320.

## MGT 425. Franchising. 3 Hours

Provides an overview of business franchising and how franchising can be used to grow a business concept. Students will learn how franchises operate and when to use franchising as a business model. Understanding the complexities of franchising (e.g. which ideas can be franchised, pricing strategies, and territory management) and the keys to success (e.g., the importance of communications, networking, teamwork, leadership) are important goals of the course. Counts as elective credit for ENT majors and minors. Prerequisite(s): Junior standing.

## MGT 429. Current Issues in Entrepreneurship. 3 Hours

In-depth examination of selected contemporary topics relevant to entrepreneurship. Subject matter may vary each semester. May be taken only once for credit toward Entrepreneurship major or minor. Prerequisite(s): MGT 318 or MGT 320; junior standing.
MGT 430. Senior Seminar in Entrepreneurship. 3 Hours
Project-based capstone learning experience for Entrepreneurship major. Course objective is to integrate prior coursework through completion of a consulting project with local entrepreneurial firm, including business plan revision, market research, feasibility testing, financial modeling and analysis, and operations analysis. Overall 2.7 GPA or higher required. Prerequisite(s): MGT 301, MGT 320, MGT 321; Entrepreneurship major.

## MGT 490. Managing the Enterprise. 3 Hours

Course focuses on creating understanding of how concepts and analytical tools learned in other business courses are integrated in practice to create a unified whole. Students learn how general and top managers gather and use information to influence organizational mission, goals, and strategies. Course typically relies heavily on cases and/or business simulation. Prerequisite(s): DSC 211; FIN 301; MGT 301 or 300; MIS 301; MKT 301 or 300; OPS 301; senior standing; Business majors only.

## MGT 491. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent and original research thesis under guidance of departmental faculty member. Prerequisite(s): University Honors Program participant; permission of department chairperson and director of Honors Program; senior standing.

## MGT 492. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent and original research thesis under guidance of departmental faculty member. Prerequisite(s): University Honors Program participant; permission of department chairperson and director of Honors Program; senior standing.

## MGT 494. Seminar in Management. 3 Hours

Study of selected topics or issues in contemporary managerial practice, domestic or international. May be taken more than once if topics change. Title will reflect topics covered in a particular offering. Prerequisite(s): Vary by topic; junior standing.

## MGT 497. Internship for General Elective Credit. 1-3 Hours

Supervised work experience in partnership with sponsoring employer that is directly relevant to major or minor. Must work with internship coordinator and get approval of department chairperson or designee. May be used for general elective credit only. 7 or higher; permission of Internship Coordinator. Prerequisite(s): ENT or IBM majors; junior standing; overall GPA of 2.7 or higher.

## MGT 498. Cooperative Education. 1-3 Hours

Optional full-time work period off campus alternating with study period on campus. (See Chapter X; consult Cooperative Education Office for details.) Permission of chairperson or designee required. May be used for general elective credit only. LDR or ENT majors only. 7 or higher. Prerequisite(s): ENT or IBM majors only; Overall GPA of 2.7 or higher.

## MGT 499. Independent Study. 1-3 Hours

Supervised study involving directed readings, individual research (library, field, or experimental), or projects in specialized area of management. May be taken only once. May count as general elective credit. Does not apply to requirements for Leadership or Entrepreneurship major or minor. Prerequisite(s): MGT 301; ENT or LDR major; senior standing; sponsorship by faculty member; permission of department chairperson.

## Marketing Courses

## MKT 300. Survey of Marketing. 3 Hours

Survey of marketing for non-marketing majors. Course introduces students to market and environmental analysis, marketing strategy and links with corporate strategy, market segmentation, organizational and consumer markets, and marketing mix (product, price, promotion, distribution). Prerequisite(s): Non-business majors only; sophomore standing.

## MKT 301. Principles of Marketing. 3 Hours

The general principles and practices underlying the processes of marketing. Analysis of the environmental conditions of manufacturers, wholesalers, retailers, and other marketing agencies. Prerequisite(s): (BIZ 100 or BIZ 102 or BAI 151); Business majors only; sophomore standing.

## MKT 310. Principles of Selling. 3 Hours

The nature of selling, explored through the practical application of buying motives and selling techniques. Projects and role-playing to experience the preparation, closing, and post-purchase phases of selling. Prerequisite(s): MKT 300 or MKT 301.

## MKT 315. Retail Marketing. 3 Hours

Survey of the development of retailing and the impact of consumer behavior, fashion, computers, and other innovations. Structural organization, location, and layout. Merchandising operations including planning of sales, purchases, stock control, markup, and expense control. Prerequisite(s): MKT 300 or MKT 301.

## MKT 340. Multicultural Marketing Analysis. 3 Hours

Study of basic concepts and theories of multicultural marketing. Students acquire basic understanding of culture, awareness of cultural differences, and appreciation of importance of cultural adaptation for marketing program, especially as related to development of marketing systems. Prerequisite(s): MKT 300 or MKT 301.

## MKT 341. Business-to-Business Marketing. 3 Hours

Concepts and analytical procedures associated with marketing to business. Business consumer and competitor analysis, marketing information systems, marketing research, and demand forecasting. Strategy development in product, promotion, distribution, and pricing with focus on manufacturers of business products. Prerequisite(s): MKT 300 or MKT 301.

## MKT 350. Digital Marketing. 3 Hours

Comprehensive study of the internet as a marketing channel and as an economic and social phenomenon. Emphasis is on role of internet in firm's overall marketing efforts, especially marketing mix, target markets, and external environment; principles of e-commerce; and application of course knowledge in a managerial and decision-making context. Prerequisite(s): MKT 300 or MKT 301.

## MKT 361. Christian Ethics and Meaningful Marketing. 3 Hours

Interdisciplinary survey of basic marketing principles alongside Catholic social teaching and major ideas in Christian ethics. Students reflect on historical and contemporary questions about marketing and Christian ethics, and analyze marketing strategies with respect to diversity (i.e. gender, class, race,) and social justice. Prerequisite(s): REL 103 or ASI 110 or equivalent; sophomore level.

## MKT 411. Sales Management. 3 Hours

The structure of the sales organization; determination of sales policies; selection, training, and motivation of salespersons; establishing sales territories and quotas. Prerequisite(s): (MKT 300 or MKT 301); MKT 310.

MKT 412. Advanced Selling Skills in High Technology Industries. 3 Hours This course is focused on expanding the depth and breadth of the students' knowledge of the professional selling process, so that they can develop a much deeper understanding of Business-to-Business (B2B), Consultative Selling in High Technology Industries, with a significant emphasis placed on the Complex or Major Sale. Prerequisite(s): MKT 310.

MKT 413. Value Analysis in Major Sales Engagements. 3 Hours
According to Neil Rackham, author of "SPIN Selling": "Today, sales forces that simply communicate value to the customer are doomed to fail. Sales must begin to create value for the customer, in order to survive." In this course you will learn how to define and begin the process of investigating and determining three types of value for the customer: Financial Value, Business Value and Personal Value. We will then learn how to further develop and quantify each type of value for the customer. Once we have created the value for the customer, we will focus on how to articulate and present this value to the customer by "selling with impact"; to close the sale, win the business and enhance the long-term Customer Partnering Relationship. Prerequisite(s): MKT 310.

## MKT 420. Entrepreneurial Marketing. 3 Hours

Study of the techniques used to profitably identify and fill customers' needs when operating within a limited budget during the early stages of a start-up or in a small to medium sized firm. Course strives to develop skills in applying basic marketing principles and high impact sales and promotion techniques in integrated manner to produce a practical, costeffective action plan for start-ups and smaller companies. Prerequisite(s): MKT 300 or MKT 301.

## MKT 421. Advertising. 3 Hours

Nature and scope of advertising, social and economic aspects, role of research, creative strategy, media planning and selection, coordination with other marketing efforts. Prerequisite(s): MKT 300 or MKT 301.

## MKT 428. Promotion Management. 3 Hours

Integration course to familiarize marketing students interested in promotion and marketing communication with tools necessary for the development, implementation, and management of promotional programs. Focus on management and coordination of advertising, personal selling, publicity and public relations, sales promotion, and collateral materials. Prerequisite(s): MKT 300 or MKT 301.

## MKT 430. Brand Management. 3 Hours

This highly interactive course is a hands-on, practical exploration of product, service, and enterprise-wide brand building and management. The course is structured along the daily responsibilities and challenges faced by brand/marketing managers. As such, the course will provide experience with proven strategies for building successful brands in the competitive marketplace, the decisions and options faced by brand managers, and the tools to effectively manage brands. It covers topics such as product management, branding, brand equity, integrated branding strategies, brand positioning, perceptual mapping and long term brand management. Prerequisite(s): MKT 300 or MKT 301.

## MKT 435. New Product Development. 3 Hours

Investigation and analysis of the new product development process, the management of a product through its life cycle, and the importance of the price variable in the product management process. Prerequisite(s): MKT 300 or MKT 301.

## MKT 436. Marketing Intelligence. 3 Hours

This course provides an examination of how consumer marketing is evolving in the context of consumer behavior analysis, personalized marketing channels, and computer automation tools. The focus is on analyzing personalized consumer marketing based on consumer behavior. Prerequisite(s): MKT 300 or MKT 301.

## MKT 437. Advanced New Product Development. 3 Hours

Study of the role of new product development in driving marketing success for firms. This course is designed to help students develop an understanding and appreciation of the difficulties and challenges of designing, developing, and launching new products. Prerequisite(s): MKT 435.

MKT 440. Global Marketing. 3 Hours
Emphasis on understanding global marketing environments, developing skills of global market analysis, designing and developing appropriate marketing strategies for global markets, decision making in global marketing. Prerequisite(s): MKT 300 or MKT 301.

MKT 450. Buyer Behavior \& Market Analysis. 6 Hours
Integration of theoretical components of buyer behavior and marketing research. Emphasis placed on how marketing managers use concepts from these bodies of knowledge to make better decisions. Topics include common processes and methods of contemporary market research, analysis of purchase decisions, market research techniques used to gather information about purchase decisions, and use of information to formulate and implement a marketing strategy. Prerequisite(s): DSC 211; MKT 301; Marketing major; junior standing.
MKT 455. Marketing Analytics and Strategy. 3 Hours
This course, which is the CAP major capstone, focuses on the analytical methods used to interpret market and customer data and to inform strategic decisions. Emphasis is placed on applying the empirical results from data analyses to issues of market identification and segmentation, product and brand positioning, pricing, distribution, and promotional strategies. Topics include hypothesis testing through statistical analyses, development of data-driven marketing strategy recommendations, and clarity in reporting of results. These topics are covered through analysis of marketing project data from class clients, preparation of a comprehensive marketing research strategy report, and presentation of results and recommendations to clients. Prerequisite(s): ACC 207, ACC 208; MKT 450; Marketing major.
MKT 494. Special Topics in Marketing. 3 Hours
Subject varies from time to time. May be taken more than once if topic changes. Prerequisite(s): Vary by topic.

MKT 497. Internship for General Elective Credit. 1-3 Hours
Practical work experience associated with career development and career exploration. See internship coordinator for details. Permission of department chair or designee required. Prerequisite(s): MKT major; junior standing; overall gpa of 2.7 or higher; permission of internship coordinator.

## MKT 498. Cooperative Education. 1-3 Hours

Optional full-time work period off campus alternating with study period on campus. (See Chapter X; consult Cooperative Education Office for details.) Permission of chairperson or designee required. For general elective credit only. Prerequisite(s): MKT major; overall gpa of 2.7 or higher.
MKT 499. Independent Study in Marketing. 1-3 Hours
Study of one or more specific aspects of the marketing process with emphasis on individual reading and research. Subject matter to be determined by the instructor on the basis of interest and need of the student. Enrollment limited. Permission of chairperson or designee required. Prerequisite(s): MKT 301; MKT major; senior standing; permission of department chairperson.

# SCHOOL OF EDUCATION AND HEALTH SCIENCES 

Kevin R. Kelly, Dean<br>Linda A. Hartley, Associate Dean

In conformity with the University's mission, the School of Education and Health Sciences (SEHS) endeavors to educate distinctive graduates who will effectively and efficiently utilize the highest quality of learning and scholarship and engage people in building strong learning communities and in developing collaborative, dynamic partnerships. The SEHS programs focus on distinctive Catholic and Marianist educational and intellectual traditions which enable graduates to become effective practitioners in the field of professional education and the health sciences. The theme for the SEHS is Building Learning Communities through Critical Reflection.

As a community of learners, collaboration and critical reflection are fostered and encouraged through efforts to integrate and connect knowledge, skills and dispositions gained from various courses in the SEHS and the liberal arts, including the Common Academic Program. This acquaints the students with the major areas of knowledge and provides the basis for their specific program of study. The SEHS is particularly noted for the professional development of teachers and health science professionals who are able to enhance the quality of life experiences for both children and adults. In relation to teaching, the school is committed to quality programs which address the professional preparation of teachers for the early, middle and secondary schools and intervention specialists. In relation to the health sciences, the school is committed to quality programs which address the professional preparation for specialists in exercise science and fitness management, sport management, pre-physical therapy and food and nutrition. Provisions for professional competence are made through:

1. comprehensive study of the various fields
2. study of the professional foundations common to all of the program areas
3. specialized study of the principles underlying a particular area of study
4. appropriate field-based experiences

Students in the SEHS should appraise their commitment to teaching and the health science professions according to their development in specific knowledge, skills and dispositions. Students will have opportunities to apply theory to practice in planned and supervised field-based experiences. Their programs of study will include reflective practice which will incorporate inquiry leading to self improvement.

The SEHS is committed:

- to education for the improvement of others and society
- to the principles that refer to a shared common humanity
- to the dignity of the person and the use of reason and cooperation in seeking social justice
- to the democratic principles
- to a humanistic approach to learning; and
- to the Marianist traditions in education


## Academic Programs

The SEHS offers the following majors leading to the Bachelor of Science in Education degree. Additional information specific to each department, including certificate and endorsement programs, may be found under the Programs of Study tab.

## Department of Health and Sport Science

- Dietetics (p. 332)
- Exercise Physiology (p. 334)
- Exercise Science (p. 332)
- Sport Management (p. 336)
- Pre-Physical Therapy (p.


## Department of Teacher Education

- Adolescence to Young Adult Education (p. 343)
- Early Childhood Education (p. 344)
- Early Childhood Leadership and Advocacy (p. 345)
- Foreign Language Education (Multi-Age P-12) (p. 346)
- Intervention Specialist (Special Education) (p. 347)
- Middle Childhood Education (p. 348)
- Middle Childhood Education/Intervention Specialist (p. 349)
- Secondary Catholic Religion Education (p. 350)

Students who major in the College of Arts and Sciences can also earn a teaching license (p. 332). See program requirements for the majors in the Department of Teacher Education.

## Degree Requirements

To be awarded a bachelor's degree by the School of Education and Health Sciences:

1. All course requirements for the $B S$ in Education degree, including courses required for the major, must be completed.
2. Waived course hours must be made up with an equivalent number of undergraduate course hours.
3. Courses totaling 54 semester hours must be at the 300-400 level.
4. At least 30 of the final 36 semester hours must be earned at the University of Dayton.

The candidate has the responsibility of meeting degree requirements for the BS in Education degree. Therefore, the student should be thoroughly familiar with the degree requirements and with his or her progress towards meeting those requirements.

## Department of Health \& Sport Science requirements

The candidate for graduation in a Health and Sport Science major must have earned at least a 2.0 cumulative GPA and also a 2.0 GPA or higher in each major and minor.

## Department of Teacher Education requirement

The candidate for graduation in a teacher preparation program must complete a minimum of 124 semester hours and have earned at least a 3.0 cumulative GPA.

## Licensure for Students in Arts and Sciences

## B.A. or B.S. and B.S.E.

Students earning a Bachelor of Arts or a Bachelor of Science in the College of Arts and Sciences who wish to complete the requirements for a teaching license in the state of Ohio may do this by also completing the requirements for the Bachelor of Science in Education and Health Sciences. The dual degree option requires students to complete all course and academic requirements, including specific minimum GPA requirements, in both academic units. Some overlap of degree requirements may exist and students are encouraged to meet with an adviser to obtain a clear understanding of the total academic work needed for the dual degree option. For a full description of the requirements for the teacher licensure programs in the Department of Teacher Education, see Programs of Study (p. 342).

## Transfer Students

The School of Education and Health Sciences welcomes transfer students into our programs.

## External transfers

Candidates for admission from other accredited colleges or universities must be in good academic standing in the colleges or universities from which they are transferring and submit a complete application in accordance with UD admissions policies. Students must have a minimum 3.0 GPA. Students should contact the SEHS Assistant Dean, Dr. Mary Lou Andrews, at 937-229-3146.

For more information, please visit the School of Education and Health Sciences website (https://www.udayton.edu/education).

## Internal transfers

- Department of Health \& Sport Science: Candidates for admission to the Department of Health \& Sport Science should contact the department and make an appointment to meet with an advisor:

Department of Health \& Sport Science
Fitz Hall 646
937-229-4240

- Department of Teacher Education: Candidates for admission to the Department of Teacher Education should contact the department and make an appointment to meet with Dr. Rochonda Nenonene, faculty advisor:

Department of Teacher Education Fitz Hall 680
937-229-3330

## Programs of Study

To learn more about the programs in the School of Education and Health Sciences,
explore the departments:

- Health and Sport Science (p. 332)
- Teacher Education (p. 342)


## Individually Designed Major

Students demonstrating extraordinary interest, special skills or needs, and sound academic status may initiate an individually designed major. Students carry the responsibility to find a faculty mentor or advisor for such major. All University and School of Education and Health Sciences requirements for the Bachelor of Science in Education must be fulfilled. The degree received will be a Bachelor of Science in Education with the major Education and Allied Studies. Plans for such major must be submitted to the appropriate chairpersons and the SEHS Dean's Office for final approval. Plans may be altered with appropriate supporting rationale and the approval of the department chairperson and dean.

## Health and Sport Science

Majors:

- Bachelor of Science in Education, Dietetics (p. 332)
- Bachelor of Science in Education, Exercise Physiology (p. 334)
- Bachelor of Science in Education, Exercise Science (p. 334)
- Bachelor of Science in Education, Pre-Physical Therapy (p. 335)
- Bachelor of Science in Education, Sport Management (p. 336)

The undergraduate mission of the Department of Health and Sport Science is to prepare students to be proficient and professional in the disciplines of dietetics, exercise physiology, exercise science, prephysical therapy, and sport management.

The Dietetics Program prepares students for post-baccalaureate dietetic internships or preprofessional practice programs.

Exercise Physiology students prepare to pursue research careers in exercise science, medicine or health.

The Exercise Science Program is designed to prepare students for professional opportunities in corporate fitness, wellness, and health maintenance programs in a variety of settings.

The Pre-Physical Therapy Program will prepare students for graduate school in physical therapy and other allied health professions.

The Sport Management Program prepares students for professional opportunities in Division I and professional sports, sports organizations/ federations, newspapers, television, sporting goods, and the many areas of recreation.

Along with minimum ACT/SAT scores, minimum cumulative GPAs are required for students wishing to transfer into the department.

## Faculty

Corinne Daprano, Chairperson
Professors Emeriti: Drees, Laubach, Leonard, Roberts, Schleppi, Siciliano Professor: Titlebaum
Associate Professors: Daprano, DeMarco, Linderman
Assistant Professors: Crecelius, Cuy Castellanos
Lecturers: Dalton, Gallo, Ritterhoff

## Bachelor of Science in Education, Dietetics (EHA) minimum 123 hours

This program, which leads to a Bachelor of Science degree, prepares students who wish to become registered dietitians. It has a strong science component.

During the last semester of their senior year, students make application to a dietetic internship program. These post-baccalaureate programs are usually eight to eleven months in length and will qualify the student to sit for examination to become registered dieticians. Acceptance into the internship program is highly competitive and is based on the student's grades, work experience, recommendation letters, and extra curricular activities. Selection is made through computer matching.

Costs of the didactic program in dietetics may also include laboratory fees, the purchase of a lab coat, and membership fees for the Student Dietetic Association and the Academy of Nutrition and Dietetics. No liability insurance is needed since the students in this program do not participate in a practice setting.

The didactic program in dietetics is currently granted initial accreditation by the Commission on Accreditation for Dietetics Education (CADE), Suite 2000, 120 South Riverside Plaza, Chicago, Illinois 60606, Phone: (900) 877-1600.

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$


Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice 3

Major Capstone 0-3

Completed with ASI 110 and ASI 120.
Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

## Major Requirements

ACC $200 \quad$ Introduction to Accounting

| BIO 151 | Concepts of Biology I: Cellular \& Molecular Biology (Satisfies CAP Natural Sciences) | 3 |
| :---: | :---: | :---: |
| BIO 152 | Concepts of Biology II: Evolution \& Ecology | 3 |
| BIO 312 | General Genetics | 3 |
| BIO 411 | General Microbiology | 3 |
| $\begin{aligned} & \text { CHM } 123 \\ & \& 123 \mathrm{~L} \end{aligned}$ | General Chemistry and General Chemistry Laboratory (Satisfies CAP Natural Sciences) | 4 |
| $\begin{aligned} & \text { CHM } 124 \\ & \& 124 \mathrm{~L} \end{aligned}$ | General Chemistry and General Chemistry Laboratory | 4 |
| CHM 313 | Organic Chemistry | 3 |
| ENG 370 <br> or ENG 371 <br> or ENG 372 <br> or ENG 373 | Report \& Proposal Writing (Any satisfies CAP Inquiry) <br> Technical Communication <br> Business and Professional Writing <br> Writing in the Health Professions | 3 |
| HSS 101 | Introduction to the University Experience | 1 |
| HSS 113 | Introduction to Dietetics \& Nutrition | 2 |
| $\begin{aligned} & \text { HSS } 210 \\ & \& 210 \mathrm{~L} \end{aligned}$ | Introductory Foods and Introductory Foods Laboratory | 4 |
| HSS 295 | Nutrition \& Health (Satisfies CAP Integrative) | 3 |
| HSS 302 | Community Nutrition (Satisfies CAP Diversity and Social Justice) | 3 |
| HSS 303 | Food Service Systems Management | 2 |
| HSS 304 | Institutional Quantity Food Buying | 3 |
| HSS 305 | Human Anatomy | 3 |
| HSS 305L | Human Anatomy Laboratory | 1 |
| HSS 307 | Human Physiology | 3 |
| HSS 345 | Clinical Assessment and Electrocardiography | 3 |
| HSS 401 | Nutritional Biochemistry I | 3 |
| HSS 402 | Nutrition for the Aging Adult | 2 |
| HSS 406 | Nutrition for Mother \& Child | 2 |
| $\text { HSS } 428$ | Research in Sport and Health Sciences (Satisfies CAP Capstone) | 3 |
| HSS 439 | Professional Seminar in Dietetics | 2 |
| HSS 456 | Nutritional Biochemistry II | 3 |
| HSS 495 | Medical Nutrition Therapy I | 3 |
| HSS 496 | Medical Nutrition Therapy II | 3 |
| HST 341 <br> or HST 344 <br> or HST 355 or HST 376 | Historical Perspectives on Science, Technology \& Society (Satisfies CAP Adv Studies in HST) <br> History of Science, Technology \& the Modern Corporation <br> American Urban History <br> Social \& Cultural History of the United States | 3 |
| MGT 301 or HSS 356 | Organizational Behavior <br> Organizational Behavior in Health \& Sport | 3 |
| MTH 207 | Introduction to Statistics (Satisfies CAP Mathematics) | 3 |
| PHL 312 | Ethics (Any satisfies CAP Practical Ethical Action and Adv Studies in REL/PHL ) | 3 |
| or PHL 313 | Business Ethics |  |
| or PHL 315 | Medical Ethics |  |
| or REL 360 | Christian Ethics |  |
| or REL 367 | Christian Ethics \& Health Care Issues |  |


| or REL 368 | Christian Ethics \& the Business World |
| :--- | :--- |
| PSY 101 | Introductory Pschology |
| PSY 431 | Interviewing \& Counseling |
| CAP Arts Elective |  |
| CAP REL/Faith Traditions Elective |  |
| Bachelor of Science in Education, |  |
| Exercise Physiology (EEP) minimum 131 |  |
| hours |  |

With its increased emphasis on the sciences, this program is more appropriate for students interested in pursuing research careers in exercise science, medicine, or health (M.S., Ph.D. degrees).

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1} 12$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |


| Second-Year Writing Seminar ${ }^{3}$ | $0-3$ |
| :--- | :--- |


| ENG $200 \quad$ Writing Seminar II |  |
| :---: | :---: |
| Oral Communication | 3 |
| CMM 100 Principles of Oral Communication |  |

Mathematics 3
Social Science 3

| SSC 200 | Social Science Integrated |
| :--- | :--- |
| Arts | 3 |

Natural Sciences ${ }^{4} \quad 7$

| Crossing Boundaries | variab |
| :--- | :--- |
| credit |  |


| Faith Traditions |
| :--- |
| Practical Ethical Action |
| Inquiry |


| Integrative | variab |
| :---: | :---: |
| Advanced Study | credit |

Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$

| Diversity and Social Justice | 3 |
| :--- | ---: |
| Major Capstone | $0-3$ |

Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

## Major Requirements

| BIO 151 | Concepts of Biology I: Cellular \& Molecular Biology |
| :--- | :--- |
| $\& 151 \mathrm{~L}$ | and Concepts of Biology Laboratory I: Cellular <br> \& Molecular Biology (Satisfies CAP Natural <br> Sciences) |


| $\begin{aligned} & \text { BIO } 152 \\ & \& 152 L \end{aligned}$ | Concepts of Biology II: Evolution \& Ecology and Concepts of Biology Laboratory II: Evolution \& Ecology | 4 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { CHM } 123 \\ & \& 123 \mathrm{~L} \end{aligned}$ | General Chemistry and General Chemistry Laboratory | 4 |
| $\begin{aligned} & \text { CHM } 124 \\ & \& 124 \mathrm{~L} \end{aligned}$ | General Chemistry and General Chemistry Laboratory | 4 |
| BIO 312 | General Genetics | 3 |
| $\begin{aligned} & \text { CHM } 313 \\ & \& 313 \mathrm{~L} \end{aligned}$ | Organic Chemistry and Organic Chemistry Laboratory (Satisfies CAP Inquiry) | 4 |
| $\begin{aligned} & \text { CHM } 314 \\ & \& 314 \mathrm{~L} \end{aligned}$ | Organic Chemistry and Organic Chemistry Laboratory | 4 |
| BIO 411 | General Microbiology | 3 |
| CHM 420 | Biochemistry | 3 |
| HSS 101 | Introduction to the University Experience | 1 |
| HSS 112 | Introduction to Exercise Science \& Fitness Management | 2 |
| HSS 121 | Fitness for Life | 2 |
| HSS 295 | Nutrition \& Health (Satisfies CAP Integrative) | 3 |
| $\begin{aligned} & \text { HSS } 305 \\ & \& 305 \mathrm{~L} \end{aligned}$ | Human Anatomy and Human Anatomy Laboratory | 4 |
| $\begin{aligned} & \text { HSS } 307 \\ & \& 307 \mathrm{~L} \end{aligned}$ | Human Physiology and Human Physiology Laboratory OR BIO 403 and BIO403L (Pre-Med) | 4 |
| HSS 345 | Clinical Assessment and Electrocardiography | 3 |
| $\begin{aligned} & \text { HSS } 408 \\ & \& 408 \mathrm{~L} \end{aligned}$ | Physiology of Exercise and Physiology of Exercise Laboratory | 4 |
| HSS 428 | Research in Sport and Health Sciences (Satisfies CAP Capstone) | 3 |
| MTH 148 | Introductory Calculus I | 3 |
| P/TH 207 | Introduction to Statistics (Satisfies CAP Mathematics) | 3 |
| $\begin{aligned} & \text { PHY } 201 \\ & \& 201 \mathrm{~L} \end{aligned}$ | College Physics I and College Physics Laboratory I (Satisfies CAP Natural Sciences) | 4 |
| $\begin{aligned} & \text { PHY } 202 \\ & \text { ofé 202L } \end{aligned}$ | General Physics and General Physics Laboratory | 4 |
| PSY 101 | Introductory Psychology | 3 |
| PSY 251 | Human Growth \& Development (OR PSY 351 AND PSY 353) | 3 |
| $\begin{aligned} & \text { PSY } 366 \\ & \text { or PSY } 363 \\ & \text { or PSY } 368 \\ & \text { or PSY } 422 \\ & \text { or PSY } 435 \end{aligned}$ | Health Psychology <br> Abnormal Psychology <br> Community Psychology <br> Biopsychology <br> Human Factors | 3 |

## Bachelor of Science in Education, Exercise Science (EES) minimum 125 hours

Wellness is no longer a health trend or fad, it has become a lifestyle. Career opportunities available to graduates include:

- Exercise program directors in business, industry, hospitals, and communities
- Cardiac rehabilitators
- Health and fitness club managers

Specific functions include testing, research, evaluating, and prescribing exercise-related activities, and promoting wellness programs.

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1} 12$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |

Second-Year Writing Seminar ${ }^{3} \quad 0-3$
ENG 200 Writing Seminar II 3

Oral Communication
CMM $100 \quad$ Principles of Oral Communication
Mathematics 3

Social Science 3
SSC $200 \quad$ Social Science Integrated

| Arts | 3 |
| :--- | :--- |
| Natural Sciences ${ }^{4}$ | 7 |


| Crossing Boundaries | variab <br> credit |
| :--- | :--- |


| Faith Traditions |  |
| :--- | :--- |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative | variab |
| Advanced Study | credit |

Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice
Major Capstone

## -

Completed with ASI 110 and ASI 120.
Or ENG 100A and ENG 100B, or ENG 200H, by placement.
Completed with ENG 200H or ASI 120.
Must include two different disciplines and accompanying lab.
U.S. History AP credit will not satisfy this requirement.

## Major Requirements

| HSS 101 | Introduction to the University Experience | 1 |
| :--- | :--- | :--- |
| HSS 112 | Introduction to Exercise Science \& Fitness <br> Management | 2 |
| HSS 121 | Fitness for Life | 2 |
| BIO 151 | Concepts of Biology I: Cellular \& Molecular Biology <br>  | 4 |
| \& 151L | Molecular Biology (Satisfies CAP Natural Science) |  |
| BIO 152 | Concepts of Biology II: Evolution \& Ecology <br>  | 4 |
| \& 152L | Ecology |  |
| CHM 123 General Chemistry <br> and General Chemistry Laboratory <br> \& 123L and 4 |  |  |


| CHM 124 <br> \& 124L | General Chemistry and General Chemistry Laboratory | 4 |
| :---: | :---: | :---: |
| HSS 275 | History of Physical Education \& Sport (Satisfies Adv Study in HST and Diversity and Social Justice) | 3 |
| HSS 295 | Nutrition \& Health (Satisfies CAP Integrative) | 3 |
| $\begin{aligned} & \text { HSS } 305 \\ & \& 305 \mathrm{~L} \end{aligned}$ | Human Anatomy and Human Anatomy Laboratory | 4 |
| $\begin{aligned} & \text { HSS } 307 \\ & \& 307 \mathrm{~L} \end{aligned}$ | Human Physiology and Human Physiology Laboratory | 4 |
| $\begin{aligned} & \text { HSS } 320 \\ & \text { or HSS } 321 \end{aligned}$ | Essentials of Strength Conditioning Essentials of Personal Training | 3 |
| HSS 335 | Introduction to Athletic Training | 3 |
| HSS 345 | Clinical Assessment and Electrocardiography | 3 |
| HSS 405 | Tests \& Measurements in Sport Science | 3 |
| HSS 408 <br> \& 408L | Physiology of Exercise and Physiology of Exercise Laboratory | 4 |
| HSS 409 <br> \& 409L | Kinesiology and Kinesiology Laboratory | 4 |
| HSS 422 | Exercise for Special Populations | 3 |
| HSS 428 | Research in Sport and Health Sciences (Satisfies CAP Capstone) | 3 |
| HSS 448 | Safety \& the Law in Physical Education \& Sports | 3 |
| HSS 490 | Exercise Science Internship - On Campus | 2 |
| HSS 491 | Exercise Science Internship | 1-3 |
| PSY 101 | Introductory Psychology | 3 |
| PSY 251 | Human Growth \& Development | 3 |
| MTH 207 | Introduction to Statistics (Satisfies CAP Mathematics) | 3 |
| ACC 200 | Introduction to Accounting | 3 |
| ENG 373 | Writing in the Health Professions (Satisfies CAP Inquiry) | 3 |
| or ENG 372 | Business and Professional Writing |  |
| or ENG 375 | Writing for the Web |  |

Advisor Approved Electives ..... 9-12
Bachelor of Science in Education, Pre- Physical Therapy (EPT) minimum 123 hours

The Pre-Physical Therapy program is focused on preparing students for entrance to graduate programs in physical therapy. It is designed to optimize graduates' chances of being accepted into some of the top physical therapy schools in the country. These graduate programs are highly selective, and both the undergraduate curriculum and the student's performance are considered in this competitive screening. Employment opportunities for physical therapists are growing faster than any other segment of the healthcare industry. Because of the depth and breadth of the curriculum, a graduate will also have preparation for careers in fitness management and sports rehabilitation.

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

## HST 103 The West \& the World

REL 103 Introduction to Religious and Theological Studies
PHL 103 Introduction to Philosophy
4

| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| :---: | :---: | :---: |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| SSC 200 | Social Science Integrated |  |
| Arts |  | 3 |
| Natural Sciences |  | 7 |
| Crossing Boundaries |  | iab |
| Faith Traditions |  |  |
| Practical Ethical Action |  |  |
| Inquiry |  |  |
| Integrative |  |  |
| Advanced Study |  |  |
| Philosophy and/or Religious Studies |  |  |
| Historical Studies ${ }^{5}$ |  |  |
| Diversity and Social Justice |  | 3 |
| Major Capstone |  | 0-3 |
| Completed with ASI 110 and ASI 120. <br> 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement <br> 3 Completed with ENG 200 H or ASI 120. <br> 4 Must include two different disciplines and accompanyi <br> 5 U.S. History AP credit will not satisfy this requirement. |  |  |
| Major Requirements |  |  |
| $\begin{aligned} & \text { BIO } 151 \\ & \text { \& } 151 \mathrm{~L} \end{aligned}$ | Concepts of Biology I: Cellular \& Molecular Biology and Concepts of Biology Laboratory I: Cellular \& Molecular Biology (Satisfies CAP Natural Sciences) | 4 |
| $\begin{aligned} & \text { BIO } 152 \\ & \& 152 \mathrm{~L} \end{aligned}$ | Concepts of Biology II: Evolution \& Ecology and Concepts of Biology Laboratory II: Evolution \& Ecology | 4 |
| CHM 123 <br> \& 123L | General Chemistry and General Chemistry Laboratory | 4 |
| CHM 124 $\& 124 \mathrm{~L}$ | General Chemistry and General Chemistry Laboratory | 4 |
| HSS 101 | Introduction to the University Experience | 1 |
| HSS 114 | Introduction to Health Professions | 1 |
| HSS 121 | Fitness for Life | 2 |
| HSS 220 | Adapted Physical Activity | 3 |
| HSS 295 | Nutrition \& Health (Satisfies CAP Integrative) | 3 |
| $\begin{aligned} & \text { HSS } 305 \\ & \& 305 \mathrm{~L} \end{aligned}$ | Human Anatomy and Human Anatomy Laboratory | 4 |
| $\begin{aligned} & \text { HSS } 307 \\ & \& 307 \mathrm{~L} \end{aligned}$ | Human Physiology and Human Physiology Laboratory | 4 |
| HSS 345 | Clinical Assessment and Electrocardiography | 3 |
| $\begin{aligned} & \text { HSS } 408 \\ & \& 408 \mathrm{~L} \end{aligned}$ | Physiology of Exercise and Physiology of Exercise Laboratory | 4 |
| $\begin{aligned} & \text { HSS } 409 \\ & \& 409 \text { L } \end{aligned}$ | Kinesiology and Kinesiology Laboratory | 4 |


| HSS 428 | Research in Sport and Health Sciences (Satisfies CAP Capstone) | 3 |
| :---: | :---: | :---: |
| HSS 465 | Physical Therapy Seminar | 3 |
| MTH 148 | Introductory Calculus I (Satisfies CAP Mathematics) | 3 |
| MTH 207 | Introduction to Statistics (Satisfies CAP Inquiry) | 3 |
| $\begin{aligned} & \text { PHY } 201 \\ & \& 201 \mathrm{~L} \end{aligned}$ | College Physics I <br> and College Physics Laboratory I (Satisfies CAP <br> Natural Sciences) | 4 |
| $\begin{aligned} & \text { PHY } 202 \\ & \& 202 L \end{aligned}$ | General Physics and General Physics Laboratory | 4 |
| PSY 101 | Introductory Psychology | 3 |
| PSY 251 | Human Growth \& Development (OR PSY 351 AND PSY 353) | 3 |
| PSY 363 | Abnormal Psychology | 3 |
| or PSY 366 | Health Psychology |  |
| or PSY 368 | Community Psychology |  |
| or PSY 422 | Biopsychology |  |
| or PSY 435 | Human Factors |  |
| ADVISOR APPR | VED ELECTIVES | 9-1 |

## Bachelor of Science in Education, Sport Management (ESM) minimum 126 hours

The Sport Management program prepares students for opportunities in sport, event, and facility management. In particular, Sport Management professionals gain positions in collegiate and professional organizations, sport clubs, and athletic federations, as well as public and private recreation. Opportunities are also available in arenas and convention centers, event management, and all forms of media.

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected First-Year Humanities Commons ${ }^{1}$12

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |

Second-Year Writing Seminar ${ }^{3} \quad 0-3$

ENG $200 \quad$ Writing Seminar II
Oral Communication 3

CMM 100 Principles of Oral Communication
Mathematics 3

Social Science 3
SSC $200 \quad$ Social Science Integrated
Arts 3
Natural Sciences ${ }^{4} 7$
Crossing Boundaries variable

Faith Traditions
Practical Ethical Action
Inquiry
Integrative
Advanced Study
variable
credit

| Philosophy and/or Religious Studies |  |
| :--- | ---: |
| Historical Studies ${ }^{5}$ |  |
| Diversity and Social Justice | 3 |
| Major Capstone | $0-3$ |


| 1 | Completed with ASI 110 and ASI 120. |
| :--- | :--- |
| 2 | Or ENG 100A and ENG 100B, or ENG 200 H , by placement. |
| 3 | Completed with ENG 200 H or ASI 120. |
| 4 | Must include two different disciplines and accompanying lab. |
| 5 | U.S. History AP credit will not satisfy this requirement. |


| Major Requirements |  |  |
| :---: | :---: | :---: |
| HSS 101 | Introduction to the University Experience | 1 |
| HSS 111 | Introduction to Sport Management | 3 |
| HSS 250 | Principles of Sport Management | 3 |
| HSS 255 | Practicum in Health \& Sport Science | 3 |
| HSS 285 | Sport Management Field Experience | 3 |
| HSS 331 | Sport Ethics | 3 |
| HSS 349 | Financing Sport Operations | 3 |
| HSS 353 | Sports Media | 3 |
| HSS 354 | Sport in the Global Community (Satisfies CAP Diversity and Social Justice) | 3 |
| HSS 356 | Organizational Behavior in Health \& Sport | 3 |
| HSS 357 | Sports Marketing | 3 |
| HSS 358 | Sales \& Fundraising in Sport | 3 |
| HSS 360 | Sport and Bodies (Satisfies CAP Integrative, CAP Diversity \& Social Justice) | 3 |
| HSS 448 | Safety \& the Law in Physical Education \& Sports | 3 |
| HSS 428 | Research in Sport and Health Sciences (Satisfies CAP Capstone) | 3 |
| HSS 485 | Sport Management Internship | 3 |
| CPS 111 | Introduction to Personal Computers | 3 |
| MTH 207 | Introduction to Statistics (Satisfies CAP Mathematics) | 3 |


| Courses in Business Minor | 18 |
| :--- | :--- |
| Courses in Professional Competency | 12 |

- Bachelor of Science in Education, Dietetics (p. 337)
- Bachelor of Science in Education, Exercise Physiology (p. 337)
- Bachelor of Science in Education, Exercise Science (p. 338)
- Bachelor of Science in Education, Pre-Physical Therapy (p. 335)
- Bachelor of Science in Education, Sport Management (p. 338)


## Dietetics

| First Year |  |  |
| :--- | :---: | ---: |
| Fall | Hours Spring | Hours |
| HSS 101 | 1 BIO 152 | 3 |
| HSS 113 | 2 CHM 124 | 4 |
|  | \& 124L |  |
| BIO 151 | 3 ENG 100 | 3,4 |
| CHM 123 | 4 HST 103 | 3 |
| \& 123L |  |  |
| CMM 100 | 3 PHL 103 | 3 |


| REL 103 | 3 |  |
| :---: | :---: | :---: |
|  | 16 | 16-17 |
| Second Year |  |  |
| Fall | Hours Spring | Hours |
| HSS 295 | 3 HSS 307 | 3 |
| HSS 305 | 4 CHM 313 | 3 |
| \& 305L |  |  |
| ACC 200 | 3 ENG 200 | 3-4 |
| PSY 101 | 3 MTH 207 | 3 |
| SSC 200 | 3 Arts elective | 3 |
|  | 16 | 15-16 |
| Third Year |  |  |
| Fall | Hours Spring | Hours |
| HSS 210 | 4 HSS 345 | 3 |
| \& 210 L |  |  |
| HSS 302 | 3 HSS 402 | 2 |
| HSS 356 | 3 HSS 428 | 3 |
| HSS 406 | 2 BIO 411 | 3 |
| ENG 370, 371, 372, or 373 | 3 PSY 431 | 3 |
|  | HST 355 | 3 |
|  | 15 | 17 |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| HSS 303 | 2 HSS 456 | 3 |
| HSS 304 | 3 HSS 496 | 3 |
| HSS 401 | 3 BIO 312 | 3 |
| HSS 439 | 2 Faith <br> Traditions | 3 |
| HSS 495 | 3 PHL 313, 315, REL 367, or REL 368 | 3 |
|  | 13 | 15 |

## Total credit hours: 123-125

## Exercise Physiology

| First Year |  |  |
| :---: | :---: | :---: |
| Fall | Hours Spring | Hours |
| HSS 101 | $\begin{gathered} 1 \text { BIO } 152 \\ \& 152 \mathrm{~L} \end{gathered}$ | 4 |
| HSS 112 | $\begin{gathered} 2 \text { CHM } 124 \\ \& 124 \mathrm{~L} \end{gathered}$ | 4 |
| BIO 151 | 4 ENG 100 | 3,4 |
| \& 151L |  |  |
| CHM 123 | 4 MTH 148 | 3 |
| \& 123L |  |  |
| CMM 100 | 3 REL 103 | 3 |
| PHL 103 | 3 |  |
|  | 17 | 17-18 |
| Second Year |  |  |
| Fall | Hours Spring | Hours |
| HSS 295 | $\begin{gathered} 3 \text { HSS } 307 \\ \& 307 \mathrm{~L} \end{gathered}$ | 4 |
| HSS 305 | 4 CHM 314 | 4 |
| \& 305L | \& 314L |  |
| CHM 313 | 4 ENG 200 | 3-4 |
| \& 313L |  |  |
| MTH 207 | 3 HST 103 | 3 |
| SSC 200 | 3 PSY 101 | 3 |
|  | 17 | 17-18 |
| Third Year |  |  |
| Fall | Hours Spring | Hours |
| HSS 121 | 2 HSS 408 | 4 |
|  | \& 408L |  |



| Natural Science | 3 Natural Science Lab | 1 |  |
| :---: | :---: | :---: | :---: |
|  | 16 | 16-17 |  |
| Second Year |  |  |  |
| Fall | Hour§pring | Hours |  |
| HSS 250 | 3 HSS 285 | 3 |  |
| HSS 255 | 3 HSS 353 | 3 |  |
| ECO 203 | 3,4 ACC 200 | 3 |  |
| ENG 200 | 3-4 Arts elective | 3 |  |
| SSC 200 | 3 MGT 201 | 3 |  |
|  | 15-17 | 15 |  |
| Third Year |  |  |  |
| Fall | HourSpring | Hours |  |
| HSS 331 | 3 HSS 360 | 3 |  |
| HSS 356 | 3 BUS minor elective | 3 |  |
| HSS 358 | 3 Practical Ethical Action \& Advanced Philosophy | 3 |  |
| Professional Competency | 3 Professional Competency | 6 |  |
| BUS minor elective | 3 |  |  |
|  | 15 | 15 |  |
| Fourth Year |  |  |  |
| Fall | HourSpring | HourSummer | Hours |
| HSS 349 | 3 HSS 354 | 3 HSS 485 | 3 |
| HSS 448 | 3 HSS 357 | 3 |  |
| HSS 428 | 3 BUS minor elective | 3 |  |
| BUS minor elective | 3 Faith Traditions \& Advanced Religion | 3 |  |
| Inquiry \& Advanced History | 3 Professional Competency | 3 |  |
|  | 15 | 15 | 3 |

Total credit hours: 125-128

## Courses

HSS 101. Introduction to the University Experience. 1 Hour
Examination of the values that foster academic progress in the College, discussion of strategies for taking full advantage of academic opportunities, and integrating formal and experiential learning.
HSS 111. Introduction to Sport Management. 3 Hours
Course to help the student define professional goals and assess personal strengths and weaknesses in the light of competencies deemed essential for a sport management career.

## HSS 112. Introduction to Exercise Science \& Fitness Management. 2 Hours

Course to help the student define professional goals and assess personal strengths and weaknesses in the light of competencies deemed essential for an exercise science and fitness management career.

HSS 113. Introduction to Dietetics \& Nutrition. 2 Hours
To acquaint the students interested in a career in dietetics or nutrition with the professions, roles, responsibilities, and opportunities afforded them. Examples of practice for each area will be explored. Required by all entering first-year students and open to students interested in food and nutrition careers.

## HSS 114. Introduction to Health Professions. 2 Hours

An introduction to the professions, roles, responsibilities, and opportunities afforded to students in the health sciences. The course will help the student define professional goals and assess personal strengths and weaknesses in the light of competencies deemed essential for a health science career.

## HSS 115. Introduction to Therapuetic Dosing in the Health Sciences. 3 Hours <br> Examination of the direct relationship of dosage calculations in the health sciences. Emphasis is on the transfer of basic mathematics skills to application and problem solving in the health sciences.

## HSS 117. Personal \& Community Health. 3 Hours

Survey of health science and principles of preventive medicine as introduction to other courses in health and sport science.

## HSS 121. Fitness for Life. 2 Hours

This course will include a combination of classroom lectures covring numerous topics pertaining to health related fitness as well as laboratory activity sessions implementing concepts that foster a healthy, active lifestyle.
HSS 130. Physical Education Activities. 1 Hour
Selected courses offered to all University students.
HSS 182. Aerobic Conditioning. 2 Hours
Aerobic conditioning techniques developed primarily through running programs. Required for EES and EDP majors.
HSS 201. Medical Terminology. 2 Hours
This course is designed to introduce and build the skills and knowledge needed to develop an understanding of the terminology used in medical and health professions. The mechanism of building a medical vocabulary, utilizing roots, prefixes, suffixes, and the combining forms, and the spelling, pronunciation, and abbreviations are emphasized.
HSS 206. Fundamentals of Human Anatomy and Physiology. 3 Hours Fundamental-level coverage of human anatomy and physiology. Major topics include: basic chemistry and metabolism, cells and tissues, skeletal, muscular, nervous, endocrine, cardiovascular, and respiratory systems. Prerequisite(s): BIO 101, OR BIO 151, OR CHM 123, OR CHM 200, OR PHY 105, OR PHY 201, OR PHY 206, OR SCI 180, OR SCI 190.

## HSS 210. Introductory Foods. 2 Hours

Study of scientific principles applied to the processing and preparation of food to maintain nutritional quality and aesthetic value. Prerequisite(s):
CHM 123, CHM 123L.
HSS 210L. Introductory Foods Laboratory. 2 Hours
Course to accompany HSS 210 lecture. Corequisite(s): HSS 210.

## HSS 220. Adapted Physical Activity. 3 Hours

Course to prepare prospective teachers to adapt a physical education program so all children and youth can successfully participate in activity programs. Study of the atypical child in order to organize and administer a program which will meet individual needs.

## HSS 250. Principles of Sport Management. 3 Hours

Examination of the nature of management from theoretical and practical perspectives in a variety of sport settings. Focus on managerial functions and skills. Prerequisite(s): HSS 111.

## HSS 253. Sport Facility Operations. 3 Hours

The processes of planning, constructing, equipping, maintaining, and operating sport facilities are investigated in this course.
HSS 255. Practicum in Health \& Sport Science. 3 Hours
The practicum class is designed for students to gain insight into a wide array of field experiences within this discipline. Students are given choices of field work within a variety of settings. In addition, a weekly seminar is required as part of the practicum experience. Prerequisite(s): HSS 111 or HSS 112.

## HSS 275. History of Physical Education \& Sport. 3 Hours

Study of the historical development of physical education, sport, and associated disciplines as they relate to significant people and events in the history of Western civilization. Prerequisite(s): HST 103 The West and the World or approved equivalent/ substitute.

## HSS 285. Sport Management Field Experience. 3 Hours

This experience is done after completion of HSS 255.150 clock hours need to be completed for the 3 semester hour experience.

## HSS 295. Nutrition \& Health. 3 Hours

Study of the nutrient needs of humans and of their choices as modified by socioeconomic, cultural, and life cycle factors. Sophomore standing.

## HSS 302. Community Nutrition. 3 Hours

Study of the social, cultural and environmental factors relating to dietary behaviors and best practices to addressing nutrition-related needs. Prerequisite(s): HSS 295.

## HSS 303. Food Service Systems Management. 2 Hours

Study of food service organizations and management. Demonstrate the importance of menu as the primary control of the food service system factors affecting menu planning, customer satisfaction, and management decisions.

## HSS 304. Institutional Quantity Food Buying. 3 Hours

To study quantity food production in foodservice system through application of principles for determining needs and procuring, producing and storing foods in quantity, along with institutional equipment selection, maintenance, and layout. Prerequisite(s): HSS 210, HSS 210L; a Multipurpose Computer Account (AKA Dial-in/PPP/Flyernet account); basic IBM compatible computer skills.

## HSS 305. Human Anatomy. 3 Hours

Study of the human body with emphasis on the interdependent relationships of structure and function. Prerequisite(s): CHM 123, CHM 123L, CHM 124, CHM 124L, BIO 151, BIO 151L, BIO 152, BIO 152L.

## HSS 305L. Human Anatomy Laboratory. 1 Hour

Hands-on study of the human body with emphasis on the interdependent relationships of structure and function through the use of interactive anatomy.

## HSS 307. Human Physiology. 3 Hours

Survey of the functions of body systems with respect to general cell physiology and specialization into tissues, structural contributions to tissue/organ physiology, pertinent concepts of biochemical physiology, tissue metabolism and energy/food requirements during stress and exercise, recent research into control and regulation of functions of major systems, physiologic limitations outside environmental ranges, and selected examples of pathophysiology. Prerequisite(s): CHM 123, CHM 124, HSS 305, BIO 151, BIO 152.

## HSS 307L. Human Physiology Laboratory. 1 Hour

Virtual human physiological laboratory course meant to enhance the materials covered in HSS 307 - Human Physiology. Laboratory simulations in human physilogy to cover concepts such as, but not limited to, cell transport mechanisms and permeability, skeletal muscle physiology, endocrine system physiology, cardiovascular dynamics, cardiovascular physiology, respiratory system mechanics, renal system physiology, and blood analysis. Prerequisite(s): BIO 151, BIO 152; (CHM 123, CHM 124) or equivalent; HSS 305. Corequisite(s): HSS 307.

HSS 320. Essentials of Strength Conditioning. 3 Hours
Course designed to prepare students for the certified strength and conditioning specialist (NSCA) exam. Topics included will pertain to muscular strength and endurance conditioning, physiology of strength conditioning, muscular strength testing and evaluation, and organization/ administration of strength training programs.

## HSS 321. Essentials of Personal Training. 3 Hours

To provide students with specific, real-world information regarding the knowledge, skills, and expectations associated with a competent personal trainer or fitness professional. Additionally, this course is designed to prepare students for the nationally accredited Certified Personal Trainer (CPT) certification exam. Prerequisite(s): HSS 305 or BIO 475.

## HSS 330. Leadership in Sport. 3 Hours

As our society and industries adapt and reinvent themselves, especially in the sport (service) industry, there is a need for individuals within organizations to step up to the role of a leader, independent of their formal position. Therefore, the purpose of this course is for students to start (or continue) to develop their self-awareness, understanding, knowledge and practice of leadership.

## HSS 331. Sport Ethics. 3 Hours

Study of the ethical decisions in sport and athletics, using case analysis and real world examples to assist future sport management professionals to develop a set of moral reasoning skills to self-evaluate, examine, and critically analyze ethical issues they will encounter in their professional careers. Prerequisite(s): Junior/Senior status.

## HSS 335. Introduction to Athletic Training. 3 Hours

Application of principles and methods involved in prevention, care, and treatment of athletic injuries. Prerequisite(s): HSS 305.

## HSS 341. Extreme Sports. 3 Hours

No description available.
HSS 345. Medical Evaluation \& Terminology. 3 Hours
Medical terminology related to physiological processes.

## HSS 349. Financing Sport Operations. 3 Hours

The financial concepts and theories and their application in the professional intercollegiate, recreational and commercial sport industries. Topics include revenues and expenses of professional, intercollegiate, and private sport industries; issues affecting these revenues and expenses; fundraising at the intercollegiate level; ownership in sport; and public and private funding for non-profit sports programs.

## HSS 350. Business of Soccer. 3 Hours

Study of international sport management issues through the perspective of European soccer with particular reference to professional soccer in England including the Premier League, Spain (La Liga), Italy (Serie A), Germany (Bundesliga), the UEFA Champions League, as well as major international governing bodies such as FIFA and UEFA.

## HSS 353. Sports Media. 3 Hours

This is the study and the appraisal of the media and the role that it plays in contemporary sports. Attention is also given to preparation and evaluation of media sports presentations.

## HSS 354. Sport in the Global Community. 3 Hours

Analyze the growth and development of sport throughout the global community with an emphasis on the structure and organization of sport. Additionally the production of major sport events, such as the Olympics and World Cup Soccer Tournament, will be examined. Prerequisite(s): HSS 250.

HSS 356. Organizational Behavior in Health \& Sport. 3 Hours
Overview of the individual, group, and organization level factors utilized to manage people for personal, team, and organizational effectiveness in health, wellness, and sport organizations. Prerequisite(s): HSS 255 for ESM majors; None for EHA majors.

## HSS 357. Sports Marketing. 3 Hours

Course content is designed to give students an understanding of marketing principles applied to sport, sport events, and sport products. Marketing strategies including the sales, promotions, and advertising of sport will be emphasized.

## HSS 358. Sales \& Fundraising in Sport. 3 Hours

Examination and understanding of sales and fundraising techniques. Students will gain first-hand experience in developing new skills for the job market.

## HSS 360. Sport and Bodies. 3 Hours

Critical examination of the historical and contemporary ways in which the human body is altered/modified, displayed/portrayed, valued/ devalued, and included/excluded in terms of gender, race, social class, and ability status within sports. This course will examine how sport and bodies function in the political, social, and economic systems of the U.S. and globally. Using the perspectives of health and sport sciences and sociology, this course examines sport and bodies from macro and micro perspectives.

## HSS 384. Food Justice. 3 Hours

Diversity, social inequality and social justice are integral aspects of the fields of health science, sociology, and humanities. These issues particular to food are relevant in thinking about the challenges that people in Dayton and around the globe face. Through the combined analysis of at least two academic units, students will learn how to perform descriptive and normative analysis, as well as how to focus on pragmatic opportunities to address and ameliorate food injustice. Prerequisite(s): Sophomore-status.

## HSS 401. Nutritional Biochemistry I. 3 Hours

Extension of the student's knowledge of the science of nutrition, stressing the metabolism of food constitutents and recent advances in the field of nutrition. Prerequisite(s): (BIO 403 or HSS 307); CHM 314; HSS 295.

## HSS 402. Nutrition for the Aging Adult. 2 Hours

The study of the process of aging through adulthood. This will focus on the changes in nutritional needs during the aging process. Attention will be paid to the community resources available to help provide optimum nutrition to healthy people as they age. Prerequisite(s): HSS 295, HSS 305, HSS 307, CHM 123, CHM 124.

## HSS 404. Coaching Internship. 1-3 Hours

Practical coaching experience working in local schools with interscholastic teams. Elective.

HSS 405. Tests \& Measurements in Sport Science. 3 Hours
Direct relationship of tests and measurements to the field of sport science.

## HSS 406. Nutrition for Mother \& Child. 2 Hours

Physiologic and biochemical principles and results of current research are used to build a foundation for exploration of nutrition from the stages of growth and development, to maturation, and aging. These serve as the basis for consideration of the social, economic, physiologic, and lifestyle factors that influence nutrition status, food choices, and specific life state concerns. Particular attention is paid to using the principles of nutrition in planning and implementing recommendations for dietary change. Prerequisite(s): HSS 295, HSS 307.

HSS 408. Physiology of Exercise. 3 Hours
Detailed study of the effects of exercise on human functions, as a basis for the study of physical fitness, motor skills, and athletic training. Prerequisite(s): HSS 305; (HSS 306 or HSS 307).

## HSS 408L. Physiology of Exercise Laboratory. 1 Hour

Course to accompany HSS 408. Weekly two-hour laboratory stressing practical applications of exercise physiology. Prerequisite(s): HSS 305; (HSS 306 or HSS 307).

## HSS 409. Kinesiology. 3 Hours

Investigation and analysis of human motion based on anatomical, physiological, and mechanical principles. Prerequisite(s): HSS 305; (HSS 306 or HSS 307).

## HSS 409L. Kinesiology Laboratory. 1 Hour

Course to accompany HSS 409. Weekly two-hour laboratory stressing the practical application of kinesiology.
HSS 422. Exercise for Special Populations. 3 Hours
Course designed to prepare prospective exercise specialists to adapt physical education and exercise so that all individuals can successfully participate in activity programs. A study of various disabilities and conditions in order to organize and administer a program which will meet individual needs.

## HSS 428. Research in Sport and Health Sciences. 3 Hours

Application and practice of research in student's chosen profession and vocation. Emphasis will be on designing and evaluating experimental studies, collection, analysis, interpretation, and communication of data, and role of research in professional practice. Senior standing or with instructor permission.

## HSS 431. Nutrition for Exercise \& Sport Science. 3 Hours

Investigation of current research in the nutritional assessment of the athlete. Topics include dietary needs, fluid replenishment, pre-game meals, and "fad" diets for the athlete. Pre-requisite(s): HSS 295.

## HSS 439. Professional Seminar in Dietetics. 2 Hours

This guided practicum and seminar will provide an opportunity for candidates to develop and apply their knowledge of typical and atypical development from conception to age 3 as they observe young children in an infant/toddler classroom setting. Theories and research based practices related to infant and toddler care and education will be discussed. Candidates will conduct naturalistic assessment, identify developmental milestones and related risk factors, and will plan and execute play-based strategies to support develoment. 45 contact hours of field experience is required,.

HSS 448. Safety \& the Law in Physical Education \& Sports. 3 Hours Study of the legal aspects of physical education and athletics. Analysis of specific court cases. Formulation of safety policies.

HSS 455. Selected Studies in Exercise Science. 1-3 Hours
Investigating, analyz-ing, and reporting on a problem in physical education. Prerequisite(s): Permission of department chairperson.

## HSS 456. Nutritional Biochemistry II. 3 Hours

Integration and application of principles of physiology, nutrition and biochemistry to the processes of metabolic function.

## HSS 465. Physical Therapy Seminar. 3 Hours

Addresses current issues facing prospective and present physical therapists in a reforming healthcare industry.
HSS 485. Sport Management Internship. 3 Hours
Work experience carried out under the auspices and supervision of the sports management staff. Application and permission of director of Sports Management program required.

HSS 490. Exercise Science Internship - On Campus. 2 Hours
Work experience carried out under the auspices and supervision of the University of Dayton Wellness Program staff. Application and permission of director of Exercise Science and Fitness Management program required.

## HSS 491. Exercise Science Internship. 1-3 Hours

Work experience carried out under the auspices of an industrial, commercial, educational, government or health agency-related wellness program. Application and permission of director of Exercise Science and Fitness Management program required.
HSS 492. Human Anatomy Dissection Lab. 1 Hour
This is a team based learning course where students will work in groups to complete a full body human gross anatomy dissection with a human donor. Students will complete dissections to identify structures in all systems, review the anatomical relationships, and make connections between structure and function. Prerequisite(s): HSS 305, HSS 305L, HSS 307.

## HSS 494. Assessment of Nutritional Status. 2 Hours

This course provides foundational coursework in the Nutrition Care Process with an emphasis on the nutrition assessment. The course will cover anthropometrics, biochemical analysis, clinical assessment to include Nutrition Focused Physical Exam, diet assessment, energy estimation, and body composition assessment. Prerequisite(s): HSS 295, HSS 307, third year student.
HSS 495. Medical Nutrition Therapy I. 3 Hours
Study of nutrition care process, nutritional diagnostic therapy and counseling services for the purpose of disease management to include: weight management, eating disorders, upper \& lower gastrointestinal disorders, hepatobiliary and pancreatic disorders, and nutrition support.Prerequisite(s): CHM 313, HSS 494, Senior Standing. Corequisite(s): HSS 401, PSY 431.

## HSS 496. Medical Nutrition Therapy II. 3 Hours

Study of nutrition care process, nutritional diagnostic therapy and counseling services for the purpose of disease management to include: Diabetes, Thyroid, Anemia, Cardiovascular, Pulmonary, Renal, Cancer, HIV, Metabolic Stress, Rheumatic, Neurologic, and Psychiatric Conditions. Prerequisite(s): HSS 495.

## HSS 498. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research thesis under the guidance of a faculty research director. Restricted to students in the Berry Scholars Program with permission of the program director.

## HSS 499. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research thesis under the guidance of a faculty research director. Restricted to students in the Berry Scholars Program with permission of the program director.

## Teacher Education

## Majors:

[^7]- Bachelor of Science in Education (p. 346), Foreign Language Education (p. 346)
- Bachelor of Science in Education (p. 347), Intervention Specialist (p. 347)
- Bachelor of Science in Education (p. 348), Middle Childhood Education (p. 348)
- Bachelor of Science in Education, Middle Childhood Education/ Intervention Specialist (p. 349)
- Bachelor of Science in Education (p. 350), Secondary Catholic Religion Education (p. 350)

Additional Educator Preparation Option:

- Early Childhood Intervention Specialist (p. 350)

Endorsements:

- Early Childhood Generalist (p. 350)
- Middle Childhood Generalist
- Prekindergarten Special Needs (p. 351)


## Certificates:

- Catholic Education (p. 351)
- Dyslexia (p. 351)
- Early Childhood Leadership and Advocacy (p. 352)
- Teaching English to Speakers of Other Languages (p. 352)
- Science, Technology, Engineering and Mathematics (p. 352)
- Urban Teacher (p. 353)


## Faculty

Connie L. Bowman, Chairperson
Professors Emeriti: Frye, Fuchs, Geiger, Hart, Joseph, Lasley, Rowley, Sudzina, Talbert-Johnson, Weaver
Professors: Herrelko, Kinnucan-Welsch,
Associate Professors: Adams, Baldwin, Bogard, Bowman, Collopy, Kelly,
White
Assistant Professors: Arnold, Gallagher, Gold, Lyons, Sableski
Clinical Faculty: Comingore, Engelhardt, Lawless-Frank, Mathes,
McIntosh, Nenonene, Scheuermann
Teacher-in-Residence: Evans
Visiting Professors: Falk
The University of Dayton's Department of Teacher Education prepares teachers for the early, middle, and secondary grade levels. In addition, the department offers programs in intervention specialist (special education), grades $\mathrm{K}-12$, and foreign language education, grades $\mathrm{P}-12$. The music education and art education programs are offered in the College of Arts and Sciences. It is also possible for students to complete a degree in a teaching field in the College of Arts and Sciences and also complete the Bachelor of Science in Education leading to licensure.

The department has adopted a theme that is integrated throughout the programs of study, Teacher as Reflective Decision Maker in a Pluralistic Society. This theme aligns with the Marianist mission of the University, the university wide Student Learning Outcomes and the unit outcomes for the School of Education and Health Sciences (SEHS):

- Embracing diversity
- Building community
- Engaging in critical reflection


## - Developing as a scholarly practitioner

The department has established policies that require students to achieve benchmarks and demonstrate professional competencies in coursework and field experiences. Furthermore, all students must complete a good moral character form, and BCII and FBI criminal background check prior to field experience in P-12 schools. In order for the University of Dayton to approve the state of Ohio teaching license application, applicants must have on file in the SEHS dean's office passing scores on the state of Ohio licensure tests.

Teacher Education Undergraduate Academic policies:

1. Candidates for undergraduate licensure are placed in schools in the Miami Valley area for all clinical experiences. Student teaching is the capstone clinical experience for the preparation programs. Once students have been approved and placed for student teaching, they may not withdraw from the program except with the approval of the department chair. A student who withdraws without this approval forfeits future placement in student teaching.
2. An education course taken as an independent study cannot be applied toward teacher licensure.
3. Independent study is not available for regularly scheduled undergraduate courses.
4. Candidates must meet each of the following benchmarks:

- Candidates must earn an overall grade point average of 2.5 or higher after completing EDT 109
- Candidates must earn an overall grade point average of 2.75 after completing EDT 110
- Candidates must earn an overall grade point average of 3.0 after completing the program specific development course
- Candidates must earn an overall grade point average of 3.0 or higher prior to entry into the clinical experience/methods
- Grade of C- or higher in all EDT courses
- Grade of S in all EDT laboratories prior to entry into clinical experience
- Unexcused absences in a teacher education course cannot exceed $13 \%$ in any given course.


## Bachelor of Science in Education, Adolescence to Young Adult Education (EYA) minimum 124 hours

The Department of Teacher Education offers a Bachelor of Science in Education in Adolescence to Young Adult Education. The program meets all requirements for a state of Ohio license to teach learners ages 12-21 and grades 7-12. A student has three options to meet the program requirements for adolescence to young adult licensure: 1) BSE with a major in adolescence to young adult education; 2) BSE with a major in adolescence to young adult education and an additional major in the College of Arts and Sciences; 3) BSE with a major in adolescence to young adult education and a Bachelor of Arts or Bachelor of Science degree in the College of Arts and Sciences (dual degree).

A student in the adolescence to young adult education program is required to have a single comprehensive teaching field. The number of semester hours to complete the teaching field requirements varies across programs. A student must meet all academic and competency requirements in order to continue in the program, to student teach
and be recommended for licensure. In addition, all field and clinical experiences must be successfully completed. Students are expected to have completed all of the teaching concentration courses prior to student teaching; exceptions must be approved by a faculty advisor. In order for the University of Dayton to approve the state of Ohio teaching license application, applicants must have on file in the SEHS dean's office passing scores on the state of Ohio licensure tests.

Adolescence to young adult education teaching fields include:

- Integrated Language Arts
- Integrated Mathematics
- Integrated Science
- Integrated Social Studies
- Earth Sciences/Chemistry
- Earth Sciences/Physics
- Earth Sciences
- Life Sciences/Chemistry
- Life Sciences/Earth
- Life Sciences/Physics
- Life Sciences
- Physical Sciences/Chemistry
- Physical Sciences/Physics
- Physical Sciences/Physics \& Chemistry

| Common Academic Program (CAP) |  |
| :---: | :---: |
| *credit hours will vary depending on courses selected |  |
| First-Year Humanities Commons ${ }^{1}$ | 12 |
| HST 103 The West \& the World |  |
| REL 103 Introduction to Religious and Theological Studies |  |
| PHL 103 Introduction to Philosophy |  |
| ENG 100 Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ | 0-3 |
| ENG 200 Writing Seminar II |  |
| Oral Communication | 3 |
| CMM 100 Principles of Oral Communication |  |
| Mathematics | 3 |
| Social Science | 3 |
| SSC 200 Social Science Integrated |  |
| Arts | 3 |
| Natural Sciences ${ }^{4}$ | 7 |
| Crossing Boundaries | variable credit |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |
| Advanced Study | variable credit |

Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice
3
Major Capstone
0-3

[^8]2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

## Major Requirements

| EDT 109 | Personal Aspects of Teaching | 1 |
| :---: | :---: | :---: |
| EDT 110 | The Profession of Teaching ${ }^{1}$ | 3 |
| EDT 110L | The Profession of Teaching Laboratory | 0 |
| EDT 222 | Middle Childhood to Young Adult Development in a Diverse Society ${ }^{1}$ | 3 |
| EDT 222L | Middle Childhood to Young Adult Development in a Diverse Society Laboratory | 0 |
| EDT 305 | Philosophy and History of American Education | 3 |


|  |  |  |
| :---: | :---: | :---: |
| EDT 338 | Teaching, Learning and Management ${ }^{1}$ | 3 |
| EDT 338L | Teaching, Learning and Management Laboratory | 0 |
| EDT 340 | Educating Diverse Student Populations in Inclusive Settings (Satisfies CAP Integrative and Diversity and Social Justice) ${ }^{1}$ | 3 |
| EDT 340L | Educating Diverse Student Populations in Inclusive Settings Laboratory | 0 |
| EDT 459 | Critical Reading and Writing in the Content Area ${ }^{2}$ | 3 |
| EDT 436 | Adolescent to Young Adult Capstone Seminar (Satisfies CAP Capstone) | 3 |
| EDT 475 | Student Teaching-Adolescence to Young Adult ${ }^{3}$ | 12 |
| EDT 481 | Adolescence to Young Adult Assessment | 3 |
| EDT Content methods in teaching field ${ }^{1,3}$ |  | 3 |
| EDT Content methods laboratory course |  | 1 |
| MTH 114 | Contemporary Mathematics (Satisfies CAP Mathematics) ${ }^{4}$ | 3 |

Concentration (10 courses) ..... 30
Concentration/elective (6 courses) ..... 18

1 Must register for the corequisite laboratory course, all field experiences arranged by the University.
EDT 459 and content methods in teaching field must be taken concurrently.
3 Students will have a required seminar throughout the semester.
4

## Bachelor of Science in Education, Early Childhood Education (ECE) minimum 124 hours

The Department of Teacher Education offers a Bachelor of Science in Education in Early Childhood Education. This program meets all requirements for a state of Ohio license to teach prekindergarten through grade three.

A student in the early childhood education program is required to choose an area of focus for elective coursework which must bring the total number of credit hours to 124 required for graduation. A student must meet all academic and competency requirements in order to continue in the program, to student teach, and to be recommended for licensure. In addition, all field and clinical experiences must be successfully
completed. In order for the University of Dayton to approve the state of Ohio teaching license application, applicants must have on file in the SEHS dean's office passing scores on the state of Ohio licensure tests.


Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice 3
Major Capstone 0-3

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

## Major Requirements

| EDT 109 | Personal Aspects of Teaching | 1 |
| :---: | :---: | :---: |
| EDT 110 | The Profession of Teaching ${ }^{1}$ | 3 |
| EDT 110L | The Profession of Teaching Laboratory | 0 |
| EDT 211 | Child Development: Birth to Age Eight ${ }^{1}$ | 3 |
| EDT 211L | Child Development: Birth to Age Eight Laboratory | 1 |
| EDT 212 | Early Childhood Theory and Practice ${ }^{1,2}$ | 3 |
| EDT 212L | Early Childhood Theory and Practice Laboratory | 0 |
| EDT 305 | Philosophy and History of American Education (Satisfies CAP Practical Ethical Action and Advanced Study in Philosophy) | 3 |
| EDT 313 | Developmentally Appropriate Practice for Preschool ${ }^{1,3}$ | 3 |
| EDT 313L | Developmentally Appropriate Practice for Preschool Laboratory | 1 |



| EDT 340L | Educating Diverse Student Populations in Inclusive <br> Settings Laboratory | 0 |
| :--- | :--- | :--- |
| EDT 344 | Collaboration with Families, Professionals and <br> Agencies | 3 |
| EDT 460E | Early Childhood Program and Personnel <br> Management | 3 |
| EDT 460EL | Early Childhood Program and Personnel <br> Management Laboratory | $0-1$ |
| EDT 461E | Supporting Quality Curriculum and Instruction in <br> Early Care and Education | 3 |
| EDT 461EL | Supporting Quality Curriculum and Instruction in <br> Early Care and Education Laboratory | $0-1$ |
| EDT 462E | Regulations, Licensing and the Law in Early Care <br> and Education | 3 |
| EDT 462EL | Regulations, Licensing and the Law in Early Care <br> and Education Laboratory | $0-1$ |
| EDT 463E | Managing Finances and Marketing in Early Care <br> and Education | 3 |
| EDT 463EL | Managing Finances and Marketing in Early Care <br> and Education Laboratory | $0-1$ |
| EDT 464E | Advocacy in Early Care and Education | 3 |
| EDT 465E | Internship and Practicum in Early Childhood <br> Administration | 6 |
| Workshop | An | 12 |

## Bachelor of Science in Education, Foreign Language Education (ELA) minimum 124 hours

The Department of Teacher Education offers a Bachelor of Science in Education in Foreign Language Education. The program meets all requirements for a state of Ohio license to teach P-12. Three teaching concentrations are available: French, German, and Spanish. Students enrolled in this program may also elect to complete a dual degree or an additional major in the College of Arts and Sciences.

A student must meet all academic and competency requirements in order to continue in the program, to student teach and to be recommended for licensure. In addition, all field and clinical experiences must be successfully completed. Students are expected to have completed all of the teaching concentration courses prior to student teaching; exceptions must be approved by a faculty advisor. In order for the University of Dayton to approve the state of Ohio teaching license application, applicants must have on file in the SEHS dean's office passing scores on the state of Ohio licensure tests, including the Oral Proficiency Interview and the Writing Proficiency Test offered by the American Council on the Teaching of Foreign Languages (ACTFL).

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1} 12$

| HST 103 | The West \& the World |  |
| :--- | :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ | $0-3$ |
| Second-Year Writing Seminar ${ }^{3}$ |  |  |
| ENG 200 | Writing Seminar II |  |


| Oral Communication | 3 |
| :--- | :---: |
| CMM 100 Principles of Oral Communication |  |
| Mathematics | 3 |
| Social Science | 3 |
| SSC $200 \quad$ Social Science Integrated |  |
| Arts | 3 |
| Natural Sciences ${ }^{4}$ | variable <br> credit |
| Crossing Boundaries |  |
| Faith Traditions |  |
| Practical Ethical Action | variable |
| Inquiry | credit |

Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice 3
Major Capstone 0-3
1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

## Major Requirements

| EDT 109 | Personal Aspects of Teaching | 1 |
| :---: | :---: | :---: |
| EDT 110 | The Profession of Teaching | 3 |
| EDT 110L | The Profession of Teaching Laboratory | 0 |
| EDT 207 | Child and Adolescent in Education | 3 |
| EDT 207L | Child and Adolescent in Education Laboratory | 0 |
| EDT 305 | Philosophy and History of American Education (Satisfies CAP Practical Ethical Action and Advanced Study in Philosophy) | 3 |
| EDT 338 | Teaching, Learning and Management | 3 |
| EDT 338L | Teaching, Learning and Management Laboratory | 0 |
| EDT 340 | Educating Diverse Student Populations in Inclusive Settings (Satisfies CAP Integrative and Diversity and Social Justice) | 3 |
| EDT 340L | Educating Diverse Student Populations in Inclusive Settings Laboratory | 0 |
| EDT 433 | Foreign Language Methods for Adolescence to Young Adult | 3 |
| EDT 433L | Foreign Language Methods for AYA (7-12) Field Internship | 1-2 |
| EDT 436 | Adolescent to Young Adult Capstone Seminar | 3 |
| EDT 471 | Student Teaching- Foreign Languages P-12 (Satisfies CAP Capstone) | 12 |
| LNG 320 | Instructed Second Langauge Acquisition | 2 |
| LNG 330 | Teaching World Languages in the Elementary School (PK-6) | 4 |
| LNG 468 | Introduction to Linguistics | 3 |
| MTH 114 | Contemporary Mathematics (Satisfies CAP Mathematics) | 3 |


| Concentration (12 courses) ${ }^{2}$ | 36 |
| :--- | ---: | ---: |
| Concentration/electives (3 courses) | 9 |
| Study Abroad (Concentration) ${ }^{1}$ |  |
| 1 | Participation in an approved study-abroad immersion program for |
| a summer, semester or academic year is strongly recommended. |  |
| $\quad$ Experience shows that study abroad is a major factor in the |  |
| successful completion of the professional requirements which |  |
| include field experiences and required assessments for licensure. |  |
| 2 | One course must be FRN 469, GER 469 or SPN 469. |

Diversity and Social Justice 3
Major Capstone 0-3
Completed with ASI 110 and ASI 120.
Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

## Major Requirements

| EDT 109 | Personal Aspects of Teaching |  |
| :---: | :---: | :---: |
| EDT 110 | The Profession of Teaching ${ }^{1,3}$ | 3 |
| EDT 110L | The Profession of Teaching Laboratory | 0 |
| EDT 207 | Child and Adolescent in Education ${ }^{1}$ | 3 |
| EDT 207L | Child and Adolescent in Education Laboratory | 0 |
| EDT 305 | Philosophy and History of American Education (Satisfies CAP Practical Ethical Action and Advanced Study in Philosophy) | 3 |
| EDT 321 | Classroom Environment for Middle Childhood ${ }^{1}$ | 3 |
| EDT 321L | Classroom Environment for Middle Childhood Laboratory | 1 |
| EDT 340 | Educating Diverse Student Populations in Inclusive Settings (Satisfies CAP Integrative and Diversity and Social Justice) ${ }^{1}$ | 3 |

EDT 340L Educating Diverse Student Populations in Inclusive 0 Settings Laboratory

| EDT 341 | Language Development, English Language <br> Learners and Emergent Literacy | 3 |
| :--- | :--- | ---: |
| EDT 342 | Behavior Management | 3 |
| EDT 343 | Introduction to Education of Learners with Mild/ <br> Moderate Learning Needs 1 | 3 |
| EDT 343L | Introduction to Education of Learners with Mild/ | 0 | Moderate Learning Needs Laboratory

EDT $344 \quad$| Collaboration with Families, Professionals and |
| :--- | :--- |
| Agencies |

EDT 350 Foundations of Literacy through Literature 3
EDT 425 Middle School Principles and Practices 3
EDT 441 Adapting Content Standards for Students with 3

Special Needs ${ }^{1}$
EDT 441L Adapting Content Standards for Students with 0
Special Needs Laboratory
Assessment: Mild/Moderate ${ }^{1,2}$
Intervention Specialist: Mild/Moderate Field 1 Internship ${ }^{2}$
Curriculum: Mild/Moderate ${ }^{2} 2$
Instructional Strategies: Mild/Moderate ${ }^{2} 3$
Application of Computers/Technology in Special 2 Education
Phonics, Spelling and Vocabulary 3
Introduction to Literacy for Early Childhood 3
Methods of Literacy for Early Childhood 3
Intervention Specialist Capstone Seminar 3
(Satisfies CAP Capstone)
Student Teaching- Intervention Specialist: Mild/
12 Moderate

| GEO 204 | Geology for Teachers (Satisfies CAP Natural Sciences) | 4 |
| :---: | :---: | :---: |
| HST 251 | American History to 1865 | 3 |
| or HST 252 | American History Since 1865 |  |
| MTH 204 | Mathematical Concepts I | 3 |
| MTH 205 | Mathematical Concepts II (Satisfies CAP Mathematics) | 3 |
| SCI 190 | The Physical Universe (Satisfies CAP Natural Sciences) ${ }^{4}$ | 3 |
| Must register for the corequisite laboratory course, all field experiences arranged by the University. |  |  |
| EDT 442, EDT 442L, EDT 443 and EDT 444 must be taken concurrently. Field experience is required. |  |  |
| Designates cohort courses to be taken together in the same semester. |  |  |
| Students must take either SCI 190L or SCI 230L. |  |  |

## Bachelor of Science in Education, Middle Childhood Education (EMS) minimum 124 hours

The Department of Teacher Education offers the middle childhood education program for transfer students, which leads to the Bachelor of Science in Education. The program meets all requirements for a state of Ohio license to teach grades four through nine. A student in the middle childhood education program is required to have two concentrations of 24 or more semester hours in the following content areas:

- Mathematics
- Science
- Social Studies
- Reading/Language Arts

A student must meet all academic and competency requirements in order to continue in the program, to student teach and to be recommended for licensure. In addition, all field and clinical experiences must be successfully completed. Students are expected to have completed all of the teaching concentration courses prior to student teaching; exceptions must be approved by a faculty advisor. In order for the University of Dayton to approve the state of Ohio teaching license application, applicants must have on file in the SEHS dean's office passing scores on the state of Ohio licensure tests.


| Social Science | 3 |  |
| :--- | :---: | :---: |
| SSC 200 | Social Science Integrated |  |
| Arts | 3 |  |
| Natural Sciences ${ }^{4}$ | 7 |  |
| Crossing Boundaries | variable |  |
| Faith Traditions | credit |  |
| Practical Ethical Action |  |  |
| Inquiry |  |  |
| Advanced Study | variable |  |
| Philosophy and/or Religious Studies | credit |  |
| Historical Studies ${ }^{5}$ |  |  |
| Diversity and Social Justice | 3 |  |
| Major Capstone | $0-3$ |  |
| 1 | Completed with ASI 110 and ASI 120. |  |
| 2 | Or ENG 100A and ENG 100B, or ENG 200H, by placement. |  |
| 3 | Completed with ENG 200H or ASI 120. |  |
| 4 | Must include two different disciplines and accompanying lab. |  |
| 5 | U.S. History AP credit will not satisfy this requirement. |  |

## Major Requirements

| EDT 109 | Personal Aspects of Teaching | 1 |
| :---: | :---: | :---: |
| EDT 110 | The Profession of Teaching ${ }^{1}$ | 3 |
| EDT 110L | The Profession of Teaching Laboratory | 0 |
| EDT 222 | Middle Childhood to Young Adult Development in a Diverse Society ${ }^{1}$ | 3 |
| EDT 222L | Middle Childhood to Young Adult Development in a Diverse Society Laboratory | 0 |
| EDT 305 | Philosophy and History of American Education (Satisfies CAP Practical Ethical Action and Advanced Study in Philosophy) | 3 |
| EDT 321 | Classroom Environment for Middle Childhood ${ }^{\text {1,2 }}$ | 3 |
| EDT 321L | Classroom Environment for Middle Childhood Laboratory | 1 |
| EDT 340 | Educating Diverse Student Populations in Inclusive Settings (Satisfies CAP Integrative and Diversity and Social Justice) ${ }^{1,2}$ | 3 |
| EDT 340L | Educating Diverse Student Populations in Inclusive Settings Laboratory | 0 |
| EDT 350 | Foundations of Literacy through Literature | 3 |
| EDT 423 | Middle Childhood Capstone Seminar | 3 |
| EDT 425 | Middle School Principles and Practices | 3 |
| EDT 425L | Middle School Principles and Practices Laboratory | 0 |
| EDT 450 | Phonics, Spelling and Vocabulary | 3 |
| EDT 452 | Digital Literacies, ELL and Content Reading Strategies | 3 |
| EDT 458 | Reading, Writing and Assessment - Middle Childhood ${ }^{1,2}$ | 3 |
| EDT 458L | Middle Level (4-9) Field Internship | 1-2 |
| EDT 474 | Student Teaching- Middle Childhood | 12 |
| Methods courses (select two): |  | 6 |
| EDT 426 | Reading/Language Arts for Middle Childhood |  |

$\left.\begin{array}{llc}\hline \text { EDT 427 } & \text { Mathematics for Middle Childhood } & \\ \hline \text { EDT 428 } & \text { Science for Middle Childhood }\end{array}\right]$

1 Must register for the corequisite laboratory course, all field experiences arranged by the University.
2 Designates cohort courses to be taken together in the same semester.
3 Fewer concentration hours may be required depending upon chosen concentrations.

## Bachelor of Science in Education, Middle Childhood Education/Intervention Specialist (EIM) minimum 124 hours

Common Academic Program (CAP)<br>*credit hours will vary depending on courses selected<br>First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |

Second-Year Writing Seminar ${ }^{3}$ 0-3
ENG 200 Writing Seminar II
Oral Communication 3

| CMM 100 | Principles of Oral Communication |
| :--- | :--- |
| athematics | 3 |

Social Science 3

| SSC 200 | Social Science Integrated |
| :--- | :--- |
| Arts | 3 |

Natural Sciences ${ }^{4} \quad 7$

Crossing Boundaries

| Faith Traditions |
| :--- |
| Practical Ethical Action |
| Inquiry |
| Integrative |

Advanced Study
Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice 3
Major Capstone 0-3
1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.
4 Must include two different disciplines and accompanying lab.

5 U.S. History AP credit will not satisfy this requirement.

| EDT 109 | Personal Aspects of Teaching | 1 |
| :---: | :---: | :---: |
| EDT 110 | The Profession of Teaching ${ }^{1}$ | 3 |
| EDT 110L | The Profession of Teaching Laboratory | 0 |
| EDT 222 | Middle Childhood to Young Adult Development in a Diverse Society (Satisfies CAP Diversity and Social Justice) ${ }^{1}$ | 3 |
| EDT 222L | Middle Childhood to Young Adult Development in a Diverse Society Laboratory | 0 |
| EDT 305 | Philosophy and History of American Education (Satisfies CAP Practical Ethical Action and Advanced Study in Philosophy) | 3 |
| EDT 321 | Classroom Environment for Middle Childhood ${ }^{1}$ | 3 |
| EDT 321L | Classroom Environment for Middle Childhood Laboratory | -1 |
| EDT 340 | Educating Diverse Student Populations in Inclusive Settings (Satisfies CAP Integrative and Social Justice) ${ }^{1}$ | 3 |
| EDT 340L | Educating Diverse Student Populations in Inclusive Settings Laboratory | 0 |
| EDT 350 | Foundations of Literacy through Literature | 3 |
| EDT 425 | Middle School Principles and Practices | 3 |

Choose two concentration areas:

| EDT 426 | Reading/Language Arts for Middle Childhood |  |
| :---: | :---: | :---: |
| EDT 427 | Mathematics for Middle Childhood |  |
| EDT 428 | Science for Middle Childhood |  |
| EDT 429 | Social Studies for Middle Childhood |  |
| EDT 441 | Adapting Content Standards for Students with Special Needs ${ }^{1}$ | 3 |
| EDT 441L | Adapting Content Standards for Students with Special Needs Laboratory | 0 |
| EDT 442 | Assessment: Mild/Moderate ${ }^{1}$ | 2-3 |
| EDT 442L | Intervention Specialist: Mild/Moderate Field Internship | 0-1 |
| EDT 444 | Instructional Strategies: Mild/Moderate | 3 |
| EDT 450 | Phonics, Spelling and Vocabulary | 3 |
| b\|EDT 452 | Digital Literacies, ELL and Content Reading Strategies ${ }^{1}$ | 3 |


| EDT 452L | Digital Literacies, ELL and Content Reading |
| :--- | :--- |
| Strategies Lab |  |

Reading, Writing and Assessment - Middle 3
Childhood ${ }^{1}$
Middle Level (4-9) Field Internship 1-2
Middle Childhood Capstone Seminar (Satisfies 3 CAP Capstone)
Student Teaching- Middle Childhood 9
Student Teaching- Intervention Specialist: Mild/ 6 Moderate
GEO 204 Geology for Teachers (Satisfies CAP Natural 4
Sciences)
American History to 18653
Introduction to Statistics (Satisfies CAP 3
Mathematics)
The Physical Universe (Satisfies CAP Natural

| SCI 190L | The Physical Universe Laboratory | 1 |
| :--- | :--- | :--- |
| VAE 232 | Integrating Visual Culture (Satisfies CAP Arts and | 3 |
|  | Inquiry) |  |

1 Must register for the corequisite laboratory course, all field experiences arranged by the University.
2 See 4-Yr Plan.

## Bachelor of Science in Education, Secondary Catholic Religion Education (ERL) minimum 124 hours

The Department of Teacher Education offers the Bachelor of Science in Education in Secondary Catholic Religion Education. This program leads to the Archdiocese of Cincinnati Certificate to teach religion grades 7-12.

A student must meet all academic and competency requirements in order to continue in the program, to student teach and to be recommended for the certificate. In addition, all field and clinical experiences must be successfully completed. Students should take electives as needed to achieve 124 semester credit hours.

| *credit hours will vary depending on courses selected |  | Common Academic Program (CAP) |
| :---: | :---: | :---: |
| First-Year Human | ities Commons ${ }^{1}$ | 12 |
| HST 103 | The West \& the World |  |
| REL 103 | Introduction to Religious and Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| SSC 200 | Social Science Integrated |  |
| Arts |  | 3 |
| Natural Sciences ${ }^{4}$ |  | 7 |
| Crossing Boundaries |  | varia |


| Faith Traditions |  |
| :--- | ---: |
| Practical Ethical Action |  |
| Inquiry | variab |
| Integrative | cred |
| Advanced Study |  |
| Philosophy and/or Religious Studies |  |
| Historical Studies ${ }^{5}$ | 3 |
| Diversity and Social Justice | $0-3$ |

1 Completed with ASI 110 and ASI 120.
2
3
4

5 U.S. History AP credit will not satisfy this requirement.

## Major Requirements

| EDT 109 | Personal Aspects of Teaching |  |
| :---: | :---: | :---: |
| EDT 110 | The Profession of Teaching ${ }^{1}$ | 3 |
| EDT 110L | The Profession of Teaching Laboratory | 0 |
| EDT 222 | Middle Childhood to Young Adult Development in a Diverse Society ${ }^{1}$ | 3 |
| EDT 222L | Middle Childhood to Young Adult Development in a Diverse Society Laboratory | 0 |
| EDT 305 | Philosophy and History of American Education (Satisfies CAP Practical Ethical Action and Advanced Study in Philosophy) | 3 |
| EDT 331L | Religion Methods Laboratory | 1 |
| EDT 338 | Teaching, Learning and Management ${ }^{1}$ | 3 |
| EDT 338L | Teaching, Learning and Management Laboratory | 0 |
| EDT 340 | Educating Diverse Student Populations in Inclusive Settings (Satisfies CAP Integrative and Diversity and Social Justice) ${ }^{1}$ | 3 |
| EDT 340L | Educating Diverse Student Populations in Inclusive Settings Laboratory | 0 |
| EDT 436 | Adolescent to Young Adult Capstone Seminar (Satisfies CAP Capstone) | 3 |
| EDT 459 | Critical Reading and Writing in the Content Area | 3 |
| EDT 475 | Student Teaching-Adolescence to Young Adult | 2 |
| EDT 481 | Adolescence to Young Adult Assessment | 3 |
| MTH 114 | Contemporary Mathematics (Satisfies CAP Mathematics) | 3 |
| Concentration (31 hours) |  |  |
| 1 Must re experie | for the corequisite laboratory course, all field rranged by the University. |  |

## Early Childhood Intervention Specialist License

The Department of Teacher Education offers the early childhood intervention specialist program, as an additional licensure option for sterndents $^{\text {tu }}$ who successfully complete the early childhood education program. Persons earning this license are qualified to teach children ages three through eight who have mild or moderate to intensive needs. In order for the University of Dayton to approve the state of Ohio teaching license application, the candidate must have on file in the SEHS dean's office passing scores on the required state of Ohio licensure test.

## Early Childhood Intervention Specialist License

| EDT 314 | Collaborative Assessment and Team Models | 3 |
| :--- | :--- | ---: |
| EDT 315 | Health and Medical Issues for Early Childhood | 3 |
| EDT 342 | Behavior Management | 3 |
| EDT 445 | Application of Computers/Technology in Special <br>  <br>  <br> Education | 2 |
| EDT 472 | Internship in Early Childhood Special Education | 5 |
| Total Hours |  | 16 |

## Early Childhood Generalist Endorsement

The Department of Teacher Education offers the early childhood generalist endorsement program. The endorsement will allow teachers
in self-contained fourth and fifth grade classrooms to teach the subjects of mathematics, science and social studies. Students enrolled in an early childhood education program may complete the coursework for the early childhood generalist endorsement as a focus area for their undergraduate degree. In order for the University of Dayton to approve the state of Ohio endorsement application, applicants must have on file in the SEHS dean's office passing scores on the state of Ohio licensure tests.

## Early Childhood Generalist Endorsement

EDT 409 Mathematics for 4th and 5th Grades 3
EDT $410 \quad$ Science for 4th and 5th Grades 3
EDT $411 \quad$ Social Studies for 4th and 5th Grades 3

Total Hours

## Prekindergarten Special Needs Endorsement

The Department of Teacher Education offers the prekindergarten special needs endorsement program. This endorsement can be added to an intervention specialist or early childhood education license and allows teachers to teach children ages three to five who have mild or moderate to intensive needs. Students enrolled in an early childhood education program may complete the coursework for the prekindergarten special needs endorsement as a focus area for their undergraduate degree. In order for the University of Dayton to approve the state of Ohio endorsement application, candidates must have on file in the SEHS dean's office passing scores on the state of Ohio licensure tests.

## Prekindergarten Special Needs Endorsement

| EDT 314 | Collaborative Assessment and Team Models | 3 |
| :--- | :--- | ---: |
| EDT 315 | Health and Medical Issues for Early Childhood | 3 |
| EDT 341 | Language Development, English Language <br> Learners and Emergent Literacy | 3 |
| EDT 344 | Collaboration with Families, Professionals and <br> Agencies | 3 |
| EDT 472 | Internship in Early Childhood Special Education | 5 |
| Total Hours |  | 17 |

## Middle Childhood Generalist Endorsement

The Department of Teacher Education offers the middle childhood generalist endorsement program. This endorsement can be added to any existing middle childhood educaiton license for any combination of the four areas of concentration. The generalist endorsement will allow teachers to teach grades four to six only. In order for the University of Dayton to approve the state of Ohio endorsement application, candidates must have on file in the SEHS dean's office passing scores on the state of Ohio licensure tests.

## Middle Childhood Generalist Endorsement

| Language and Reading |  |  |
| :--- | :--- | :--- |
| EDT 426 | Reading/Language Arts for Middle Childhood | 3 |
| Select one course from | 3 |  |
| EDT 608 | The Writing Classroom |  |
| ENG 470 | History of English |  |
| ENG 472 | The Structure of English |  |
| LNG 468 | Introduction to Linguistics |  |
| Mathematics |  | 3 |
| EDT 427 | Mathematics for Middle Childhood | 3 |

$\left.\begin{array}{lll}\text { MTH 266 } & \begin{array}{l}\text { Discrete \& Finite Mathematics for Middle School } \\ \text { Teachers }\end{array} & 3 \\ \text { Science (Prerequisites: SCI 190, SCI 190L, SCI 210, \& SCI 210L)) }\end{array}\right]$

## Catholic Education Certificate

The Department of Teacher Education offers the undergraduate Catholic education certificate, which is an interdisciplinary program designed for University of Dayton students enrolled in any major. The program includes courses in the departments of Teacher Education and Religious Studies, and prepares students with historical, cultural, catechetical, and spiritual background that is particularly relevant for students interested in teaching in Catholic schools or pursuing parish ministry. Embedded within the program are opportunities for preservice teacher education students to develop competencies and dispositions that are considered desirable by Catholic school administrators, while for others it may provide experience that may help the student to discern a call to a career in Catholic education or in another ecclesial area. It should be noted that the certificate alone does not meet the requirements for teacher licensure in the state of Ohio.

## Certificate in Catholic Education

| EDT 306 | History of Catholic K-12 Schools in the United <br> States | 3 |
| :--- | :--- | ---: |
| EDT 336 | The Culture of the Catholic School | 3 |
| REL 281 | Forum for Catechetical Leaders I | 1 |
| REL 282 | Forum for Catechetical Leaders II | 1 |
| REL 283 | Forum for Catechetical Leaders III | 1 |
| REL 284 | Forum for Catechetical Leaders IV | 1 |
| Total Hours |  | 10 |

## Dyslexia Certificate

The Department of Teacher Education offers the undergraduate dyslexia certificate program. This certificate program provides knowledge and practical application of skills for instructing students with dyslexia within the regular classroom. Teacher Education candidates enrolled in a licensure program may choose to add the dyslexia certificate to their coursework. This is a University issued certificate and does not represent state licensure.

## Required Courses:

| EDT 340 | Educating Diverse Student Populations in Inclusive <br> Settings $^{1}$ | 3 |
| :--- | :--- | :--- |
| EDT 340L | Educating Diverse Student Populations in Inclusive <br> Settings Laboratory | 0 |
| EDT 350 | Foundations of Literacy through Literature | 3 |
| EDT 450 | Phonics, Spelling and Vocabulary | 3 |
| EDT 467 | Advanced Phonics and Multisensory Instruction | 3 |
| EDT 482 | Dyslexia Methods Practicum | 3 |

Early Childhood and Intervention Specialist Required Coursework:
EDT 453 Introduction to Literacy for Early Childhood
EDT 454 Methods of Literacy for Early Childhood

Middle Childhood Required Coursework:

| EDT 452 | Digital Literacies, ELL and Content Reading <br> Strategies |
| :--- | :--- |
| EDT 458 | Reading, Writing and Assessment - Middle $^{\text {Childhood }}{ }^{1}$ |
| EDT 458L | Middle Level (4-9) Field Internship |

1 Must register for the corequisite laboratory course, all field experiences arranged by the University.

## Early Childhood Leadership and Advocacy Certificate

The Department of Teacher Education offers the early childhood leadership and advocacy certificate program. This certificate provides knowledge and skills required of program administrators, supervisors, teacher leaders, and advocates for effective leadership and advocacy in a variety of early childhood settings. Students enrolled in an early childhood education license program may complete the coursework for the early childhood leadership and advocacy certificate as a focus area for their undergraduate degree.

| Early Childhood Leadership and Advocacy Certificate |  |  |
| :--- | :--- | :--- |
| EDT 460E | Early Childhood Program and Personnel <br> Management | 3 |
| EDT 460EL | Early Childhood Program and Personnel <br> Management Laboratory | $0-1$ |
| EDT 461E | Supporting Quality Curriculum and Instruction in <br> Early Care and Education | 3 |
| EDT 461EL | Supporting Quality Curriculum and Instruction in <br> Early Care and Education Laboratory | $0-1$ |
| EDT 462E | Regulations, Licensing and the Law in Early Care <br> and Education | 3 |
| EDT 462EL | Regulations, Licensing and the Law in Early Care <br> and Education Laboratory | $0-1$ |
| EDT 463E | Managing Finances and Marketing in Early Care <br> and Education | 3 |
| EDT 463EL | Managing Finances and Marketing in Early Care <br> and Education Laboratory | $0-1$ |
| EDT 464E | Advocacy in Early Care and Education <br> Internship and Practicum in Early Childhood | 6 |

## Total Hours

## Teaching English to Speakers of Other Languages Certificate

The Department of Teacher Education offers the undergraduate certificate in teaching English to speakers of other languages (TESOL) program. This program is an interdisciplinary program, drawing from courses in the departments of Teacher Education, English, and Global Languages and Cultures. The program is designed for current University of Dayton students enrolled in any major. It prepares students to teach English as an additional language in postsecondary schools, adult education settings and private language institutes in the United States and abroad. It can also provide opportunities for preservice teacher education students to develop competence in working with Englishlanguage learners in their grade level and content area classrooms. It
should be noted that the certificate alone does not meet the requirements for the TESOL endorsement from the state of Ohio; however, the certificate coursework will apply toward the TESOL endorsement program, which is offered at the post-baccalaureate level.

## TESOL Certificate

| LNG 468 | Introduction to Linguistics | 3 |
| :---: | :---: | :---: |
| or ENG 468 | Introduction to Linguistics |  |
| or EDT 448 | Introduction to Linguistics |  |
| ENG 472 | The Structure of English | 3 |
| EDT 437 | Second Language Learning and Teaching | 3 |
| ENG 466 | TESOL Methods for Teaching English Language Learners | 3 |
| or EDT 466 | TESOL Methods for Teaching English Language Learners |  |
| EDT 438 | TESOL Practicum | 1 |
| Total Hours |  | 13 |

## Science, Technology, Engineering and Mathematics

Ohio schools are looking for teachers who have experience in teaching mathematics, science, and engineering using technology. The several licensure programs at UD for Teacher Education are designed to have pre-service teachers take a variety of courses, including a heavy requirement for mathematics and science courses. The senior year methods classes in mathematics and science are now focusing on the integration of these topics through the lens of the engineering process. Application of the available technology now present in Fitz Hall provides an opportunity to imbue pre-service teachers with opportunities to put technology into their teaching. The focus on the STEM fields in the teacher preparation programs addresses the Habits of Inquiry document because students and faculty are observing the signs of the time as they become proficient in integrating across disciplines to use solve problems. The Department of Teacher Education will recognize the cross-disciplinary work of UD teacher education students in three licensure areas with a STEM Certificate, which acknowledges they are knowledgeable in the area of STEM education.

## Early Childhood Education ${ }^{1}$

EDT 409 Mathematics for 4th and 5th Grades 3
EDT 410 Science for 4th and 5th Grades 3
SCI $230 \quad$ Organisms, Evolution \& Environment 3
SCI 230L Organisms, Evolution \& Environment Laboratory 1
EGR 103 Engineering Innovation 2
Middle Childhood Education ${ }^{1}$

| EDT 427 | Mathematics for Middle Childhood | 3 |
| :--- | :--- | :---: |
| or EDT 409 | Mathematics for 4th and 5th Grades | 3 |
| EDT 428 | Science for Middle Childhood <br> or EDT 410 | Science for 4th and 5th Grades |
| SCI 230 | Organisms, Evolution \& Environment | 3 |
| SCI 230L | Organisms, Evolution \& Environment Laboratory | 1 |
| MTH 266 | Discrete \& Finite Mathematics for Middle School <br> Teachers | 3 |

Adolescent to Young Adult ${ }^{1}$

| EDT 432 | Integrated Mathematics Methods for Adolescence <br> to Young Adult | 3 |
| :--- | :--- | :--- |
| or EDT 434 | Science Methods for Adolescence to Young Adult |  |
| EDT 432L | Integrated Mathematics Methods AYA (7-12) Field <br> Internship |  |
| 1-2 |  |  |

## Urban Teacher Certificate

The Department of Teacher Education offers the urban teacher certificate program. This certificate program provides for the development for the development of knowledge, skills and dispositions that prepares candidates to be culturally competent educators who can understand and respond to the needs and challenges of urban students, families and schools. Students enrolled in any licensure program in Teacher Education who complete the Urban Teacher Academy program qualify for this certificate.

| Foundational Coursework: |  |  |
| :---: | :---: | :---: |
| EDT 110 | The Profession of Teaching ${ }^{1}$ | 3 |
| EDT 110L | The Profession of Teaching Laboratory | 0 |
| EDT 340 | Educating Diverse Student Populations in Inclusive Settings | 3 |
| EDT 340L | Educating Diverse Student Populations in Inclusive Settings Laboratory | 0 |
| One of the following Sociology or History Courses with an Urban Focus: |  | 3 |
| EDT 322 <br> or SOC 310 Perspectives on Education and Social Justice |  |  |
| HST 352 | Family History |  |
| HST 355 | American Urban History |  |
| HST 371 | Labor and Working Class History |  |
| HST 376 | Social \& Cultural History of the United States |  |
| HST 398 | African American History before 1877 |  |
| HST 399 | History of Blacks in the United States Since 1900 |  |
| SOC 328 | Racial \& Ethnic Relations |  |
| SOC 339 | Social Inequality |  |
| SOC 341 | Self \& Society |  |
| SOC 351 | Urban Sociology |  |
| SOC 352 | Community |  |
| SOC 355 | Families \& the Economy |  |
| SOC 371 | Sociology of Human Rights |  |
| SOC 432 | Structure of Privilege |  |
| SOC 438 | Urban Poverty |  |
| SSC 200 | Social Science Integrated |  |
| Early Childhood Coursework: ${ }^{2}$ |  |  |
| EDT 313 | Developmentally Appropriate Practice for Preschool ${ }^{1}$ |  |
| EDT 313L | Developmentally Appropriate Practice for Preschool Laboratory |  |



1 Must register for the corequisite laboratory course, all field experiences arranged by the University.
2
Candidates must apply by the second semester of sophomore year in order to complete certificate requirements.
3 Must register for credit in both Fall and Spring semesters.
4 All field placements will be in urban settings, including the culminating full term student teaching in licensure area.

- Bachelor of Science in Education, Adolescence to Young Adult (p. 353)
- Bachelor of Science in Education (p. 354), Early Childhood (p. 344)
- Bachelor of Science in Education (p. 354), Foreign Language (p. 345)
- Bachelor of Science in Education (p. 354), Intervention Specialist (p. 347)
- Bachelor of Science in Education, Middle Childhood/Intervention Specialist (p. 342)
- Bachelor of Science in Education (p. ), Middle Childhoo (p. 348)d
- Bachelor of Science in Education (p. 355), Secondary Catholic Religion (p. 350)


## Adolescence to Young Adult

| First Year |  |  |
| :--- | :---: | ---: |
| Fall | Hours Spring | Hours |
| EDT 109 | 1 EDT 110 | 3 |
| CMM 100 | 3 EDT 110L | 0 |
| HST 103 | 3 ENG 100 | 3,4 |
| MTH 114 | 3 REL 103 | 3 |
| PHL 103 | 3 CAP Natural | 3 |
|  | Science |  |
| CAP Natural Science | 3 Concentration | 3 |
| CAP Natural Science Lab | 1 |  |
|  | 17 | $15-16$ |
| Second Year |  |  |
| Fall | Hours Spring | Hours |
| EDT 222 | 3 CAP Adv | 3 |
|  | Historical |  |
| EDT 222L | Study |  |
| SSC 200 | 0 CAP Inquiry | 3 |
| Concentration | 3 ENG 200 | $3-4$ |
|  | 12 Concentration | 9 |


| Third Year |  |  |
| :--- | :---: | ---: |
| Fall | Hours Spring | Hours |
| EDT 338 | 3 EDT 305 | 3 |
| EDT 338L | 0 EDT 323 | 3 |
| EDT 340 | 3 CAP Arts | 3 |
| EDT 340L | 0 Concentration | 9 |
| CAP Adv Rel/Faith Traditions | 3 |  |
| Concentration | 6 | 15 |
|  | 15 | Hours |
| Fourth Year | Hours Spring | 12 |
| Fall | 3 EDT 475 | 3 |
| EDT 459 | 3 EDT 436 |  |
| EDT 481 | 3 |  |
| EDT Special Methods | 1 |  |
| EDT Special Methods Lab | 6 | 16 |
| Concentration | 16 |  |
|  |  |  |


| Focus Area | 3 | 18 |
| :--- | :---: | ---: |
| Total credit hours: 134-140 |  |  |
|  |  |  |
| FOreign Language |  |  |
| First Year |  |  |
| Fall | Hours Spring | Hours |
| EDT 109 | 1 EDT 110 | 3 |
| CMM 100 | 3 EDT 110L | 0 |
| HST 103 | 3 ENG 100 | 3,4 |
| MTH 114 | 3 REL 103 | 3 |
| PHL 103 | 3 CAP Natural | 3 |
| Concentration | Science |  |
|  | 3 CAP Natural | 1 |
|  | Science Lab |  |
|  | Concentration | 3 |

Total credit hours: 132-134

## Early Childhood Education

| First Year |  |  |
| :--- | :---: | ---: |
| Fall | Hours Spring | Hours |
| EDT 109 | 1 EDT 110 | 3 |
| CMM 100 | 3 EDT 110L | 0 |
| HST 103 | 3 ENG 100 | 3,4 |
| MTH 204 | 3 REL 103 | 3 |
| PHL 103 | 3 GEO 204 | 4 |
| SCI 190 | 3 MTH 205 | 3 |
| SCI 190L | 1 |  |
|  | 17 | $16-17$ |
| Second Year |  |  |
| Fall | Hours Spring | Hours |
| EDT 211 | 3 EDT 212 | 3 |
| EDT 211L | $0-1$ EDT 212L | 0 |
| EDT 340 | 3 EDT 305 | 3 |
| EDT 340L | 0 SCI 230 | 3 |
| MUS 232 | 3 Faith | 3 |
|  | Traditions/ | 3 |
|  | Adv Religious |  |
| VAE 101 | Studies |  |
| ENG 200 | 2 HST 251 | 3 |
| SSC 200 | $3-4$ | 3 |
|  | 3 | 15 |


| Third Year |  |  |
| :--- | :---: | ---: |
| Fall | Hours Spring | Hours |
| EDT 341 | 3 EDT 313 | 3 |
| EDT 350 | 3 EDT 313L | 1 |
| EDT 344 | 3 EDT 317 | 2 |
| EDT 450 | 3 EDT 453 | 3 |
| Focus Area | 6 Focus Area | 9 |
|  | 18 | 18 |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| EDT 412 | 3 EDT 473 or | $12-15$ |
|  | 473 and 472 |  |
| EDT 413 | 2 EDT 416 | 3 |
| EDT 414 | 3 |  |
| EDT 415 | 3 |  |
| EDT 415L | 1 |  |
| EDT 454 | 3 |  |


| SSC 200 | 3 EDT 343L | 0 |
| :---: | :---: | :---: |
| CAP Adv Rel/Faith Traditions | 3 ENG 200 | 3-4 |
| HST 251 or 252 | 3 CAP Arts | 3 |
|  | 15 | 15-16 |
| Third Year |  |  |
| Fall | Hours Spring | Hours |
| EDT 321 | 3 EDT 425 | 3 |
| EDT 321L | 0-1 EDT 441 | 3 |
| EDT 342 | 3 EDT 441L | 0 |
| EDT 445 | 2 EDT 450 | 3 |
| EDT 350 | 3 EDT 453 | 3 |
| EDT 340 | 3 Elective | 3 |
| EDT 340L | 0 |  |
| Elective | 3 |  |
|  | 17-18 | 15 |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| EDT 344 | 3 EDT 476 | 12 |
| EDT 442 | 2-3 EDT 484 | 0-3 |
| EDT 442L | 0-1 |  |
| EDT 443 | 2 |  |
| EDT 444 | 3 |  |
| EDT 454 | 3 |  |
|  | 13-15 | 12-15 |

Total credit hours: 120-128

## Middle Childhood/Intervention Specialist

| First Year |  |  |
| :---: | :---: | :---: |
| Fall | Hours Spring | Hours |
| EDT 109 | 1 EDT 110 | 3 |
| CMM 100 | 3 EDT 110L | 0 |
| HST 103 | 3 ENG 100 | 3,4 |
| MTH 207 | 3 REL 103 | 3 |
| PHL 103 | 3 GEO 204 | 4 |
| SCI 190 | 3 VAE 232 | 3 |
| SCI 190L | 1 |  |
|  | 17 | 16-17 |
| Second Year |  |  |
| Fall | Hours Spring | Hours |
| EDT 222 | 3 EDT 340 | 3 |
| EDT 222L | 0 EDT 340L | 0 |
| EDT 305 | 3 ENG 200 | 3-4 |
| SSC 200 | 3 ADV PHL/ | 3 |
|  | Faith |  |
|  | Traditions |  |
| CAP ADV Historical St. | 3 Concentration | 6 |
| Concentration | 6 Generalist |  |
|  | Endorsement |  |
|  | MTH 214 or |  |
|  | Concentration |  |
|  | 18 | 15-16 |
| Third Year |  |  |
| Fall | Hours Spring | Hours |
| EDT 321 | 3 EDT 425 | 3 |
| EDT 321L | 0 EDT 450 | 3 |
| EDT 350 | 3 EDT 452 | 3 |
| Concentration | 12 EDT 441 | 3 |
|  | Concentration | 6 |
|  | EDT 441L | 0 |
|  | 18 | 18 |


| Fourth Year | Hours Spring | Hours |
| :--- | ---: | ---: |
| Fall | 3 EDT 423 | 3 |
| EDT 458 | 1 EDT 474 | 9 |
| EDT 458 L | 3 EDT 476 | 6 |
| EDT 426, 427, 428, or 429 | 3 |  |
| EDT 426, 427, 428, or 429 | 2 |  |
| EDT 442 | 0 | 18 |
| EDT 442 L | 3 |  |
| EDT 444 | 3 | 18 |
| Concentration |  |  |
| Total credit hours: $138-140$ |  |  |

## Middle Childhood Education

| First Year |  |  |
| :--- | :---: | ---: |
| Fall | Hours Spring | Hours |
| EDT 109 | 1 EDT 110 | 3 |
| CMM 100 | 3 EDT 110L | 0 |
| HST 103 | 3 ENG 100 | 3,4 |
| PHL 103 | 3 REL 103 | 3 |
| MTH 207 | 3 GEO 204 | 4 |
| SCI 190 | 3 CAP Arts | 3 |
| SCI 190L | 1 | $16-17$ |
|  | 17 |  |
| Second Year |  | 3 |



## Secondary Catholic Religion Education

First Year
Fall
EDT 109
CMM 100
HST $103 \quad 3$ ENG 100

| Hours Spring | Hours |
| :---: | ---: |
| 1 EDT 110 | 3 |
| 3 EDT 110 L | 0 |
| 3 ENG 100 | 3,4 |


| MTH 114 or 207 | 3 PHL 103 | 3 |
| :---: | :---: | :---: |
| REL 103 | 3 CAP Natural Science | 3 |
| CAP Natural Science | 3 Adv Historical Study | 3 |
| CAP Natural Science Lab | 1 |  |
|  | 17 | 15-16 |
| Second Year |  |  |
| Fall | Hours Spring | Hours |
| EDT 222 | 3 CAP Arts | 3 |
| EDT 222L | $\begin{aligned} & 0 \text { REL 281, 282, } \\ & \text { 283, 284, or } \\ & \text { UDI } 419 \end{aligned}$ | 1 |
| Adv Rel/Faith Traditions | $\begin{aligned} & 3 \text { REL 310, 311, } \\ & \text { or } 312 \end{aligned}$ | 3 |
| REL 281, 282, 283, 284, or UDI 419 | $\begin{gathered} 1 \text { REL } 315,316 \text {, } \\ 318 \text {, or } 319 \end{gathered}$ | 3 |
| REL 323 or 324 | $\begin{aligned} & 3 \text { REL } 443 \text { or } \\ & 446 \end{aligned}$ | 3 |
| REL 360 or 363 | 3 ENG 200 | 3-4 |
| SSC 200 | 3 |  |
|  | 16 | 16-17 |
| Third Year |  |  |
| Fall | Hours Spring | Hours |
| EDT 338 | $\begin{aligned} & 3 \text { REL 281, 282, } \\ & 283,284 \text {, or } \\ & \text { UDI } 419 \end{aligned}$ | 1 |
| EDT 338L | 0 Religion Elective | 3 |
| EDT 340 | 3 REL-World Religions Course | 3 |
| EDT 340L | 0 CAP inquiry | 3 |
| EDT 305 | 3 Elective | 6 |
| REL 281, 282, 283, 284, or UDI 419 | 1 |  |
| REL Doctrine | 3 |  |
| REL 327, 328, or 329 | 3 |  |
|  | 16 | 16 |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| EDT 331L | 0 EDT 475 | 12 |
| EDT 459 | 3 EDT 436 | 3 |
| EDT 481 | 3 |  |
| Elective | 9 |  |
|  | 15 | 15 |

Total credit hours: 126-128

## Courses

EDT 109. Personal Aspects of Teaching. 1 Hour
This course is a candidate's general introduction to education as a profession, and to the University of Dayton. Candidates' personal values, goals, motives and strengths will be identified and reflected upon in relation to the qualities and dispositions necessary to be an effective teacher. This course serves as an introduction to the different program areas (AYA, MCE, ECE, IS and multi-age), to technology in education and to various educational issues. EDT 109 is waived for those candidates who transfer to the University.

## EDT 110. The Profession of Teaching. 3 Hours

This course is designed to study the principal components of effective teaching that facilitate the learning of all students. Students will explore and demonstrate knowledge of current educational issues, the Ohio Standards for the Teaching Profession and other professional standards. Students will provide evidence of the development of professional dispositions and their understanding of the importance of developing a community of learners that respects and appreciates diversity. Students will provide evidence of critical reflection on the teaching process as it relates to incorporating social justice and the Marianist characteristics of education. Prerequisite(s): EDT 109 or by permission.

## EDT 110L. The Profession of Teaching Laboratory. 0 Hours

This 20 hour field experience is designed to accompany the EDT 110 course. Both the course and field experience are designed to study the principal components of effective teaching that facilitate the learning of all students. Students will explore and demonstrate knowledge of current educational issues, the Ohio Standards for the Teaching Profession and other professional standards. Students will provide evidence of the development of professional dispositions and their understanding of the importance of developing a community of learners that respects and appreciates diversity. Students will use their lab experience as the basis for providing evidence of critical reflection on the teaching process as it relates to incorporating social justice and the Marianist characteristics of education into their understanding about the profession.

## EDT 207. Child and Adolescent in Education. 3 Hours

Study of the empirical principles of intellectual, moral, physical, personality and social development as related to performance in the classroom. Interpretations for appropriate generic teaching behaviors and developmental causes of behavior problems are discussed. Prerequisite(s): EDT 110, EDT 110L.
EDT 207L. Child and Adolescent in Education Laboratory. 0 Hours This course consists of planned field experiences providing candidates the opportunity for field reflections in relation to child and adolescent development in school settings.

## EDT 211. Child Development: Birth to Age Eight. 3 Hours

This course focuses on the study of typical physical, motor, socialemotional and aesthetic development of young children ages preconception through eight. Assessment, risk factors, environmental design and guiding behavior are covered. Students will use this knowledge to reflect on and make decisions about practices that serve the needs of young children and their families. This course relies on field experience to be completed at the Bombeck Family Learning Center. Prerequisite(s): EDT 110, EDT 110L.
EDT 211L. Child Development: Birth to Age Eight Laboratory. 0-1 Hours This 45 contact hour practicum course is one semester of a yearlong field experience held in conjunction with EDT 211 and EDT 212. Only students who have been accepted to the ECE program are eligible. During registration, students should sign up for a weekly time slot at the Bombeck Family Learning Center. Current medical forms with a negative TB test, background check and references are required. Forms are available at the Bombeck Family Learning Center website.

## EDT 212. Early Childhood Theory and Practice. 3 Hours

This course is an introduction to the theory base that drives developmentally appropriate practice for working with young children birth through age eight. It extends knowledge of how children develop and focuses on theories of Piaget, Kohlberg, Skinner, Pavlov, Erikson, Rogers and Vygotsky. Field experience required at the Bombeck Family Learning Center. Prerequisite(s): EDT 211, EDT 211L.

EDT 212L. Early Childhood Theory and Practice Laboratory. 0 Hours This practicum course is a yearlong field experience held in conjunction with EDT 211 and EDT 212. Only students who have been accepted to the ECE program are eligible. During registration, students should sign up for a weekly time slot at the Bombeck Family Learning Center. Current medical forms with a negative TB test, background check and references are required. Forms are available at the Bombeck Family Learning Center website.

## EDT 222. Middle Childhood to Young Adult Development in a Diverse Society. 3 Hours

Examination of early adolescence to young adulthood development within the United States context with an emphasis on socioeconomic diversity.Students will explore the complexity of environmental influences on development and on disparities in outcomes. They will examine the teacher's role in promoting resiliency and positive developmental and educational outcomes. Prerequisite(s): EDT 110, EDT 110L.

## EDT 222L. Middle Childhood to Young Adult Development in a Diverse

 Society Laboratory. 0 HoursThis course consists of planned field experiences providing candidates the opportunity for field reflections in relation to young adolescent and young adult development in school settings.
EDT 303. School, Self and Society. 3 Hours
A study of the relationships among social change, institutional reform, and student socialization in various levels and types of schools. The students will make a comparison of schools around the world. One aim of such a study is to locate the differences that derive from differences in the cultures of the communities they serve. Another aim is to record how schools responded to forces of globalization and from internal forces of change.

## EDT 305. Philosophy and History of American Education. 3 Hours

 This course is the study of American philosophy of education in a historical framework. This course emphasizes the political analyses of educational issues in their historical context. Thematic issues from the Catholic/Marianist perspective are included among the topics studied.EDT 306. History of Catholic K-12 Schools in the United States. 3 Hours This course examines the Catholic K - 12 educational experience in the United States with a particular emphasis on the impact that Catholic schools have had on the creation of Catholic culture in America and on American culture in general. Particular emphasis is placed upon those historical antecedents that directly or indirectly affect Catholic schools today. Prerequisite(s): EDT 110, EDT 110L, HST 103, PHL 103.

## EDT 312. Infant and Toddler Practicum Seminar. 2 Hours

This guided practicum and seminar will provide an opportunity for candidates to develop and apply their knowledge of typical and atypical development from conception to age three as they observe young children in both structured and naturalistic settings. Developmental milestones as well as related risk factors will be emphasized.

EDT 313. Developmentally Appropriate Practice for Preschool. 3 Hours This course will expand the knowledge of how young children, ages three through five, learn and develop. How to provide opportunities that will support this age group's physical, social, emotional, language, cognitive and aesthetic development will be explored. Extensive focus on the content areas of art, music, science, social studies and mathematics as well as guiding behavior and family culture will occur. Field experience in an urban preschool or preschool special education setting required. Prerequisite(s): EDT 212, EDT 212L.

## EDT 313L. Developmentally Appropriate Practice for Preschool Laboratory. 1 Hour

This field experience provides students with an opportunity to work with diverse populations. Placements are made in preschool programs that serve children from low income families, minority children who are at risk or children with identified special needs.

## EDT 314. Collaborative Assessment and Team Models. 3 Hours

This course provides an in depth study of transdisciplinary teaming and collaborative assessment models in the field of early childhood special education. Included will be the transdisciplinary and collaborative nature of assessment in the diagnosis, screening and instruction of young children (birth to age eight) who are typically and atypically developing. Emphasis will be given to the role of the family in the assessment process. Systematic observation using a play-based approach will be emphasized. Prerequisite(s): EDT 212, EDT 212L.

## EDT 315. Health and Medical Issues for Early Childhood. 3 Hours

 Study of the health and medical needs associated with young children with disabilities. Students engage in collaboration between educational and medical professionals in an effort to integrate services for young children.EDT 317. Integrating the Arts in Early Childhood Curriculum. 2 Hours This course will provide opportunities for ECE majors to integrate the arts throughout the ECE curriculum in meaningful ways. Music, dance, drama and visual arts will be used to represent what young children know and are able to do as well as provide an opportunity to recognize and appreciate cultural difference in artistic expression. Candidates will create aesthetically pleasing newsletters and websites to communicate with families and to market their program.

## EDT 318. Urban Teacher Academy-Junior Seminar. 0-1 Hours

This course is designed to deepen understanding of critical issues facing urban educators. Students will examine how the culture of poverty affects students, families and schools. Instructional and management strategies that encourage the learning and development of efficacy, risktaking, socio-cultural awareness, contextual interpersonal skills and selfunderstanding are developed through integrated readings, discussions, field experience and presentations. Inherent in this deepening of understanding is the development of reflective thinking and writing and problem solving strategies.

## EDT 321. Classroom Environment for Middle Childhood. 3 Hours

This course is the study of the middle childhood student within the classroom environment. Theories of learning and practical applications, motivation, classroom management and discipline, lesson and unit planning, teaching methodologies and assessment are examined and practiced. Prerequisite(s): EDT 222, EDT 222L.

## EDT 321L. Classroom Environment for Middle Childhood Laboratory. 0-1

 HoursThis course consists of planned field experiences providing candidates the opportunity for field reflections in regards to learning theories and classroom management in middle level school settings.

## EDT 322. Perspectives on Education and Social Justice. 3 Hours

 This Inquiry course gives students a set of lenses to critically evaluate contemporary issues around schools and schooling from a social justice perspective. The course focuses on educational and social scientific research methodologies used for investigating educational inequalities.EDT 323. Historical Literacy and Historical Thinking. 3 Hours
Exploration of the cognitive processes that constitute historical thinking and historical understanding with emphases on the development of historical literacy in the students themselves and strategies designed to increase historical literacy in secondary school students.

## EDT 331L. Religion Methods Laboratory. 0-1 Hours

This course examines the planning, diagnosis, instructional methods, materials and assessment techniques used in teaching religion to students with varied needs and abilities.

## EDT 336. The Culture of the Catholic School. 3 Hours

This course explores the theological, moral, academic, human and social components that give the Catholic school its distinctive culture. The role of spiritual, sacramental and communal relationships in the creation of Catholic school identity will be examined. Prerequisite(s): EDT 110, EDT 110L.

## EDT 338. Teaching, Learning and Management. 3 Hours

This course is a study of the empirical principles of learning such as reinforcement, discovery, motivation and transfer theories. Interpretations for generic teaching behaviors especially in diagnosis, prescription and assessment are presented. Prerequisite(s): EDT 207 and EDT 207L or EDT 222 and EDT 222L.
EDT 338L. Teaching, Learning and Management Laboratory. 0 Hours This course consists of planned field experiences providing candidates the opportunity for field reflections in regard to learning theories in school settings.

## EDT 340. Educating Diverse Student Populations in Inclusive Settings. 3

 HoursThe study of the evidence based practice in multicultural education where teachers are knowledgeable about and respect diversity, including cultural and racial/ethnic origins, language, gender, sexual identity, religion, economic status and learning challenges associated with exceptionalities. Candidates will aspire to create democratic classrooms with a culturally relevant and inclusive curriculum, incorporating legal aspects and social justice perspectives associated with student learning. Candidates will gain knowledge in the importance of assessments, and ways to differentiate the curriculum to the individual learning needs of students in general classrooms, working in collaboration with other adults in the student's life. Prerequisite(s): EDT 110, EDT 110 L or permission of the department.

## EDT 340L. Educating Diverse Student Populations in Inclusive Settings Laboratory. 0 Hours

This course consists of planned field experiences providing candidates the opportunity for field reflections in relation to adapting learning experiences for diverse learners in school settings.

## EDT 341. Language Development, English Language Learners and Emergent Literacy. 3 Hours

This course is the study of oral language and literacy development in children, with implications for all learners, including children with special needs, or English Language Learners. Prerequisite(s): EDT 110, EDT 110L.

## EDT 342. Behavior Management. 3 Hours

This course examines the principles and methods of observing, recording, measuring and managing human behavior with emphasis on students with disabilities.

EDT 343. Introduction to Education of Learners with Mild/Moderate Learning Needs. 3 Hours
This course is a study of the role and function of the intervention specialist. This course presents issues of definition, identification and placement procedures. The candidate will acquire knowledge of major researchers and historians, variations in belief, traditions and values across cultures and current practices in the field.
EDT 343L. Introduction to Education of Learners with Mild/Moderate Learning Needs Laboratory. 0 Hours
This course consists of planned field experiences providing candidates the opportunity for field reflections in relation to the individual learning needs of students in school settings.
EDT 344. Collaboration with Families, Professionals and Agencies. 3

## Hours

This course examines theories and techniques to assist teachers in working with colleagues, families and agency personnel to provide an appropriate educational program, improve home-school relationships and develop family-professional partnerships. Historical and legal perspectives of parental influence on special education service are examined. Prerequisite(s): EDT 343, EDT 343L; ECE: EDT 340, EDT 340L.
EDT 350. Foundations of Literacy through Literature. 3 Hours
This course serves as an introductory course to the reading/language arts (listening, speaking, reading, writing, viewing, visual representation) and the role literature plays in these processes. It is a foundation course in reading and is intended to align with the requirements of Ohio Reading Core licensure standards for the ECE, MCE, and IS programs. Topics examined include the foundations of literacy, research, theories and related models of reading, various children's and young adult literature, the integration of technology in literacy, an overview of the importance of on-going assessment in teaching reading/language arts and an awareness of cultural, linguistic and ethnic diversity in individual learners. Prerequisite(s): EDT 110, EDT 110L.

## EDT 400. Independent Study. 1-12 Hours

This course is an in-depth study of a selected educational topic. The candidate develops an individual learning plan that includes objectives, schedule of readings and assignments, products and methods of assessment. Prerequisite(s): Permission of department chairperson.

EDT 404. Current Innovations in Education. 3 Hours
This course is the study of current innovations in education. The course focuses on the examination and critical analysis of recent trends in curriculum and instructional and assessment strategies in P-12 schools.

## EDT 406. Special Topics in Teaching. 1-3 Hours

This course is the study of specialized areas of education not typically included in the professional education sequence. Topics are announced.
EDT 409. Mathematics for 4th and 5th Grades. 3 Hours
Planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching mathematics to students in grades four and five with varied needs and abilities using a tier method. Topics include: Ohio Academic Content Standards, applications and instructional techniques that address proficiency testing, resources, technologies, manipulatives, interdisciplinary connections, grouping techniques, current research and 21 st century skills. Prerequisite(s): MTH 204, MTH 205.

## EDT 410. Science for 4th and 5th Grades. 3 Hours

Planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching science to students in grades four and five with varied needs and abilities using a tier method. Topics include: Ohio Academic Content Standards, applications and instructional techniques that address proficiency testing, resources, technologies, manipulatives, interdisciplinary connections, grouping techniques, current research and 21 st century skills.

## EDT 411. Social Studies for 4th and 5th Grades. 3 Hours

Course designed to address social studies content including social aspects of learning and pedagogy specific to fourth and fifth grades.

## EDT 412. Developmentally Appropriate Practice in Mathematics for Early

 Childhood. 3 HoursThis course will extend the candidate's knowledge of how children, ages six through eight, develop and learn in order to provide opportunities that support the physical, social, emotional, language, cognitive and aesthetic development of all young children. Students will learn to use knowledge of how young children differ in their development and approaches to learning mathematics in order to provide individually appropriate opportunities for learning the subject. The course will emphasize teaching in the content of mathematics and will focus on the Ohio Mathematics academic content standards and the National Council of Teachers of Mathematics (NCTM) standards. Field experience is integrated with the primary block. This course is part of the first semester senior year internship and culminates in the second semester of student teaching. Prerequisite(s): EDT 313, EDT 313L, EDT 453.

## EDT 413. Developmentally Appropriate Practice in Social Studies for Early Childhood. 2 Hours

Students will learn to use knowledge of how young children, ages six through eight, differ in their development and approaches to learning social studies in order to provide individually appropriate opportunities for learning the subject. The course will emphasize teaching in the content of social studies and will focus on the Ohio Social Studies academic content standards and the National Council for the Social Studies (NCSS) standards. Field experience is integrated with the primary block. This course is part of the first semester senior year internship and culminates in second semester student teaching. Prerequisite(s): EDT 313, EDT 313L, EDT 453.

## EDT 414. Developmentally Appropriate Practice in Science for Early Childhood. 3 Hours

This course will explore resources and techniques available to provide all early childhood students with a holistic, interdisciplinary understanding of science. Candidates will design lessons, activities and assessments which link the national standards, state model, and international goals to contemporary events and children's daily lives. Field experience is integrated with the primary block. Developmentally appropriate practices, science processes, inquiry, problem-solving and safety issues will be addressed. Prerequisite(s): EDT 313, EDT 313L, EDT 453, GEO 204; SCI 190, SCI 190L, SCI 230.

## EDT 415. Working with Young Learners with Mild to Moderate Disabilities. 2-3 Hours

This course is the study of the role and function of the early childhood educator in working with learners with mild to moderate disabilities. The course presents issues of definition, identification and placement procedures. The candidate will acquire knowledge of major researchers and historians, variations in belief, traditions and values across cultures and current practices in the field. Field experience is integrated with the primary block. Prerequisite(s): EDT 313, EDT 313L, EDT 453.

EDT 415L. Early Childhood Primary (K-3) Field Internship. 1-2 Hours
This ECE field experience is the first semester of the senior level internship, which provides the candidate the opportunity for practice and reflection in K-3 settings.

## EDT 416. Early Childhood Capstone Seminar. 3 Hours

The exploration of different aspects of the teaching profession through the application of knowledge and skills. Three student learning outcomes are assessed through the capstone course; scholarship, vocation, and practical wisdom. Successful completion of the capstone course includes the submission of a teacher performance assessment and a summative teaching assessment. Prerequisite(s): EDT 412, EDT 413, EDT 414, EDT 415, EDT 415L, EDT 454.

## EDT 417. Theatre in Education. 3 Hours

Theories and practices of educational drama and theatre as applied to content areas in the early, middle and secondary classroom. Attention given to the relationship of creative drama and applied theatre practices to speaking, thinking, writing, reading, history and other curricular subjects. Co-curricular and experiential immersion required.

## EDT 418. Urban Teacher Academy- Senior Seminar. 0-1 Hours

This course is designed to deepen understanding of critical issues facing urban educators. Students will examine how the culture of poverty affects students, families and schools. Instructional and management strategies that encourage the learning and development of efficacy, risktaking, socio-cultural awareness, contextual interpersonal skills and selfunderstanding are developed through integrated readings, discussions, field experience and presentations. Inherent in this deepening of understanding is the development of reflective thinking and writing and problem solving strategies.
EDT 419. Kindergarten-Primary Curriculum and Instruction. 3 Hours This course focuses on planning, assessment, instructional methods, materials and evaluation techniques for teaching children in kindergarten and primary grades. Integrated curriculum and the Ohio Early Learning/ Academic Content Standards in mathematics and science will be emphasized. Prerequisite(s): EDT 212, EDT 212L.
EDT 419L. Kindergarten-Primary Curriculum and Instruction Laboratory. 0 Hours
This 20 contact hour course in a kindergarten or primary grades classroom supports the material covered in EDT 419.

## EDT 423. Middle Childhood Capstone Seminar. 3 Hours

This capstone seminar focuses on the scholarship and practical wisdom needed for mastery of instructional planning, incorporation of developmental appropriate strategies, along with assessment and evaluation techniques where student learning is the focus for teaching all students in the middle level classrooms. The vocational tools of research and theories of learning, unit planning, teaching methodologies and assessment are practiced and mastered through the completion of a teacher performance assessment. Field experience: Full time clinical experience in a middle level classroom.. Prerequisite(s): EDT 426 or EDT 427 or EDT 428 or EDT 429.

## EDT 425. Middle School Principles and Practices. 3 Hours

This course is primarily a study of organization (school structure), philosophy and curriculum of middle level education (ages 9 to 14), grades four to nine. It is designed to present the theoretical knowledge base about middle level (school) education. Issues and concerns, current trends and the essential elements relating to middle level education will be discussed throughout the semester of study. A variety of inquiry methods will be modeled that encourage critical thinking skills. Prerequisite(s): EDT 321, EDT 321L.

EDT 425L. Middle School Principles and Practices Laboratory. 0 Hours This course consists of planned field experiences providing candidates the opportunity for field reflections in regards to the study of organization (school structure), philosophy and curriculum of middle level education (ages nine to 14), grades four to nine. It is designed to support the course study of the theoretical knowledge base about middle level (school) education. Issues and concerns, current trends and the essential elements relating to middle level education will be observed and studied throughout the semester.
EDT 426. Reading/Language Arts for Middle Childhood. 3 Hours This course focuses on the planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching reading/language arts to students in the middle schools with varied needs and abilities. The topics emphasized in this course include: an understanding of Ohio's academic content standards for grades four to nine, applications and instructional techniques that address the Ohio achievement tests, various resources, technologies, interdisciplinary connections, various grouping techniques and current research. Prerequisite(s): EDT 425, EDT 425L.

## EDT 427. Mathematics for Middle Childhood. 3 Hours

This course focuses on the planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching mathematics to students in the middle schools with varied needs and abilities. The topics emphasized in this course include: an understanding of Ohio's academic content standards for grades four to nine, applications and instructional techniques that address the Ohio achievement tests, various resources, technologies, manipulatives, and other visuals, interdisciplinary connections, various grouping techniques and current research. Prerequisite(s): EDT 425, EDT 425L.

## EDT 428. Science for Middle Childhood. 3 Hours

This course focuses on the planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching science to students in the middle schools with varied needs and abilities. The topics emphasized in this course include: an understanding of Ohio's academic content standards for grades four to nine, applications and instructional techniques that address the Ohio achievement tests, various resources, technologies, experiments, and other hands-on experiences, interdisciplinary connections, various grouping techniques and current research. Prerequisite(s): EDT 425, EDT 425L.

## EDT 429. Social Studies for Middle Childhood. 3 Hours

This course focuses on the planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching social studies to students in the middle schools with varied needs and abilities. The topics emphasized in this course include: an understanding of Ohio's academic content standards for grades four to nine, applications and instructional techniques that address the Ohio achievement tests, various resources, technologies and active hands-on experiences, other visuals, interdisciplinary connections, various grouping techniques and current research. Prerequisite(s): EDT 425, EDT 425L.

EDT 431. Integrated Language Arts Methods for Adolescence to Young Adult. 3 Hours
This course focuses on planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching all levels of integrated language arts to students in grades seven to 12 with varied needs and abilities. Topics include: understanding Ohio's academic content standards for grades seven to 12 , applications and instructional techniques that address the Ohio achievement and competency tests, various resources, technologies, interdisciplinary connections, various grouping techniques, best practices and current research. Prerequisite(s): EDT 338, EDT 338L, EDT 340, EDT 340L.

## EDT 431L. Integrated Language Arts Methods AYA (7-12) Field Internship. 1-2 Hours

This AYA field experience is the first semester of the senior level internship, providing the candidate with practice and reflection in the integrated language arts in an AYA setting.

## EDT 432. Integrated Mathematics Methods for Adolescence to Young

 Adult. 3 HoursThis course focuses on planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching all levels of mathematics to students in grades seven to 12 with varied needs and abilities. Topics include: understanding Ohio's academic content standards for grades seven to 12, applications and instructional techniques that address the Ohio achievement and competency tests, various resources, technologies, manipulatives, and other visuals, interdisciplinary connections, various grouping techniques, best practices and current research. Prerequisite(s): EDT 338, EDT 338L, EDT 340, EDT 340L.

## EDT 432L. Integrated Mathematics Methods AYA (7-12) Field Internship.

## 1-2 Hours

This AYA field experience is the first semester of the senior level internship, providing the candidate with practice and reflection in a mathematics AYA setting.

## EDT 433. Foreign Language Methods for Adolescence to Young Adult. 3 Hours

This course focuses on planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching all levels of foreign language to students in grades seven to 12 with varied needs and abilities. Topics include: understanding Ohio's academic content standards for grades seven to 12 , applications and instructional techniques that address the Ohio achievement and competency tests, various resources, technologies, hands-on activities and other visuals, interdisciplinary connections, various grouping techniques, best practices and current research. Prerequisite(s): EDT 338, EDT 338L, EDT 340, EDT 340L.

## EDT 433L. Foreign Language Methods for AYA (7-12) Field Internship.

 1-2 HoursThis AYA field experience is the first semester of the senior level internship, which provides the candidate with practice and reflection in a foreign language AYA setting.
EDT 434. Science Methods for Adolescence to Young Adult. 3 Hours This course focuses on planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching all levels of science to students in grades seven to 12 with varied needs and abilities. Topics include: understanding Ohio's academic content standards for grades seven to 12 , applications and instructional techniques that address the Ohio achievement and competency tests, various resources, technologies, hands-on activities, interdisciplinary connections, various grouping techniques, best practices and current research. Prerequisite(s): EDT 338, EDT 338L, EDT 340, EDT 340L.
EDT 434L. Science Methods for AYA (7-12) Field Internship. 1-2 Hours This AYA field experience is the first semester of the senior level internship, which provides the candidate with practice and reflection in a science AYA setting.

EDT 435. Integrated Social Studies Methods for Adolescence to Young Adult. 3 Hours
This course focuses on planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching all levels of integrated social studies to students in grades seven to 12 with varied needs and abilities. Topics include: understanding Ohio's academic content standards for grades seven to 12 , applications and instructional techniques that address the Ohio achievement and competency tests, various resources, technologies, hands-on activities, interdisciplinary connections, various grouping techniques, best practices and current research. Prerequisite(s): EDT 338, EDT 338L, EDT 340, EDT 340L.
EDT 435L. Integrated Social Studies Methods for AYA (7-12) Field Internship. 1-2 Hours
This AYA field experience is the first semester of the senior level internship, which provides the candidate with practice and reflection in a social studies AYA setting.

## EDT 436. Adolescent to Young Adult Capstone Seminar. 3 Hours

This capstone seminar focuses on vocation, scholarship, and practical wisdom needed for mastery of instructional planning, incorporation of developmental appropriate strategies, along with data-driven assessment and evaluation techniques and content area pedagogy. The vocational tools of research and theories of learning, unit planning, teaching methodologies and assessment are practiced and mastered through the completion of a teacher performance assessment. Field experience: Full time Clinical Experience in an Adolescent to Young Adult classroom. Prerequisite(s): EDT 431 or EDT 432 or EDT 433 or EDT 434 or EDT 435.

## EDT 437. Second Language Learning and Teaching. 3 Hours

This course provides opportunities to explore the nature of language proficiency, second language acquisition, second language literacy, bilingualism and biliteracy, the role of culture in language learning and implications for second language teaching.

## EDT 438. TESOL Practicum. 1-3 Hours

This course provides opportunities to practice planning, instruction and assessment in an ESOL classroom under the mentorship of an experienced ESOL teacher. Prerequisite(s): EDT 437, LNG 468, ENG 466, ENG 472.
EDT 441. Adapting Content Standards for Students with Special Needs. 3 Hours
This course focuses on the planning, diagnosis, instructional methods, materials, assessment and evaluation techniques used by intervention specialists in inclusive and more restrictive settings to address K-12 content area standards. The topics emphasized include an understanding of how to align Ohio's academic content standards with applications and instructional techniques that ensure the achievement of special education students in the general education curriculum. The course examines the role of the intervention specialist in collaboration with general educators in making appropriate accommodations and modifications. Prerequisite(s): EDT 343, EDT 343L.

## EDT 441L. Adapting Content Standards for Students with Special Needs Laboratory. 0 Hours

This lab focuses on the planning, diagnosis, instructional methods, materials, assessment and evaluation techniques used by intervention specialists in inclusive and more restrictive settings to address K-12 content area standards. IS students will work with licensed educators to develop an understanding of how to align Ohio's academic content standards with applications and instructional techniques that ensure the achievement of special education students in the general education curriculum. The course emphasizes the role of the intervention specialist in collaboration with general educators in making appropriate accommodations and modifications.

## EDT 442. Assessment: Mild/Moderate. 2-3 Hours

This course is the study of the multidisciplinary use of assessment instruments and techniques in the diagnosis, planning and evaluation of the special needs learner and the development of individual education programs. Prerequisite(s): EDT 321, EDT 321L, EDT 441, EDT 441L, EDT 425.
EDT 442L. Intervention Specialist: Mild/Moderate Field Internship. 0-1 Hours
This field experience is the first semester of the senior level internship, providing the candidate with practice and reflection in mild/moderate intervention specialist settings.

## EDT 443. Curriculum: Mild/Moderate. 2 Hours

This course is the study of curriculum development considering the motor, cognitive, academic, social, language, affective, functional, life skills and individual programming of students with mild/moderate disabilities. Field experience required. Prerequisite(s): EDT 321, EDT 321L, EDT 340, EDT 340L, EDT 343, EDT 343L, EDT 425.

## EDT 444. Instructional Strategies: Mild/Moderate. 3 Hours

This course examines the strategies, materials and evaluation techniques for teaching students with mild/moderate learning problems. Field experience required. Prerequisite(s): EDT 321, EDT 321L, EDT 340, EDT 340L, EDT 343, EDT 343L, EDT 425.

## EDT 445. Application of Computers/Technology in Special Education. 2

 HoursThis course is the study of basic computer applications in special education, including instructional programs, software evaluation, telecommunications, multimedia and hypermedia, assistive technology, augmentative devices, resources and legal/ethical issues. Prerequisite(s): EDT 341, EDT 343, EDT 343L.

## EDT 446. Career Education/Special Education. 2 Hours

Theory and techniques of job classification, assessment, selection, placement and activities related to work from preschool to adult. Prerequisite(s): EDT 343, EDT 343L. Corequisite(s): EDT 442, EDT 442L, EDT 443, EDT 444.

## EDT 447. Instructional Strategies: Moderate. 2 Hours

This course examines strategies for teaching and managing behaviors of students with moderate disabilities. Prerequisite(s): EDT 321, EDT 321L,
EDT 340, EDT 340L, EDT 343, EDT 343L, EDT 425, EDT 425L.

## EDT 448. Introduction to Linguistics. 3 Hours

Survey of the various aspects of a scientific description of human language: phonetics, phonology, morphology, syntax, semantics, and pragmatics. Interdisciplinary exploration of the reciprocal impact of linguistics on psychology, sociology, and language acquisition theory.

EDT 450. Phonics, Spelling and Vocabulary. 3 Hours
This course provides the background knowledge necessary for effectively teaching and assessing the role of phonics in the reading process. Emphases are on developing phonemic awareness, phonics, spelling and word recognition/word meaning embedded in the context of a total reading/language arts program focused on meaning construction.
EDT 452. Digital Literacies, ELL and Content Reading Strategies. 3 Hours In this course, MCE candidates examine the strategies and techniques in the development of prior knowledge skills, study skills, vocabulary, technology and assessment as they relate to critical reading abilities in a variety of curriculum areas.
EDT 452L. Digital Literacies, ELL and Content Reading Strategies Lab. 0 Hours
In this course lab, MCE candidates examine the strategies and techniques in the development of prior knowledge skills, study skills, vocabulary, technology and assessment as they relate to critical reading abilities in a variety of curriculum areas in middle level school settings.

## EDT 453. Introduction to Literacy for Early Childhood. 3 Hours

Study of appropriate instruction and assessment supporting the literacy development of children grades P-3. Major emphases are on developing the knowledge base related to a comprehensive framework for literacy instruction, including reading, writing and content area literacy, with a focus on instruction supporting emerging and early readers and writers.

## EDT 454. Methods of Literacy for Early Childhood. 3 Hours

The continued study of appropriate instruction and assessment supporting the literacy development of children grades $P-3$, with a focus on instruction supporting developing and transitional readers and writers. Major emphases are on the classroom application of the principles of comprehensive literacy instruction and assessment, including the writing process and comprehension strategies across the content areas. Prerequisite(s): EDT 350, EDT 453.
EDT 458. Reading, Writing and Assessment - Middle Childhood. 3 Hours An integrated language arts course focusing on the knowledge base underpinning the teaching of reading and related language arts processes within the language arts and across the curriculum to students of various ages, needs and abilities. Topics include planning, instructional methods, materials, assessment and evaluation techniques. Prerequisite(s): EDT 350.

## EDT 458L. Middle Level (4-9) Field Internship. 1-2 Hours

This MCE field experience is the first semester of the senior level internship, which provides the candidate with practice and reflection in middle level school settings.

## EDT 459. Critical Reading and Writing in the Content Area. 3 Hours

This class focuses on the teaching of reading and writing in the AYA and multi-age content area that includes instruction in organizing instruction, use of protocols for oral language development, strategies for word skill development, strategies for reading comprehension and assessment strategies for instructional purposes for the multi-age and AYA licenses. Prerequisite(s): EDT 338, EDT 338L.

EDT 460. Early Childhood Program and Personnel Management. 3 Hours This course is the first in the early childhood leadership program. Students will explore program and personnel management and human relations in early care and education.

## EDT 460L. Early Childhood Program and Personnel Management

 Laboratory. 0-1 HoursThis course consists of planned field experiences providing candidates the opportunity for field reflections in relation to program and personnel management and human relations in early care and education.

EDT 461. Supporting Quality Curriculum and Instruction in Early Care and Education. 3 Hours
This course provides opportunities for students to use research to identify and support quality early childhood curriculum, instruction and assessment.
EDT 461L. Supporting Quality Curriculum and Instruction in Early Care and Education Laboratory. 0-1 Hours
This course consists of planned field experiences providing candidates the opportunity for field reflections in relation to using research to identify and support quality early childhood curriculum, instruction and assessment.

## EDT 462. Regulations, Licensing and the Law in Early Care and Education.

## 3 Hours

This course addresses ethics in early care and education as well as issues related to health, safety and nutrition regulations including first aid, communicable disease, safety policies and practices. Reporting and recognizing child abuse is addressed. Students will learn to respond to regulations, licensing and laws that impact programs for young children.

## EDT 462L. Regulations, Licensing and the Law in Early Care and Education Laboratory. 0-1 Hours

This course consists of planned field experiences providing candidates the opportunity for field reflections in relation to regulations, licensing and laws that impact programs for young children.

## EDT 463. Managing Finances and Marketing in Early Care and Education.

 3 HoursStudents will explore strategies for managing finances and developing marketing plans in the field of early care and education. Prerequisite(s): EDT 460, EDT 460L.

## EDT 463L. Managing Finances and Marketing in Early Care and Education

 Laboratory. 0-1 HoursThis course supports students in EDT 463 as they explore managing finances and developing marketing plans in the field of early care and education. Prerequisite(s): EDT 460, EDT 460L.
EDT 464. Advocacy in Early Care and Education. 3 Hours
This course explores current political, educational and societal issues related to early care and education and examines how teachers develop leadership skills to become better advocates for children, families, and the profession. Prerequisite(s): EDT 460, EDT 460L.
EDT 465. Internship and Practicum in Early Childhood Administration. 6

## Hours

This internship serves as the culminating experience where students demonstrate the knowledge, skills and dispositions addressed in the four proceeding early childhood leadership courses. Students complete a six week full time internship working with/as an early childhood director or administrator. Prerequisite(s): EDT 460, EDT 460L.
EDT 466. TESOL Methods for Teaching English Language Learners. 3 Hours
Introduction to key concepts in Teaching English to Speakers of Other Languages. Theoretical perspectives on second language (ESL) and literacy instruction will be interwoven with practical techniques for classroom instruction. Students will investigate approaches to teaching the four skills of English (reading, writing, listening, speaking) across varying contexts and proficiency levels. Prerequisite(s): ENG 200 or ENG 200 H or ASI 120; and junior or senior standing or permission of department chairperson.

EDT 467. Advanced Phonics and Multisensory Instruction. 3 Hours This is the first course of a two-course practicum sequence for the dyslexia methods certificate. This course will cover the specific nature of dyslexia as a language-based learning disability, multisensory instruction, advanced phonics, spelling, vocabulary and lesson planning for tutoring. Prerequisite(s): EDT 340, EDT 340L, EDT 350; EDT 450.

EDT 471. Student Teaching- Foreign Languages P-12. 12 Hours
Full-time supervised and evaluated teaching of foreign languages in $\mathrm{P}-12$ classes. The candidate will demonstrate the knowledge, skills and dispositions required of a beginning foreign language teacher. Attendance at weekly seminars is required. Prerequisite(s): EDT 433; formal admission to student teaching a full semester in advance; completion of $80 \%$ of the content area courses.

## EDT 472. Internship in Prekindergarten Special Needs. 5 Hours

Supervised and evaluated teaching in a preschool special education setting. Candidates are to demonstrate the knowledge, skills, attitudes and dispositions needed to comply with the National Association for the Education of Young Children (NAEYC) and the Division for Early Childhood of the Council of Exceptional Children (DEC) guidelines for appropriate practice that are specific to prekindergarten age children with special needs. Field experience required. Prerequisite(s): EDT 314, EDT 315, EDT 344, EDT 415, EDT 415L; Students must register for the course and submit a student teaching/internship application packet to the department of teacher education by the deadline in January prior to the fall methods block.

## EDT 473. Student Teaching-Primary Grades. 3-12 Hours

The student teaching experience is a full-time, evaluated experience in a primary setting. The candidate will demonstrate the knowledge, skills and dispositions required of a beginning primary grade teacher. Prerequisite(s): EDT 412, EDT 413, EDT 414, EDT 415, EDT 415L, EDT 454; Formal admission to student teaching a full semester in advance.
EDT 474. Student Teaching- Middle Childhood. 9-12 Hours
Full-time supervised and evaluated teaching in grades four through nine in at least one of the two candidate's concentration subjects. The candidate will demonstrate the knowledge, skills and dispositions required of a beginning middle level teacher. Attendance at weekly seminars is required. Prerequisite(s): Two of the following: EDT 426, EDT 427, EDT 428, EDT 429; formal admission to student teaching a full semester in advance.
EDT 475. Student Teaching-Adolescence to Young Adult. 12 Hours Full-time supervised and evaluated teaching in the content area in a junior or senior high school classroom. The candidate will demonstrate the knowledge, skills and dispositions required of a beginning secondary teacher. Attendance at weekly seminars is required. Prerequisite(s): Formal admission to student teaching a full semester in advance; completion of $80 \%$ of the content area courses.
EDT 476. Student Teaching- Intervention Specialist: Mild/Moderate. 0-12 Hours
Full-time supervised and evaluated teaching with students demonstrating mild/moderate learning needs. The candidate will demonstrate the knowledge, skills and dispositions of a beginning mild/moderate IS teacher. Attendance at seminars is required. Formal admission to student teaching a full semester in advance. Prerequisite(s): EDT 442, EDT 442L, EDT 444.

EDT 477. Student Teaching- Art P-12. 12 Hours
Full-time supervised and evaluated teaching in art classes in schools ( $\mathrm{P}-12$ ). The candidate will demonstrate the knowledge, skills and dispositions required of a beginning art teacher. Attendance at a weekly seminar is required. Prerequisite(s): VAE 231, VAE 383, VAE 483; formal admission to student teaching a full semester in advance and the methods courses.
EDT 479. Student Teaching- Music P-12. 12 Hours
Full-time supervised and evaluated teaching in music classes in schools ( $\mathrm{P}-12$ ). The candidate will demonstrate the knowledge, skills and dispositions required of a beginning music teacher. Attendance at a weekly seminar is required. Prerequisite(s): MUS 242, MUS 250, MUS 331, MUS 332, MUS 335, MUS 450; formal admission to student teaching a full semester in advance.

## EDT 481. Adolescence to Young Adult Assessment. 3 Hours

Student performance assessment is one of the most challenging tasks teachers must create. To do so effectively, teachers must know their state standards, learning goals, and lesson objectives and how they can be measured. The course objectives are aimed at using assessment tools to improve student learning and how the teacher can frame instruction to meet the needs of a diverse group of students. The course will introduce how to analyze data results and communicate assessment results to students, parents, and the school. These objectives will be met by readings, activities, assignments, discussions, lectures, and demonstrations.

## EDT 482. Dyslexia Methods Practicum. 3 Hours

This is the second course of a two-course practicum sequence for the dyslexia methods certificate. This course will take place in a local school and will involve one-to-one, supervised tutoring of a student with reading difficulties using a multisensory instructional approach. Prerequisite(s): EDT 467.

## EDT 484. Intervention Specialist Capstone Seminar. 0-3 Hours

This capstone focuses on the scholarship and practical wisdom needed for mastery of instructional planning, incorporation of developmentally appropriate strategies, along with assessment and evaluation techniques where student learning is the focus for teaching students with disabilities in both general education and special education $\mathrm{K}-12$ settings. The vocational tools of research and theories of learning, unit planning, teaching methodologies and assessment are practiced and mastered through the completion of a teacher performance assessment. Field experience: Full time clinical experience in a $\mathrm{K}-12$ setting under the supervision of university and K-12 faculty. Prerequisite(s): EDT 442, EDT 442L, EDT 443, EDT 444, EDT 445.

## EDT 486. Comparative Study-Public Education. 3 Hours

This course is designed to study the background and development of education as compared to educational systems in other countries. The organizing themes are how social, political and cultural foundations shape schools. Comparisons across countries and cultures will provide a context to understand how educational practices are shaped by culture.

## EDT 498. Honors Thesis. 3 Hours

This course is based on the selection, design, investigation, and completion of an independent, original research thesis under the guidance of a faculty research director. Restricted to juniors in the University Honors or Berry Scholars Programs with permission of the program director and EDT chairperson. Prerequisite(s): Permission of department chairperson and program director.

## EDT 499. Honor Thesis. 3 Hours

This course is based on the selection, design, investigation, and completion of an independent, original research thesis under the guidance of a faculty research director. Restricted to seniors in the University Honors or Berry Scholars Programs with permission of the program director and EDT chairperson.

## SCHOOL OF ENGINEERING

Eddy M. Rojas, Dean
Margaret Pinnell, Associate Dean for Faculty and Staff Development
Scott Segalewitz, Associate Dean for Experiential Learning and Student
Success
Robert Wilkens, Associate Dean for Research and Innovation

## Our Vision

Igniting passion. Engineering the future. Making a difference.

## Our Mission

Rooted in the Catholic Marianist tradition of educating the whole person, we guide the transformation of students into engineering professionals who excel technically, embrace innovation and collaboration, possess an entrepreneurial spirit, demonstrate social and global awareness, and lead their communities for the betterment of all.

## Our Purpose

The School of Engineering has as its primary purpose the education of a diverse group of men and women toward a strong technical knowledge of engineering. Beyond that, we hope to instill the following personal and educational values in our students:

COMMUNITY: We cultivate a learning community founded in teamwork, trust, collaboration, diversity, inclusion, respect, and accountability.

INNOVATION: We foster innovation by providing real-world, handson education, research, and service opportunities that shape dynamic, agile, and inquisitive problem solvers.

- EXCELLENCE: We advance engineering excellence through responsible scholarship, knowledge creation, and lifelong learning.
- ENGAGEMENT: We embrace a culture of servant leadership and stewardship that instills engagement in our students, faculty, staff, university partners, and external stakeholders.
- SERVICE: We embrace our Marianist heritage through character building, a commitment to service for the common good, and guardianship for the Earth as our common home.


## Academic Programs

The engineering program in each of the fields of chemical (p. 370), civil (p. 376), computer (p. 383), electrical (p. 382) and mechanical engineering ( p .406 ) is designed to lead to a bachelor's degree in a four-year period. While students pursue curricula they themselves have chosen according to their fields of interest, they all take certain core courses in mathematics, chemistry, physics, English and engineering fundamentals. All of the programs permit additional specialization (as an overload) in minors in areas such as aerospace engineering (p. 407), bioengineering (p. 372), chemical processing (p. 372), composite materials engineering (p. 372), computer systems (p. 384), engineering management (p. 397), engineering mechanics (p. 377), environmental engineering (p. 378), materials engineering (p. 373), mechanical systems (p. 408), operations engineering (p. 392), polymer materials (p. 373), signals and systems (p. 385), structures (p. 378), transportation engineering (p. 378) and water resources engineering (p.378) in the School of Engineering and in other areas such as languages, music and political science in other units of the University. Concentrations in the School of Engineering
include aerospace engineering (p. 407), electro-optics (p. 384), energy systems-chemical (p. 371), energy systems-mechanical (p. 407) and robotics (p. 384). Although emphasis is on fundamental theories, continued attention is paid to the solution of practical problems which the student will encounter in the practice of engineering.

The programs in chemical engineering, civil engineering, computer engineering, electrical engineering and mechanical engineering are accredited by the Engineering Accreditation Commission of ABET, http:// www.abet.org.

The programs in electronic and computer, industrial, global manufacturing systems and mechanical engineering technology are accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org.

## Courses

## EGR 100. Enrichment Workshop. 0 Hours

A workshop structured to provide collaborative learning of engineering calculus facilitated with upper-class engineering students. Required course both semesters for first-year students.

## EGR 101. Intro-Engr Design. 2-3 Hours

EGR 102. Introduction to the University Experience for Engineers. 0 Hours
This is a first semester course required for all majors the School of Engineering. The 2 primary components of this course include: (1) Introduction to the University of Dayton Educational Experience (2) Students as Reflective Decision-Makers and Active Learners This course will also be the venue to introduce all School of Engineering students to the disciplines/departments across the School of Engineering. This course is part of the Integrated Engineering Core (IEC).

## EGR 103. Engineering Innovation. 2 Hours

First year multi-disciplinary innovation projects primarily geared towards skill development in the areas of requirements analysis, creativity, conceptual design, design and problem-solving processes, prototyping, teamwork, and project communications. Application to the development of a new product or technology meeting societal needs. This course is part of the Integrated Engineering Core for all engineering students.
EGR 198. Multidisciplinary Research \& Innovation Laboratory. 1-6 Hours Students participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

## EGR 200. Professional Development Seminar. 0 Hours

Presentations on contemporary and professional engineering subjects by students, faculty, and engineers in active practice. The seminar addresses topics in key areas that complement traditional courses and prepare distinctive graduates, ready for life and work. Registration required for all sophomore students.

EGR 201. Engineering Mechanics. 3 Hours
This course provides an introduction to mechanics as applied to engineering problems. Principles of force and moment balance, work, and energy conservation are applied to systems in static equilibrium. The similarity of balance laws applied to mechanical behavior to those used in thermodynamics and electric circuits is introduced. Students are introduced to the concepts of free-body diagrams and equivalent systems of forces, properties of areas and sections, analysis of simple structures, internal forces, stress, and material failure. Introduces a common problem-solving approach and processes to address and solve open ended problems and creative application of theory. Both analytical and computer solutions of engineering mechanics problems are emphasized. This course is part of the Integrated Engineering Core for all engineering students. Prerequisite(s): MTH 168; PHY 206.

## EGR 202. Engineering Thermodynamics. 3 Hours

This course provides an introduction to engineering thermodynamics, emphasizing the vital importance of energy generation and efficiency from a multi-disciplinary perspective. State descriptions of pure substances and mixtures. Control volume analysis and conservation principles applied to systems with respect to mass, energy, and entropy with applications to power, refrigeration, chemically reacting and other energy conversion systems. Introduces a common problem-solving approach and processes to address real, open ended problems and creative application of theory. Both analytical and computer solutions of engineering thermodynamics problems are emphasized. This course is part of the Integrated Engineering Core for all engineering students. Prerequisite(s): MTH 168.

## EGR 203. Electrical \& Electronic Circuits. 3 Hours

This course provides an introduction to the discipline of Electrical and Computer Engineering. Covers principles of linear circuit analysis and problem solving techniques associated with circuits containing both passive and active components. Students are introduced to DC circuit analysis, AC circuit analysis, and transient circuit analysis. Applications of basic electronic devices including diodes, transistors, and operational amplifiers are studied. Both analytical and computer solutions of electrical and electronic circuit problems are emphasized. This course is part of the Integrated Engineering Core for all engineering students. Prerequisite(s): MTH 168.

## EGR 203L. Electrical and Electronic Circuits Lab. 1 Hour

Laboratory investigate of basic electrical and electronic circuits. Introduction to laboratory reporting, safety, and instrumentation. (1 semester hour). Corequisite(s): EGR 203.
EGR 298. Multidisciplinary Research \& Innovation Laboratory. 1-6 Hours Students participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

EGR 299. Innovation Design \& Entrepreneurship. 3 Hours No description available.

## EGR 301. ETHOS Center Internship. 12 Hours

Full time domestic or international technical internship with a non-profit or international non-governmental agency. Permission only.

## EGR 308. Engineering for the Performing Arts. 3 Hours

Experiential course exploring the best practices and upcoming trends in the materials, methods, and procedures used in engineering scenic environments for the performing arts, through the integration of the technical Theatre and Engineering disciplines. This course will provide students with practical experience in working with performance technology industry partners through the testing of emergent performance technology for product development and the uses of this technology to help support arts education needs in our community. Open to all university students.

## EGR 311 . Principles of Nanotechnology. 3 Hours

Nanoscale properties: optical, mechanical and thermal effects at the nanoscale, quantum confinement effects. Fabrication techniques: top downand bottom up techniques; nano-patterning, thin films. Nanometrology: scanning electron microscope, atomic force and microscope. Nanoelectronics: single electron devices, grapheme and carbon nanotube electronics. Carbon nanotubes, quantum dots, nanophotonics.

## EGR 320. Systems Design Scholars Seminar. 3 Hours

Interdisciplinary systems-design experience to emphasize the basic problem-solving approach and philosophy of engineering for students of varied backgrounds. By permission only.

## EGR 323. Project Management. 3 Hours

No description available.
EGR 330. Engineering Design \& Appropriate Technology. 0-3 Hours An experiential course in appropriate technology and engineering design which spans the winter and summer semesters and includes language preparation, cultural immersion, selected readings, and discussions on appropriate technology and a six to sixteen week summer servicelearning experience focused on technical or engineering related work in a developing country. Prerequisite(s): Junior or senior status; permission of instructor.
EGR 398. Multidisciplinary Research \& Innovation Laboratory. 1-3 Hours Students participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

## EGR 401. ETHOS Center Internship. 12 Hours

Full time domestic or international technical internship with a non-profit or international non-governmental agency. Permission only.

## EGR 411. Advanced Nanotechnology. 3 Hours

Nanotechnology in information, energy, fabrication and metrology: data storage, nanoelectronics, 3-D transistors; nanomaterials in photovoltaics, fuel cells; thin films, optical and non-optical lithography, MEMS, nanofabrication processes; scanning electron microscopy.

## EGR 430. Appropriate Technology and Design II. 0-3 Hours

An experiential, case-based course in appropriate technology and engineering design. Case studies focus on international standards and specifications for appropriate technologies; global protocols for needs assessment and engineering impact evaluation; and social science research methods for well being assessment. The course also includes an intensive ETHOS service-learning immersion experience focused on technical or engineering design work in a developing country. Prerequisite(s): Senior or graduate status; permission of instructor.

EGR 493. Honors Thesis. 3 Hours
Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program.

## EGR 494. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program. Prerequisite(s): EGR 493.

## EGR 499. Engineering Systems Design. 3 Hours

This course will provide students of varied backgrounds with an interdisciplinary systems-design experience of applying basic engineering problem-solving and process-oriented approaches to a set of case studies while examining those case studies through different philosophical perspectives on engineering itself.

## Bachelor's Plus Master's Program

The School of Engineering offers a combined program leading to both a bachelor's degree in an engineering major and a master's degree. Physics majors (College of Arts and Sciences) may also participate. The program is designed for the qualified student who wishes to pursue either greater specialization in a major area or to complement the undergraduate program with a related graduate-level concentration. Most students who select the program have received some advanced placement upon entry to engineering at the first-year level or take occasional summer courses.

The formal request for entrance into this program may be made as early as before the first semester of the student's junior year, but the student should consult their department to determine exactly when this request should be made. Admission requirements include a minimum cumulative grade point average of 3.00 and permission from the chairperson of the department corresponding to the student's undergraduate major and chair/program director of selected master's program. Students must formally apply to the graduate school during their senior year. Selection of the graduate (master's) program area is indicated below:

| Undergraduate Program | Graduate Program Selections |
| :--- | :--- |
| Chemical Engineering | Bioengineering, Chemical |
|  | Engineering, Civil Engineering, |
|  | Electro-Optics*, Engineering |
|  | Management, Engineering |
|  | Mechanics, Management Science, |
|  | Materials Engineering, Renewable |
|  | and Clean Energy |
|  | Bioengineering, Civil Engineering, |
| Civil Engineering | Engineering Management, |
|  | Engineering Mechanics, |
|  | Management Science, Materials |
|  | Engineering, Renewable and Clean |
|  | Energy |
|  | Bioengineering, Civil Engineering, |
|  | Computer Engineering, Electrical |
|  | Engineering, Electro-Optics*, |
|  | Engineering Management, |
|  | Engineering Mechanics, |
|  | Management Science, Materials |
|  | Engineering, Renewable and Clean |
|  | Energy |


| Electrical Engineering | Bioengineering, Civil Engineering, |
| :--- | :--- |
|  | Computer Engineering, Electrical |
|  | Engineering, Electro-Optics, |
|  | Engineering Management, |
|  | Engineering Mechanics, |
|  | Management Science, Materials |
|  | Engineering, Renewable and Clean |
|  | Energy |
|  | Aerospace Engineering, |
|  | Bioengineering, Civil Engineering, |
|  | Electro-Optics*, Engineering |
|  | Management, Engineering |
|  | Mechanics, Management Science, |
|  | Materials Engineering, Mechanical |
|  | Engineering, Renewable and Clean |
|  | Energy |
| Engineering Technology | Engineering Management, |
|  | Management Science, Materials |
|  | Engineering |
| Physics | Electro-Optics, Materials |
|  | Engineering |

* This major may need additional courses to qualify for the master's program.

The department chairperson and the graduate program director serve as an advisory committee to the student in establishing the combined program requirements. The first-year, sophomore and junior years follow the curriculum of the student's selected bachelor's program.

A student who elects the combined program must satisfy both undergraduate and graduate degree requirements as to required cumulative grade point average for graduation. The graduate of the combined program will receive a bachelor's degree in the undergraduate major (e.g., Bachelor of Mechanical Engineering) and a master's degree in the graduate area (e.g., Master of Science in Materials Engineering). A student in the 5 -year combined program who chooses not to complete the program must complete all the undergraduate major program requirements to receive the bachelor's degree.

| Course Area | Semester | Hours |
| :--- | :--- | :--- |
| Senior Year | 1 st Term | 2nd Term |
| Undergraduate <br> department major | 11 | 11 |
| Undergraduate <br> department or <br> University requirement <br> or electives | 3 | 3 |
| Graduate major (taken <br> as graduate credit) | 3 | 3 |
| Total semester hours <br> Fifth Year | 17 | 17 |
| Graduate major <br> (including thesis or <br> project) | 12 | 12 |

## Degree Requirements

A student enrolls in the curriculum prescribed for the academic year in which he or she is registered as a first-year student at the University
of Dayton or elsewhere. If for any reason it is necessary or desirable to change to a subsequently established curriculum, the student must meet all of the requirements of the new curriculum.

The degrees Bachelor of Chemical, Civil, Electrical or Mechanical Engineering, Bachelor of Science in Computer Engineering and Bachelor of Science in Engineering Technology are conferred at commencement if the general requirements enumerated here ( $p .17$ ) have been fulfilled as well as those listed below:

1. All bachelor's degrees granted by the University of Dayton require a 2.0 cumulative grade point average and at least a 2.0 grade point average in each major, minor or concentration.
2. The cumulative grade-point average in all courses which have an engineering prefix must be at least 2.0 (C average).
3. All prescribed courses outlined in the respective curricula must have been passed with grades of $D$ or better. Although courses may be scheduled in terms other than as listed, all prerequisites and corequisites must be met.
4. All students in the School of Engineering must register under Grade Option 1 for all courses in engineering, mathematics, and science except those offered only under Grade Option 2.
5. The student must have taken their last 30 semester hours through the School of Engineering at the University of Dayton.

The semester hours of credit required for graduation in each engineering curriculum administered by the School of Engineering are as follows:

| Bachelor of Chemical Engineering | 137 |
| :--- | :---: |
| Bachelor of Civil Engineering | 132 |
| Bachelor of Electrical Engineering | 134 |
| Bachelor of Mechanical Engineering | 132 |
| Bachelor of Science in Computer Engineering | 137 |

The semester hours of credit required for graduation in each engineering technology curriculum administered by the School of Engineering are as follows:

Bachelor of Science in Engineering Technology

| Electronic and Computer Engineering Technology Major | 131 |
| :--- | :--- |
| Global Manufacturing Systems Engineering Technology Major | 133 |
| Industrial Engineering Technology Major | 132 |
| Mechanical Engineering Technology Major | 132 |

## The ETHOS Center

Engineers in Technical, Humanitarian Opportunities of Service-Learning
The ETHOS Center is founded on the belief that engineers are more apt and capable of serving our world appropriately when they have experienced opportunities that increase their understanding of technology's global linkage with values, culture, society, politics and economy. ETHOS seeks to provide these opportunities through international and domestic service internships as well as through collaborative research and hands-on classroom projects that support the development of appropriate technologies for the developing world.

Such experiences expose students to alternative nontraditional technologies that are based on fundamental science and engineering principles and at the same time provide tangible and immediate impacts improving the lives of those who use them. ETHOS maintains as its
educational objective to challenge students to think creatively and independently, to work as a team and communicate effectively, and to address issues of appropriate technology, environmental ethics, social responsibility, social and economic justice, and cultural sensitivity.

## Engineering First-Year Requirements

Students who are recent high school graduates or who have earned fewer than 30 semester hours of collegiate credit are classified as first-year students and must meet common engineering program requirements. Such credit requirements may be met in a number of ways, including:

1. Advanced college-level course work at the University of Dayton or other collegiate institutions,
2. Advanced placement examinations,
3. Departmental examinations during the first term, or
4. Taking the prescribed courses as part of the first year.

| Required First-Year Program |  | 32-35 |
| :---: | :---: | :---: |
| CHM 123 | General Chemistry | 3 |
| CMM 100 | Principles of Oral Communication | 3 |
| EGR 100 | Enrichment Workshop ${ }^{1}$ | 0 |
| EGR 102 | Introduction to the University Experience for Engineers ${ }^{2}$ | 0 |
| EGR 103 | Engineering Innovation | 2 |
| ENG 100 <br> \& ENG 200 <br> or ENG 200H | Writing Seminar I and Writing Seminar II Writing Seminar II | 3-6 |
| HST 103 | The West \& the World ${ }^{3}$ | 3 |
| MTH 168 <br> \& MTH 169 | Analytic Geometry \& Calculus I and Analytic Geometry \& Calculus II | 8 |
| PHL 103 | Introduction to Philosophy | 3 |
| PHY 206 | General Physics I-Mechanics ${ }^{4}$ | 3 |
| REL 103 | Introduction to Religious and Theological Studies | 3 |
| Natural Sciences Lab ${ }^{5}$ |  | 1 |
| Programming ${ }^{6}$ |  | 0-4 |

1 Required both semesters.
2 EGR 102 or a department specific seminar is required the second semester.
Chemical engineering students must take CHM 124 and CHM 124L in the second semester and postpone one of the three Humanities Base courses until the third semester.
4 Engineering students take this requirement first or second semester of the first year.
5 Chemical, civil, and mechanical engineering students must take CHM 123L; computer and electrical engineering students take PHY 210L.
6 Computer and electrical engineering students take CPS 150 in the first year. Mechanical engineering students take MEE 104L in the first year. Chemical and civil engineering students are not required to take a programming course in the first year.

## Engineering Technology

The School of Engineering also offers a Bachelor of Science in Engineering Technology. The programs in which the degree is offered are:

[^9]- Global Manufacturing Systems Engineering Technology
- Industrial Engineering Technology
- Mechanical Engineering Technology

Students in Engineering Technology programs participate in an integrated education core in which they study specialized technical courses that emphasize rational thinking and the application of engineering and scientific principles to the practical solution of technological problems. Extensive laboratory experience aids the students in the design, analysis and implementation of systems, as well as experiencing real-world application problems. The multidisciplinary curriculum culminates in a capstone design project. All programs offer a cooperative education program in which the student is allowed to alternate work and study semesters after the first year. Additionally, many students acquire experience through internships, summer work or study abroad.

Graduates are critical thinkers who can apply established scientific and engineering knowledge to implement systems, and who are prepared to take places in society as responsible, humane and complete professionals. They work effectively on multidisciplinary design teams building complex systems. Graduates are usually involved in the design, performance evaluation, service and sales of products, equipment, and manufacturing systems or the management of these activities. Several years after graduation, they may find themselves in management positions.

## Transfer Students

The engineering technology programs welcome transfer students from associate degree programs in engineering technology who wish to pursue the Bachelor of Science in Engineering Technology. Graduates of two-year associate degree programs in engineering technology should normally expect to undertake at least two additional years of work for the bachelor's degree.

## Minors in Engineering Technology

Students majoring in any engineering technology program may earn a minor in another engineering technology program by completing 12 approved semester hours of work in the second discipline. Courses already required in the student's program may not be counted in the minor. The director of the program in which the minor is to be earned is responsible for approving the list of courses for the minor.

The minors available to engineering technology students are:

- Automotive Systems
- Electronic and Computer Engineering Technology
- Global Manufacturing Systems Engineering Technology
- Industrial Automation and Applied Robotic Systems
- Industrial Engineering Technology
- Integrated Arts and Technology
- Mechanical Engineering Technology
- Quality Assurance
- Sustainable Manufacturing

A minor in Engineering Technology is also offered for students enrolled in majors in the College of Arts and Sciences, the School of Business Administration, and the School of Education and Health Sciences.

## Accreditation

The programs in electronic \& computer, global manufacturing systems, industrial, and mechanical engineering technology are accredited by
the Engineering Technology Accreditation Commission of ABET, http:// www.abet.org.

## Engineering Technology First-Year Requirements

Students selecting any of the four engineering technology majors should take the courses prescribed under the Sample Plan of Study. Undeclared engineering technology students should follow the first-year schedule below.

## Total first-year requirements:

| CHM 123 | General Chemistry |  |
| :--- | :--- | ---: |
| \& 123L | and General Chemistry Laboratory | 4 |
| EGR 102 | Introduction to the University Experience for <br> Engineers | 0 |
| EGR 103 | Engineering Innovation | 2 |
| ENG 100 | Writing Seminar I <br> \& ENG 200 | and Writing Seminar II <br> or ENG 200H |
| Writing Seminar II | 6 |  |
| HST 103 | The West \& the World |  |
| MCT 110L | Technical Drawing \& CAD Laboratory | 3 |
| MTH 137 | Calculus I with Review |  |
| \& MTH 138 | and Calculus I with Review | 2 |
| PHL 103 | Introduction to Philosophy | 8 |
| REL 103 | Introduction to Religious and Theological Studies | 3 |
| SET 101 | Introduction to Engineering Technology II | 0 |
| SET 153L | Technical Computation Laboratory | 1 |
| Total Hours |  | 32 |

## Optional Cooperative Education

Cooperative education offers the student the opportunity to put classroom work into practical use while still in school, resulting in early career identification and greater motivation as well as providing a source of funds. All students majoring in engineering and engineering technology may participate in the cooperative education program. To be eligible, students must have completed three semesters and have a cumulative grade-point average of 2.3 or higher. Those applying for the program will be accepted on the basis of grade-point average, motivation and attitude. The number of students placed depends on the availability of jobs. Students alternate full-time semesters of work with full-time school semesters.

## Transfer Students

The engineering programs welcome transfer students from both community and senior colleges and work closely with many schools to facilitate transfers from pre-engineering programs. Students may complete the first two years of study in other accredited institutions and transfer to the University of Dayton with little or no loss of credit provided that they have followed programs similar to those prescribed by the University of Dayton School of Engineering.

A student who intends to transfer to the School of Engineering must have met the minimum of the mathematics, physics and chemistry requirements along with a minimum of 3.0 GPA to be considered for admission to the School of Engineering.

The School of Engineering has dual degree arrangements as well as curriculum agreements with Sinclair Community College and Edison State Community College.

## Programs of Study

To learn more about the available programs in the School of Engineering, explore the departments:

- Chemical and Materials Engineering (p. 370)
- Civil and Environmental Engineering and Engineering Mechanics (p. 376)
- Electrical and Computer Engineering (p. 381)
- Engineering Management, Systems, and Technology (p. 389)
- Mechanical and Aerospace Engineering (p. 405)


## Chemical and Materials Engineering

Major:

- Bachelor of Chemical Engineering (p. 370)

Concentration:

- Energy Systems-Chemical (p. 371)

Minors:

- Bioengineering (p. 372)
- Chemical Processing (p. 372)
- Composite Materials Engineering (p. 372)
- Energy Production Engineering (p. 372)
- Materials Engineering (p. 373)
- Polymer Materials (p. 373)

The Chemical and Materials Engineering Department offers an undergraduate program leading to a Bachelor of Chemical Engineering degree. Chemical engineering applies the principles of the physical sciences, economics, and human relations to research, design, build, and supervise facilities that convert raw materials into useful products and services.

The majority of chemical engineers are involved in the chemical process industries that produce many of the materials and items needed in everyday life. These include medicine, food, fertilizers, plastics, synthetic fibers, petroleum, petrochemicals, ceramics, and pulp and paper products. A chemical engineer may pursue a professional career in many other fields, such as energy conversion, pollution control, medical research, and materials development in aerospace and electronic industries. Chemical engineers are employed in research, development, design, production, sales, consulting, and management positions. They are also found in government and academia. Many use a chemical engineering education as a pathway to law, medicine, or corporate management.

The curriculum in chemical engineering serves as basic training for positions in these diverse areas of the manufacturing industry or for graduate study leading to advanced degrees. The first part of the chemical engineering curriculum provides a firm foundation in mathematics, physics, and chemistry. The chemistry background is stressed. The second part of the curriculum offers a balance between classroom and laboratory experience in stressing chemical engineering topics such as transport phenomena, thermodynamics, kinetics and reactor design, separation processes, fluid flow and heat transfer operations, process control, and process design. The development of design tools, communication, and interpersonal skills is integrated
throughout the curriculum. The curriculum allows minors in emerging technologies such as bioengineering, environmental engineering, and materials engineering. Those interested in attending medical/dental school can pursue a premed preparation as part of their curriculum.

The educational objectives of chemical engineering program graduates:

- have successful careers in the chemical process industry with the skills necessary to have opportunities to work in non-traditional industries and positions
- be successful at prestigious graduate, medical, and law schools
- be committed to performing ethically while serving their professions, companies, and communities
- exhibit strong critical thinking skills from the breadth of their general education and the depth of their foundation in engineering principles, and engage in continuous intellectual and personal growth


## Faculty

Charles E. Browning, Department Chairperson
Michael Elsass, Chemical Engineering Director
Professors Emeriti: Eylon, Flach, Lu, Snide
Professors: Browning, Lafdi, Lee, Myers, T. Saliba, Sandhu, Wilkens
Associate Professor: D. Comfort
Assistant Professors: K. Comfort, Vasquez
Senior Lecturer: Ciric
Lecturer: Elsass

## Bachelor of Chemical Engineering (CME) minimum 137 hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |


| Second-Year Writing Seminar ${ }^{3}$ | 0-3 |
| :--- | :--- |

ENG $200 \quad$ Writing Seminar II
Oral Communication 3

CMM 100 Principles of Oral Communication
Mathematics 3
Social Science 3

SSC 200 Social Science Integrated
Arts 3

| Natural Sciences ${ }^{4}$ | 7 |
| :--- | :---: |
| Crossing Boundaries | variable |

## Faith Traditions

Practical Ethical Action
Inquiry
Integrative

| Advanced Study | variable |
| :--- | :--- |
| credit |  |

Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice
3

| Major Capstone |  | 0-3 |
| :---: | :---: | :---: |
| 1 Completed w <br> 2 Or ENG 100A <br> 3 Completed w <br> 4 Must include <br> 5 U.S. History | ASI 110 and ASI 120. <br> and ENG 100B, or ENG 200H, by placement. <br> th ENG 200 H or ASI 120 . <br> wo different disciplines and accompanying lab. AP credit will not satisfy this requirement. |  |
| Major Requirements |  |  |
| CHM 123 | General Chemistry | 3 |
| CHM 123L | General Chemistry Laboratory | 1 |
| CHM 124 | General Chemistry | 3 |
| CHM 124L | General Chemistry Laboratory | 1 |
| CHM 313 | Organic Chemistry | 3 |
| CHM 313L | Organic Chemistry Laboratory | 1 |
| CHM 314 | Organic Chemistry | 3 |
| CHM 314L | Organic Chemistry Laboratory | 1 |
| CME 101 | Introduction to Chemical Engineering | 0-1 |
| $\begin{aligned} & \text { CME } 200 \\ & \text { or COP } 200 \end{aligned}$ | Professional Development Seminar Introduction to Engineering Cooperative Education | 0-1 |
| CME 203 | Material \& Energy Balances | 3 |
| CME 211 | Introduction to Thermodynamics for Chemical Engineers | 3 |
| CME 281 | Chemical Engineering Computations | 3 |
| CME 306 | Chemical Reaction Kinetics \& Engineering | 3 |
| CME 311 | Chemical Engineering Thermodynamics | 3 |
| CME 324 | Transport Phenomena I | 3 |
| CME 325 | Transport Phenomena II | 3 |
| CME 326L | Transport Phenomena Laboratory | 1-2 |
| CME 365 | Separation Techniques | 3 |
| CME 381 | Advances Mathematics for Chemical Engineers | 3 |
| CME 408 | Seminar (2 semesters) | 0-1 |
| CME 430 | Chemical Engineering Design I | 3 |
| CME 431 | Chemical Engineering Design II | 3 |
| CME 452 | Process Control | 3 |
| CME 453L | Process Control Laboratory | 2 |
| CME 465 | Fluid Flow \& Heat Transfer Processes | 3 |
| CME 466L | Chemical Engineering Unit Operations Laboratory | 2 |
| CMM 100 | Principles of Oral Communication | 3 |
| EGR 100 | Introduction to the University Experience for Engineers (2 semesters) | 0 |
| EGR 102 | Introduction to the University Experience for Engineers | 0 |
| EGR 103 | Engineering Innovation | 2 |
| EGR 201 | Engineering Mechanics | 3 |
| EGR 203 | Electrical \& Electronic Circuits | 3 |
| ENG 100 <br> \& ENG 200 <br> or ENG 200H | Writing Seminar I and Writing Seminar II Writing Seminar II | 3-6 |
| $\begin{aligned} & \text { HST } 103 \\ & \text { or HST } 198 \end{aligned}$ | The West \& the World History Scholars' Seminar | 3 |
| MTH 168 | Analytic Geometry \& Calculus I | 4 |
| MTH 169 | Analytic Geometry \& Calculus II | 4 |
| MTH 218 | Analytic Geometry \& Calculus III | 4 |


| MTH 219 | Applied Differential Equations | 3 |
| :---: | :---: | :---: |
| PHL 103 | Introduction to Philosophy | 3 |
| PHY 206 | General Physics I-Mechanics | 3 |
| PHY 207 | General Physics II - Electricity \& Magnetism | 3 |
| REL 103 | Introduction to Religious and Theological Studies | 3 |
| SSC 200 | Social Science Integrated | 3 |
| Chemistry or Biology elective ${ }^{1}$ |  | 3 |
| CME elective ${ }^{1}$ |  | 3 |
| Elective ${ }^{2}$ |  | 3 |
| Electives |  | 12 |
| Engineering/Science electives ${ }^{6}$ |  | 1 |
| Total Hours |  | 137 |
| Must be selected from list approved by the Chemical and Mat Engineering Department. |  |  |
| Must be selected from approved list of PHL or REL ethics cour |  |  |
| Conce Chem | tion in Energy Systems(CES) |  |

This concentration is open to all engineering students. The Energy Systems Concentration provides an interdisciplinary concentration in energy systems and its social consequences. Students completing this concentration will be prepared for jobs in both industrial and building energy systems, a rapidly growing market.

| ASI 320 | Cities \& Energy ${ }^{1,2}$ | 3 |
| :---: | :---: | :---: |
| CME 203 | Material \& Energy Balances | 3 |
| CME 311 | Chemical Engineering Thermodynamics | 3 |
| CME 324 | Transport Phenomena I | 3 |
| CME 325 | Transport Phenomena II | 3 |
| CME 326L | Transport Phenomena Laboratory | 1-2 |
| CME 430 | Chemical Engineering Design I | 3 |
| CME 431 | Chemical Engineering Design II | 3 |
| CME 465 | Fluid Flow \& Heat Transfer Processes | 3 |
| CME 466L | Chemical Engineering Unit Operations Laboratory | 2 |
| CME elective |  |  |
| Select one course | from: | 3 |
| CME 486 or CME 586 | Introduction to Petroleum Engineering Introduction to Petroleum Engineering |  |
| CME 524 or MEE 575 | Electrochemical Power <br> Fracture \& Fatigue of Metals \& Alloys I |  |
| CME 565 | Fundamentals of Combustion |  |
| CME 574 | Fundamentals of Air Pollution I |  |
| Select two course | from: | 6 |
| Select any CME | elective course above ${ }^{3}$ |  |
| AEE 560 or MEE 560 | Propulsion Systems Propulsion Systems |  |
| CME 507 or MEE 511 | Advanced Thermodynamics Advanced Thermodynamics |  |
| CME 579 or MAT 579 | Materials for Advanced Energy Applications Materials for Advanced Energy Applications |  |
| MEE 413 or MEE 513 | Propulsion Propulsion |  |


| MEE 420 | Energy Efficient Buildings |
| :---: | :--- |
| or MEE 569 | Energy Efficient Buildings |
| MEE 471 | Design of Thermal Systems |
| or MEE 571 | Design of Thermal Systems |
| MEE 473 | Renewable Energy Systems |
| or MEE 573 | Renewable Energy Systems |
| MEE 478 | Energy Efficient Manufacturing |
| or MEE 578 | Energy Efficient Manufacturing |

Total Hours
36-37

Or another approved humanities elective related to Energy Systems.
Satisfies History requirement.
Course cannot have already been chosen as CME elective.

## Minor in Bioengineering (BIE)

This minor is open to chemical, civil, computer, electrical, and mechanical engineering majors. The program is designed to expose the student to the use of engineering principles in biological systems and applications.

| BIO 151 | Concepts of Biology I: Cellular \& Molecular Biology | 3 |
| :---: | :--- | :---: |
| or BIO 152 | Concepts of Biology II: Evolution \& Ecology |  |
| CME 490/590 | Introduction to Bioengineering | 3 |
| Select one course from: |  | 3 |

CME 491/591 Biomedical Engineering I
MEE 430/530 Biomechanical Engineering
Select one course from: ${ }^{1}$

| BIE 503 | Principles of Biology for Bioengineers |
| :--- | :--- |
| BIE 507 | Bioengineering Experimentation Techniques |
| BIE 511 | Biomaterials |
| BIE 595 | Special Problems in Bioengineering |
| BIO 151 | Concepts of Biology I: Cellular \& Molecular Biology |
| BIO 152 | Concepts of Biology II: Evolution \& Ecology |
| BIO 312 | General Genetics |
| BIO 403 | Physiology I |
| BIO 411 | General Microbiology |
| BIO 440 | Cell Biology |
| CHM 420 | Biochemistry |
| CHM 451 | General Biochemistry I |
| CHM 452 | General Biochemistry II |
| CME 491/591 | Biomedical Engineering I |
| CME 492 | Chemical Sensors \& Biosensors |
| CME 523/ | Transport Phenomena in Biological Systems |
| BIE 551 |  |
| CME/MAT 530 | Biomaterials |
| CME 533 | Biofuel |
| CME/CEE/BIE | Biological Processing of Wastewater |
| 560 |  |
| MEE 430 | Biomechanical Engineering |
| or MEE 530 | Biomechanical Engineering |

## Total Hours

12

## Minor in Chemical Processing (CHP)

This minor is open to civil, computer, electrical, and mechanical engineering majors. The program is designed to acquaint the student with industrial operations in the chemical process industries such as heat exchange, distillation, extraction, humidification, etc. The elective courses cover a wide range of topics to accommodate the student's special interests.

| CME 203 | Material \& Energy Balances | 3 |
| :--- | :--- | ---: |
| CME 324 | Transport Phenomena I | 3 |
| CME 365 | Separation Techniques | 3 |
| Select one course from: | 3 |  |
| CME 306 | Chemical Reaction Kinetics \& Engineering |  |
| CME 430 | Chemical Engineering Design I |  |
| CME 452 | Process Control |  |
| CME 465 | Fluid Flow \& Heat Transfer Processes |  |
| CME 499 | Special Problems in Chemical Engineering |  |

Total Hours

## Minor in Composite Materials Engineering (CMA)

This minor is open to chemical, civil, and mechanical engineering majors. The program is designed to expose the student to the design, processing, and characterization of composite materials and their various applications in industry.

| CME 510 | High Performance Thermoset Polymers | 3 |
| :---: | :---: | :---: |
| or MAT 510 | High Performance Thermoset Polymers |  |
| CME 512 | Advanced Composites | 3 |
| or MAT 542 | Advanced Composites |  |
| Select two course | from: | 6 |
| CEE 540 | Composites Design |  |
| or MAT 540 | Composite Design |  |
| CEE 543 | Analytical Mechanics Composite Materials |  |
| or MAT 543 | Analytical Mechanics of Composite Materials |  |
| CEE 546 | Finite Element Analysis I |  |
| or MEE 546 | Finite Element Analysis I |  |
| CME 509 | Introduction to Polymer Science - Thermoplastics |  |
| or MAT 509 | Introduction to Polymer Science-Thermoplastics |  |
| CME 527 | Methods of Polymer Analysis |  |
| or MAT 527 | Methods of Polymer Analysis |  |
| CME 528 | Chemical Behavior of Materials |  |
| or MAT 528 | Chemical Behavior of Materials |  |
| CME 580 | Polymer Decomposition, Degradation \& Durability |  |
| or MAT 580 | Polymer Durability |  |

Total Hours

## Minor in Energy Production Engineering (EPE)

This minor is open to all engineering majors. A selection of courses covering the production of energy:

| BIE/CME/RCL | Biofuel |
| :--- | :--- |
| 533 |  |
| CME 486/586 | Introduction to Petroleum Engineering |
| CME/MEE/ | Electrochemical Power |
| RCL 524 |  |
| CHM/GEO 234 Energy Resources |  |
| ECE 316 | Introduction to Electrical Energy Systems |
| ECE 583 | Advanced Photovoltaics |
| MAT 579 | Materials for Advanced Energy Applications |
| MEE 473/573/ Renewable Energy Systems |  |
| RCL 573 |  |
| RCL 590 | Special Problems in Renewable \& Clean Energy ${ }^{1}$ |
| RCL 590 | Special Problems in Renewable \& Clean Energy ${ }^{2}$ |
| RCL 590 | Special Problems in Renewable \& Clean Energy ${ }^{3}$ |
| Total Hours |  |

1 Must be Thermal Systems Analysis.
2 Must be Solar Energy Engineering.
3 Must be Wind Energy Engineering.

## Minor in Materials Engineering (MAT)

This minor is open to all engineering majors. A general overview of materials with choice courses in polymers, composites, nanomaterials, and material characterization.


| MAT 577 | Light Structural Metals |  |
| :--- | :--- | :--- |
| MAT 590 | Selected Readings in Materials Engineering |  |
| MAT 595 | Special Problems in Materials Engineering |  |
| MAT 601 | Surface Chemistry of Solids |  |
| MAT 604 | Nanostructured Materials |  |
| MEE 312 | Engineering Materials I |  |
| Total Hours |  | 12 |

## Minor in Polymer Materials (PME)

This minor is open to all engineering majors. Coverage of polymers including thermosets and thermoplastics, and composite materials in which polymers are used as constituents. Methods of polymer processing and polymer characterization are also included.

| CME 509 | Introduction to Polymer Science - Thermoplastics |  |
| :---: | :--- | :--- |
| or MAT 509 | Introduction to Polymer Science-Thermoplastics | 3 |
| CME 510 | High Performance Thermoset Polymers |  |
| or MAT 510 | High Performance Thermoset Polymers | 3 |
| Select two courses from: |  |  |
| CME 512 | Advanced Composites |  |
| or MAT 542 | Advanced Composites |  |
| CME 527 | Methods of Polymer Analysis |  |
| or MAT 527 | Methods of Polymer Analysis |  |
| CME 528 | Chemical Behavior of Materials |  |
| or MAT 528 | Chemical Behavior of Materials |  |
| CME 580 | Polymer Decomposition, Degradation \& Durability |  |
| or MAT 580 | Polymer Durability |  |
| MAT 540 | Composite Design |  |
| MAT 543 | Analytical Mechanics of Composite Materials |  |

Total Hours

## First Year

Fall
ENG 100 (Satisfies CAP Writing Seminar
Hours Spring
Hours

Requirement)
3,4 HST 103
(Satisfies CAP First Year Humanities Common)

| CHM 123 | 3 CHM 124 | 3 |
| :--- | :--- | ---: |
| CHM 123L | 1 CHM 124L | 1 |
| MTH 168 (Satisfies CAP Math Requirement) | 4 MTH 169 | 4 |
| EGR 103 | 2 PHY 206 | 3 |
|  | (Satisfies |  |
|  | CAP Natural |  |
| EGR 102 | Science) | $0-1$ |
| EGR 100 | 0 CME 101 | 0 |
|  | 0 EGR 100 | $17-18$ |


| Second Year |  |  |
| :---: | :---: | :---: |
| Fall | Hours Spring | Hours |
| ENG 200 (Satisfies CAP Second Year Writing | 3-4 CMM 100 | 3 |
| Seminar) | (Satisfies |  |
|  | CAP |  |
|  | Communication) |  |
| CME 203 | 3 CME 281 | 3 |
| CME 211 | 3 CME 311 | 3 |
| CHM 313 | 3 CHM 314 | 3 |
| CHM 313L | 1 CHM 314L | 1 |
| MTH 218 | 4 MTH 219 | 3 |
| CME 200 (or COP 200) | 1/0 |  |
|  | 17-19 | 16 |
| Third Year |  |  |
| Fall | Hours Spring | Hours |
| CAP-Art Study | 3 CAP-PHL | 3 |
|  | Ethics |  |
| CME 324 | 3 CME 306 | 3 |
| CME 381 | 3 CME 365 | 3 |
| PHY 207 | 3 CME 325 | 3 |
| SSC 200 | 3 CME 326L | 2 |
| EGR 201 | 3 EGR 203 | 3 |
|  | 18 | 17 |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| CAP-HST | 3 Advanced | 3 |
|  | HST |  |
|  | (Satisfies |  |
|  | CAP Crossing |  |
|  | Boundaries) |  |
| CME 430 | 3 CME 431 | 3 |
| CME 465 | 3 CME 453L | 2 |
| CME 466L (Satisfies CAP Capstone Requirement) | 2 CME | 3 |
|  | Advanced |  |
|  | Elective |  |
| CME 452 | 3 CME 408 | 0-1 |
| CME 408 | 0-1 EGR/SCI EL | 6 |
| CHM/BIO Elective | 3 |  |
|  | 17-18 | 17-18 |

Total credit hours: 135-141

## Courses

CME 101. Introduction to Chemical Engineering. 0-1 Hours Introduction to the chemical engineering faculty, facilities, and curriculum; survey of career opportunities in chemical engineering. Introduction to the University first-year experience.

## CME 198. Research \& Innovation Laboratory. 1-6 Hours

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analysing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evalutating engineering solutions and engineering designs. Proposals from terams of students will be considered.
CME 200. Professional Development Seminar. 0-1 Hours Presentations on contemporary and professional engineering subjects by students, faculty, and engineers in active practice. The seminar addresses topics in key areas that complement traditional courses and prepare distinctive graduates, ready for life and work. Registration required for all sophomore students.

CME 203. Material \& Energy Balances. 3 Hours
Introductory course on the application of mass and energy conservation laws to solve problems typically encountered in chemical process industries. Prerequisite(s): CHM 123; MTH 168. Corequisite(s): CME 211.
CME 211. Introduction to Thermodynamics for Chemical Engineers. 3 Hours
First law of thermodynamics, states of matter, equations of state, open and closed system energy balances, reactive energy balances, entropy, 2nd law of thermodynamics, introduction to power cycles and refrigeration. Prerequisite(s): PHY 206, CHM 123, MTH 168.
CME 281. Chemical Engineering Computations. 3 Hours
Development of computational skills with an emphasis on algorithm development and problem solving. Computational skills are applied to typical problems in chemical engineering, engineering data analysis and statistics. Corequisite(s): CME 203, MTH 169.

## CME 298. Research \& Innovation Laboratory. 1-6 Hours

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.
CME 306. Chemical Reaction Kinetics \& Engineering. 3 Hours
Chemical reaction kinetics, ideal reactor analysis and design, multiple reactor/reaction systems, and heterogeneous catalysis. Prerequisite(s): CME 311. Corequisite(s): CME 324.
CME 311. Chemical Engineering Thermodynamics. 3 Hours
Development and application of the fundamental principles of chemical thermodynamics: Vapor/liquid equilibrium, solution thermodynamics, chemical reaction equilibria, and thermodynamic analysis of chemical engineering processes. Prerequisite(s): CME 203; CME 211; MTH 218.

## CME 324. Transport Phenomena I. 3 Hours

Viscosity, shell momentum balances, isothermal equations of change, thermal conductivity, shell energy balances, non-isothermal equations of change, mass diffusivity, shell species mass balances, equations of change for multicomponent systems. Prerequisite(s): CME 203, CME 281; MTH 219. Corequisite(s): CME 381.

## CME 325. Transport Phenomena II. 3 Hours

Multidimensional momentum, energy, and mass transport, dimensionless parameters, turbulence and numerical solution methods. Prerequisite(s): CME 324, CME 381.

## CME 326L. Transport Phenomena Laboratory. 1-2 Hours

Viscosity, conductivity, diffusion coefficient measurements, velocity, temperature, concentration profiles, engineering instrumentation, and experimental error analysis. Prerequisite(s): CHM 124L; CME 324. Corequisite(s): CME 325.

## CME 365. Separation Techniques. 3 Hours

Equilibrium staged separations: distillation, extraction and absorption, with an emphasis on distillation. Prerequisite(s): CME 311, CME 324.
CME 381. Advances Mathematics for Chemical Engineers. 3 Hours Study of analytical and numerical techniques to support upper-level chemical engineering classes. Vector analysis, matrices, differential equations, numerical integration and differentiation, root finding, and curve fitting ordinary and partial differential equations. Prerequisite(s): CME 281; MTH 219.

## CME 398. Research \& Innovation Laboratory. 1-6 Hours

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

## CME 408. Seminar. 0-1 Hours

Presentation of lectures on contemporary chemical engineering subjects by students, faculty, and engineers in active practice. Registration required of senior students only. Corequisite(s): CME 430.
CME 409. Introduction to Polymer Science - Thermoplastics. 3 Hours Broad technical overview of the nature of synthetic macromolecules, including the formation of polymers and their structure, structureproperty relationships, polymer characterization and processing, and applications of polymers. Fundmental topics such as viscoelasticity, the glassy state, time-temperature superposition, polymer transitions, and free volume will also be reviewed. The course focuses on thermoplastic polymers. Prerequisite(s): CHM 313, PHY 206, MTH 219.

## CME 410. High Performance Thermoset Polymers. 3 Hours

Survey of high performance thermoset resins, focusing on chemistry, processing and properties of six general resin families; vinyl ester, epoxy, phenolic, cyanate ester, bismaleimide, and polyimides. The course will include fundamental discussions of polymerization mechanisms, network structure development, rheology and time-temperature transformation, resin toughening, and structure-processing-property relationships. Characterization techniques will also be reviewed. Prerequisite(s): CHM 313.

## CME 412. Advanced Composites. 3 Hours

Materials and processing. Comprehensive introduction to advanced fiber reinforced polymeric matrix composites. Constituent materials and composite processing will be emphasized with special emphasis placed on structure-property relationships, the role of matrix in composite processing, mechanical behavior, and laminate processing. Specific topics will include starting materials, material forms, processing, quality assurance, test, methods, and mechanical behavior. Prerequisite(s): (CME 409 or CME 509 or MAT 501) or permission of instructor.

## CME 429. Computational Chemistry. 3 Hours

Introduction to computational chemistry including a discussion of ab initio, semiempical, and DFT methods and an overview of molecular mechanics and molecular simulation methods. Lectures are supplemented by simulation exercises using commercial programs such a Gaussian and Molecular Studio. Prerequisite(s): CHM 124 or permission of instructor.

## CME 430. Chemical Engineering Design I. 3 Hours

Study of basic design concepts, safety and health issues, capital cost estimation, manufacturing cost estimation, basic economics and profitability analysis, materials of construction, materials selection and process vessel design. Prerequisite(s): CME 203; CME 306. Corequisite(s): CME 465.

## CME 431. Chemical Engineering Design II. 3 Hours

Project-based study of principles of process design and economics, use of process flowsheet simulators, short-cut design procedures, process optimization, and plant layout. Prerequisite(s): CME 306, CME 365, CME 430, CME 465.

## CME 432. Chemical Product Design. 3 Hours

Application of the design process to products based on chemical technology. Coverage of the entire design process from initial identification of product needs, to the generation and selection of product ideas, and culminating in the manufacture of a new product.

## CME 452. Process Control. 3 Hours

Mathematical models, Laplace transform techniques, and process dynamics. Feedback control systems, hardware, and instrumentation. Introduction to frequency response, advanced techniques, and digital control systems. Prerequisite(s): CME 381. Corequisite(s): CME 306.
CME 453L. Process Control Laboratory. 2 Hours
Team-based, project oriented study of process dynamics and digital control using computer-based data acquisition and control systems with a focus on real time process monitoring and control. Prerequisite(s): (CME 452, CME 466L) or permission of instructor.

## CME 465. Fluid Flow \& Heat Transfer Processes. 3 Hours

Fluid mechanics, transportation and metering of fluids, heat transfer and its applications. Prerequisite(s): CME 311, CME 324.
CME 466L. Chemical Engineering Unit Operations Laboratory. 2 Hours Study of the equipment and utilization of various chemical engineering processes. Team based experimentation includes designing, and performing experiments on common chemical process unit operations apparatuses. After experimentation, students analyze data and compare with literature for experiment validation. Report writing and group presentations are emphasized. Prerequisite(s): CME 365. Corequisite(s): CME 465.
CME 486. Introduction to Petroleum Engineering. 3 Hours
Introduction to the fundamental concepts in petroleum engineering. Petroleum topics include overviews of areas such as petroleum geology, petroleum fluids and thermodynamics, drilling and completion, and production and multiphase flow. In addition this course will cover refinery operations.

## CME 489. Principles of Biology for Bioengineers. 3 Hours

This course is designed for students with undergraduate majors in engineering or non-biological sciences. The focus of the course is to provide a common broad base of basic knowledge and terminology in the biological sciences required for coursework in the bioengineering emphasis tracts. Prerequisite(s): (BIO 151, BIO 152) or permission of instructor.

## CME 490. Introduction to Bioengineering. 3 Hours

This class provides an introduction to bioengineering - a branch of engineering focusing on biological systems, biomaterials, engineering applications in living systems, and many other areas. By the end of this course, students will be able to understand bioengineering applications and processes, and properly apply engineering fundamentals, including transport phenomena and reaction kinetics, to these systems.
Prerequisite(s): ((BIO 151 or BIO 152); (CME 324 or MEE 308)) or permission of instructor.

## CME 491. Biomedical Engineering I. 3 Hours

Introduction to the fundamental concepts in biomedical engineering with a special focus on chemical engineering applications. Biomedical topics include overviews of areas such as biomaterials, tissue engineering, biosensors and biomedical engineering technology. Prerequisite(s): ((BIO 151 or BIO 152); CME 324) or permission of instructor.

## CME 492. Chemical Sensors \& Biosensors. 3 Hours

Analysis performed with chemical sensors complement laboratory analyses and offer the potential for more rapid and on-line analyses in complex sample matrices. The demand for new chemical sensors, biosensors, and sensing concepts is rapidly increasing and associated with the growing need to understand and/or control complex chemical and biochemical processes or detect the presence of toxic chemical or biological agents. Prerequisite(s): Permission of instructor.

## CME 493. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program.

## CME 494. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program. Prerequisite(s): CME 493.
CME 498. Research \& Innovation Laboratory. 1-6 Hours
Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.
CME 499. Special Problems in Chemical Engineering. 1-6 Hours Particular assignments to be arranged and approved by chairperson of the department.

## Civil and Environmental Engineering and Engineering Mechanics

Major:

- Bachelor of Civil Engineering (p. 376)


## Minors:

- Engineering Mechanics (p. 377)
- Environmental Engineering (p. 378)
- Structur (p. 378)es
- Transportation Engineering (p. 378)
- Water Resources Engineering (p. 378)

The Department of Civil and Environmental Engineering and Engineering Mechanics offers a broad-based curriculum leading to a Bachelor of Civil Engineering (BCE) degree. The BCE program offers sufficient elective courses to obtain a concentration in construction, environmental, geotechnical, structural, transportation or water resources engineering.

The mission of the program is to graduate broadly educated, technically competent individuals prepared for professional careers or for advanced studies.

Within the first several years following completion of the program, University of Dayton Bachelor of Civil Engineering graduates are prepared to meet the following program educational objectives:

- pursue advanced degrees in support of their chosen profession
- conduct professional and personal endeavors in a responsible and ethical manner
- seek service and leadership roles in their profession and community
- continue their professional and personal growth through a process of life-long learning.

Civil engineering is the profession in which knowledge of the mathematical and physical sciences gained by study, experience, and practice is applied with judgment to develop ways to economically utilize the materials and forces of nature in improving and protecting the environment and providing structures and facilities for community, industry, and transportation for the progressive well-being of humanity.

Civil engineers, leading users of high technology in wide-ranging applications in both the public and the private sectors, are essential to the continued improvement of society. Civil engineers can enter traditional fields such as construction, bridge and building design and analysis, highway design and traffic control, water treatment and distribution, environmental engineering, water resources, and geotechnics. Their broad education however, also prepares them for materials engineering, engineering management, and the aerospace, power, and automotive industries. Civil engineering has applications in conceptual and detail design, field operations, computers, and consulting.

Members of the student chapters of the American Society of Civil Engineers (ASCE), Chi Epsilon, Institute of Transportation Engineers (ITE), and National Society of Professional Engineers (NSPE) have the opportunity to meet regularly with practicing engineers in the Dayton community.

## Faculty

Robert Liang, Chairperson
Professors Emeriti: Bogner, J. Whitney
Professor: J. Saliba
Associate Professors: Bilgin, Crosson, Donaldson, Eustace, Taylor, Toubia, T. Whitney
Lecturer: Alakkad, Chase

## Bachelor of Civil Engineering (CEE) minimum 132 hours



- have successful careers in civil engineering or other professions



## Minor in Environmental Engineering (EVE)

This minor is open to all non-civil engineering majors. The program defines contemporary problems of pollution and identifies the technological approaches necessary to preserve the quality of our environment.

Select four courses from: ${ }^{1}$

| CEE 390 | Environmental Pollution Control $^{2}$ |
| :--- | :--- |
| CEE 434 | Water \& Wastewater Engineering $^{3}$ |
| CEE 499 | Special Problems in Civil Engineering ${ }^{4}$ |
| or CME 499 | Special Problems in Chemical Engineering |

Total Hours
1 Courses selected may not be those already required for student's major. It is recommended the minor include one course pertaining to water, air, and solid pollution control.
2 Not permissible for CME students.
3 Or CEE 595 Special Problems in Civil Engineering.
4 No more than three credit hours of EGR 330, CEE 499, or other special project coursework may be applied to this minor. Subject to approval of the CEE chairperson within two weeks of the start of the semester.

## Minor in Structures (STR)

This minor is open to all non-civil engineering majors. The program provides a broad coverage of general concepts of structural design as applied to buildings, mechanical systems, and machinery.

Select four courses from:

| CEE 311 | Civil Engineering Materials |
| :--- | :--- |
| \& 311L | and Civil Engineering Materials Laboratory |
| CEE 316 | Analysis of Structures I |
| CEE 411 | Design of Steel Structures |
| CEE 412 | Design of Concrete Structures |
| CEE 500 | Adv Struct Analysis |
| CEE 501 | Structural Analysis by Computer |
| CEE 502 | Prestressed Concrete |
| CEE 504 | Structural Dynamics |
| CEE 505 | Plastic Design in Steel |
| CEE 507 | Masonry Design |
| CEE 508 | Design Timber Structures |
| CEE 524 | Foundation Engineering |

CEE 540 Composites Design
Total Hours

## Minor in Transportation Engineering (TRE)

This minor is open to all non-civil engineering majors. The program provides broad coverage in the planning, design, operations, and management of the transportation system.

| Select four courses from: ${ }^{1}$ |  |
| :--- | :--- |
| CEE 403 | Transportation Engineering |
| CEE 515 | Pavement Engineering |
| CEE 550 | Highway Geometric Design |
| CEE 551 | Traffic Engineering |
| CEE 552 | Intelligent Transportation Systems |
| CEE 553 | Travel Demand Modeling |
| CEE 554 | Urban Public Transportation |
| CEE 555 | Highway Traffic Safety |
| CEE 558 | Traffic Engineering Research |
| CEE 595 | Special Problems in Civil Engineering |

Total Hours
1 Courses selected may not be those already required for student's major.

## Minor in Water Resources Engineering (WRE)

This minor is open to all non-civil engineering majors. The program provides broad coverage to the general concepts used in water resources engineering including hydraulics and hydrology issues within economic, optimization, operation, and management frameworks.

Select four courses from: ${ }^{1}$

| CEE 313 | Hydraulics |
| :--- | :--- |
| CEE 333 | Water Resources Engineering |
| CEE 580 | Hydrology \& Seepage |
| CEE 582 | Advanced Hydraulics |
| CEE 584 | Open Channel Flow |
| CEE 595 | Special Problems in Civil Engineering |

Total Hours
1 Courses selected may not be those already required for student's major.

## First Year

Fall Hours Spring Hours
EGR 100
0 EGR 100
EGR 102 O CEE 101 0
EGR $103 \quad 2$ EGR 2013

PHY 206 (Satisfies CAP Natural Science) 3 MTH 169 4
MTH 168 (Satisfies CAP Math Requirement)
4 CHM 123
HST 103 (Satisfies CAP First-Year Humanities
3 CHM 123L

| ENG 100 (Satisfies CAP Writing Seminar) | 3,4 CMM 100 | 3 |
| :---: | :---: | :---: |
|  | 18-19 | 17 |
| Second Year |  |  |
| Fall | Hours Spring | Hours |
| CEE 221L | 2 GEO 218 <br> (Satisfies CAP Crossing Boundaries \& Inquiry ) | 3 |
| CEE 200 ( or COP 200) | 0 EGM 303 | 3 |
| EGM 202 | 3 MTH 219 | 3 |
|  | 2 EGR 202 | 3 |
| MTH 218 | 4 ENG 200 <br> (Satisfies CAP Second Year Writing Seminar) | 3-4 |
| CHM 124 | 3 SSC 200 | 3 |
| Natural Science | 3 |  |
|  | 17 | 18-19 |
| Third Year |  |  |
| Fall | Hours Spring | Hours |
| CEE 313 | 4 CEE 312 | 4 |
| \& 313L | \& 312L |  |
| CEE 300 | 0 CEE 311L | 2 |
| CEE 316 | 3 CEE 333 | 3 |
| CEE 403 | 3 MTH 367 | 3 |
| EGR 203 | 3 Adv PHL/REL | 3 |
| Advanced PHL Ethics (Satisfies CAP Crossing Boundaries and Practical Ethical Action) | 3 |  |
|  | 16 | 15 |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| CEE 411 | 3 CEE Elective | 3 |
| CEE 400 | 0 CEE Elective | 3 |
| CEE 412 | 3 CEE 450 <br> (Satisfies <br> CAP <br> Capstone Requirement) | 3 |
| CEE 434 | 4 Art Study | 3 |
| \& 434L | (Satisfies <br> CAP Art <br> Study) |  |
| CEE 424 | 3 HST 343 <br> (Satisfies CAP Crossing Boundaries, Advanced History) | 3 |
| CEE 421 Effective fall 2019 CEE 421 will be 2 cr . hrs. | 3 |  |
|  | 16 | 15 |

Total credit hours: 132-134

## Civil \& Environmental Engr Courses

CEE 101. Introduction to Civil Engineering. 0-1 Hours
Introduction to the civil engineering faculty, facilities, and curriculum; to the career opportunities offered by the civil engineering profession; and to the areas of specialization within civil engineering.

CEE 198. Research \& Innovation Laboratory. 1,6 Hours
Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.
CEE 200. Professional Development Seminar. 0 Hours
Presentations on contemporary and professional engineering subjects by students, faculty, and engineers in active practice. The seminar addresses topics in key areas that complement traditional courses and prepare distinctive graduates, ready for life and work. Registration required for all sophomore students.

## CEE 213. Surveying. 2 Hours

An introduction to surveying and geomatics, with emphasis to theory of measurements and computation errors, leveling and traverse computations. topographic surveys, computations of earthwork, slope staking and stake out of highway curves. First term, each year. Prerequisite(s): MTH 168.

## CEE 214. Highway Geometrics. 2 Hours

Study of circular and spiral curves, vertical curves, grade lines, earthwork and mass diagram, slope and grade stakes, and contour grading. Second term, each year. Prerequisite(s): CEE 213.

## CEE 215L. Surveying Field Practice. 3 Hours

Field work and computation in topography, highway surveying, triangulation, level net, evaluation of errors, and preparation of plans. Five eight-hour days a week for three weeks. Summer, each year. Prerequisite(s): CEE 214.

CEE 221L. Civil Computation Laboratory. 2 Hours
Introduction to numerical methods and logical problem solving techniques commonly used in the civil engineering profession. Introduction to computer aided drawing and design and the use of popular CADD packages in the civil engineering profession.

## CEE 298. Research \& Innovation Laboratory. 1-6 Hours

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

## CEE 300. Professional Development Seminar. 0 Hours

Practice in the presentation and discussion of papers; lectures by staff and prominent engineers. Attendance required of all civil engineering juniors.

## CEE 311. Civil Engineering Materials. 2 Hours

Physical and mechanical properties of construction materials; Portland cement concrete, bituminous materials, wood, ferrous and non-ferrous metals, masonry units; proportioning of concrete mixtures including admixtures. Prerequisite(s): EGM 303. Corequisite(s): CEE 311L.

## CEE 311 L . Civil Engineering Materials Laboratory. 2 Hours

Laboratory experiments in the physical and mechanical properties of construction materials; Portland cement concrete, bituminous materials, wood, ferrous and non-ferrous metals, and masonry units; proportioning of concrete mixtures including admixtures. Prerequisite(s): EGM 303.

## CEE 312. Geotechnical Engineering. 3 Hours

Principles of soil structures, classification, capillarity, permeability, flow nets, shear strength, consolidation, stress analysis, slope stability, lateral pressure, bearing capacity, and piles. Second term, each year. Prerequisite(s): EGM 303. Corequisite(s): GEO 218.

## CEE 312L. Geotechnical Engineering Laboratory. 1 Hour

Laboratory tests to evaluate and identify soil properties for engineering purposes. Design problems are also included. Second term, each year. Corequisite(s): CEE 312.

## CEE 313. Hydraulics. 3 Hours

Basic principles of fluid mechanics in closed conduits and open channels. Principles include fluid statics, conservation of mass, conservation of momentum, conservation of energy, and fluid dynamics. Presentation of fluid mechanics principles through the solution of practical problems and a comprehensive semester project. Prerequisite(s): EGM 202. Corequisite(s): CEE 313L.
CEE 313L. Hydraulics Laboratory. 1 Hour
Laboratory experiments and problems associated with CEE 313. Corequisite(s): CEE 313.
CEE 316. Analysis of Structures I. 3 Hours
Elastic analysis of structures; deflection, moment-area theorems; conjugate-beam; virtual work influence lines; analysis of indeterminate structures using force methods; theories of failure, stiffness matrices, and use of software to analyze structures. Prerequisite(s): EGM 303.

## CEE 317. Analysis of Structures II. 3 Hours

Elastic analysis of structures; virtual work; Castigliano's theorems; slope deflection and moment distribution; computer analysis of structural systems, influence lines, column analogy, limit analysis. Departmental elective. Prerequisite(s): CEE 316.
CEE 333. Water Resources Engineering. 3 Hours
Integrated study of the principles of water movement and management. Focus areas include hydrology, water distribution, storm water management, and waste water collection. Second semester, each year. Prerequisite(s): CEE 313.

## CEE 390. Environmental Pollution Control. 3 Hours

Study of environmental pollution problems relating to air, water, and land resources. Causes and effects of pollution technology for solving problems. Legal and political considerations. For juniors and seniors other than civil engineering students. Credit may not be applied toward civil engineering degree. Prerequisite(s): Some knowledge of chemistry.

## CEE 398. Research \& Innovation Laboratory. 1-6 Hours

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

## CEE 400. Professional Development Seminar. 0 Hours

Practice in the presentation and discussion of papers; lectures by staff and prominent engineers. Attendance required of all civil engineering seniors.

## CEE 403. Transportation Engineering. 3 Hours

Fundamentals of transportation engineering, including design, construction, maintenance, and economics of transportation facilities. Design of pavement structures and drainage systems. Prerequisite(s): CEE 214.

CEE 411. Design of Steel Structures. 3 Hours
Design and behavior of structural steel connections, columns, beams, and beams subjected to tension, compression, bending, shear, torsion, and composite action. Second semester, each year. Prerequisite(s): CEE 316.

## CEE 412. Design of Concrete Structures. 3 Hours

Design and behavior of reinforced concrete slabs, beams, columns, walls, and footings subjected to tension, compression, bending, shear, and torsion. First semester, each year. Prerequisite(s): CEE 311, CEE 316.

## CEE 421. Construction Engineering. 3 Hours

Organization, planning, and control of construction projects, including a study of the use of machinery, economics of equipment, methods, materials, estimates, cost controls, and fundamentals of CPM and PERT contracts and bonds and legal aspects of contracting. Departmental elective.

## CEE 422. Design \& Construction Project Management. 3 Hours

Fundamentals of project management as they relate to the design and construction professional, and the application of project management techniques to the design and construction of major projects. Departmental elective.

## CEE 424. Foundation Engineering. 3 Hours

Review of soil properties, site exploration and evaluation, bearing capacity, settlements, shallow foundations, retaining structures, and deep foundations. Prerequisite(s): CEE 312.

## CEE 425. Civil Engineering Systems. 3 Hours

Analysis and evaluation of civil engineering systems using operations research tools including systems modeling, optimization and probability, and statistics. Civil engineering systems will also be examined from an economic perspective. Prerequisite(s): Junior or senior status.

## CEE 434. Water \& Wastewater Engineering. 3 Hours

Problems of water pollution; development and design of public water supply and waste water treatment systems; legal, political, ethical, and moral considerations. First term, each year. Prerequisite(s): CHM 124. Corequisite(s): CEE 313, CEE 434L.
CEE 434L. Water \& Wastewater Engineering Laboratory. 1 Hour Laboratory exercises, demonstrations, and design problems associated with water and wastewater engineering. First semester, each year. Prerequisite(s): CHM 123L. Corequisite(s): CEE 434.
CEE 450. Civil Engineering Design. 3 Hours
A group design of a complete, large-scale civil engineering system. The capstone design experience draws upon knowledge acquired over a wide spectrum of civil engineering subjects including environmental, geotechnical, structural, transportation and water resources engineering as well as project management. Second semester, each year.
Prerequisite(s): CEE 312, CEE 333, CEE 403, CEE 411, CEE 412, CEE 434.

## CEE 463. Hazardous Waste Treatment. 3 Hours

The fundamental principles of the design and operation of hazardous waste control and hazardous substances remediation processes. Hazardous waste regulations, risk assessment, and management. Department Elective. Prerequisite(s): CHM 124.

## CEE 493. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program.

## CEE 494. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis.
Restricted to students in University Honors Program. Prerequisite(s): CEE 493.

## CEE 498. Research \& Innovation Laboratory. 1-6 Hours

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

## CEE 499. Special Problems in Civil Engineering. 1-6 Hours

Particular assignments to be arranged and approved by chairperson of the department. Departmental elective.

## Engineering Mechanics Courses

EGM 202. Dynamics. 3 Hours
Kinematics, including translation, rotation, plane motion, and relative motion; kinetics of particles and bodies by the methods of force-massacceleration, work-energy, and impulse-momentum. Each semester, each year. Prerequisite(s): EGR 201.

## EGM 303. Mechanics II. 3 Hours

The study of stresses, strains, and deflections in tension, compression, shear, flexure, and torsion; shear and moment diagrams; analysis of stresses and strains at a point; Mohr's circle; analysis of columns. Each semester, each year. Prerequisite(s): EGR 201.

## EGM 304. Advanced Strength of Materials. 3 Hours

Stresses and strains at a point; shear center; unsymmetrical bending; curved beams; flat plates; torsion of noncircular bars; beams on elastic support; buckling; introduction to mechanics of composite materials. First and second terms each year. Prerequisite(s): EGM 303.

EGM 499. Special Problems in Engineering Mechanics. 1-6 Hours
Particular assignments to be arranged and approved by chairperson of the department.

## Electrical and Computer Engineering

Majors:

- Bachelor of Electrical Engineering (p. 382)
- Bachelor of Science in Computer Engineering (p. 383)

Concentrations:

- Electrical Energy Systems (p. 384)
- Electro-Optics (p. 384)
- Robotics (p. 384)

Minors:

- Computer Systems (p. 384)
- Signals and Systems (p. 385)

The Department of Electrical and Computer Engineering offers two ABET accredited undergraduate programs leading to the Bachelor of Electrical Engineering and the Bachelor of Science in Computer Engineering. The department offers masters and doctoral degrees in electrical and computer engineering and is closely coupled to the graduate program in
electro-optics where both master's and doctoral degrees are offered. The electrical and computer engineering department offers an accelerated 5 year B.S.-M.S. program, where students completing their baccalaureate degree can attain their Master of Science in Electrical Engineering or Computer Engineering within one additional year. The department also offers an undergraduate concentration in electro-optics, in collaboration with the Physics Department and the Department of Electro-Optics and Photonics, as well as a concentration in Robotics, and a concentration in Electrical Energy Systems.

The mission of the Department of Electrical and Computer Engineering is to provide an educational experience of the highest quality to produce the discipline's most valued graduates, with the skills and knowledge to learn, lead, and serve in electrical and computer engineering related professions and in their communities.

Our electrical engineering and computer engineering graduates will be prepared to:

1. find rewarding careers as engineering professionals. As electrical engineers they will be prepared to design and develop new products, technologies, and processes that incorporate one or more of the following elements: analog and digital circuits, signals and systems, propagation and processing of signals, and control systems. As computer engineers they will be prepared to design and develop new products, technologies, and processes that incorporate one or more of the following elements: analog and digital circuits, signals and systems, computer design, software development, and hardware/ software integration.
2. continue their professional education either formally, in graduate school, professional schools, or through industrial training programs; or informally, through activities such as continuing education, attendance in short courses, professional workshops, and conferences.
3. exercise and further develop their skills in professional communication through activities such as project briefings, conference presentations, technical reports and manuals, and journal publications.
4. participate in activities for the betterment of society, and carry on the traditions of the University of Dayton by maintaining high ethical standards in their professional activities, and by serving their country and community through service, leadership and mentoring.

Electrical engineering is an exciting field within the engineering discipline. It offers the opportunity to enter some of the most rewarding and challenging careers available. The latest developments in the computer, communication, automotive, medical, entertainment, and aerospace industries, as well as homeland security have resulted from advances in the electronics field. Electrical engineers are equipped to enter this dynamic arena as well as equally challenging and rewarding careers in the fields of electro-optics, communication, radar, signal and image processing, biomedicine, controls, robotics and instrumentation, and many more. Electrical engineers work in all phases of technological programs. They are involved from the conception of the basic ideas through design, fabrication, verification, manufacturing, and marketing of the final product.

Computer engineering represents perhaps the most sought-after professional component of an engineering team which develops the technological possibilities inherent in the design, construction, and operation of computer systems. The computer engineer performs a wide variety of tasks involving hardware, software, peripherals, computer-
controlled systems, and hardware-software integration, as well as computer applications in the multitude of areas listed above.

Both electrical engineering and computer engineering are broad-based engineering disciplines that provide for a wide range of career choices within the engineering field as well as providing an excellent basis for careers in such diverse areas as business, law, and medicine.

The electrical engineering curriculum is designed to provide an understanding of basic electrical engineering principles with emphasis on the development of problem solving skills. The computer engineering curriculum draws from software courses taken in computer science and hardware related courses taken from Electrical and Computer Engineering, culminating in the integration of hardware and software in systems design. An extensive laboratory experience is integrated with the classroom work to assure that the student develops a working knowledge of the fundamentals. Upper level courses integrate the knowledge base with current technology and computational tools resulting in a graduate capable of making a contribution to the engineering profession by either entering the work force or pursuing a graduate education.

## Faculty

Guru Subramanyam, Chairperson
Eric Balster, Associate Chairperson
Professors Emeriti: Evers, Kee, Loomis, Moon, Rogers, Scarpino, Thiele, Williamson
Professors: Asari, Banerjee, Chatterjee, Duncan, Hardie, Haus, Ordonez,
Penno, Sarangan, Subramanyam, Vorontsov, Weber,Wicks, Zhan
Associate Professors: Balster, Chodavarapu, Daniels, Hirakawa, Taha Assistant Professor: Ye
Adjunct Professors: R. Asari, Barrera, Bogle, Browning, Diskin, Doll, Evans,
Grote, Kaufman, Kebede, Kim, Kladitis, Korkik, Kumar, Malas, Mears,
Ouchen, Patterson, Ratliff, Shin, Wang, Wang, Watson, Yakopcic, Zhang

## Bachelor of Electrical Engineering (ELE) minimum 134 hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :---: | :--- |
| REL 103 | Introduction to Religious and Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |
| Second-Year Writing Seminar ${ }^{3}$ |  |


| Second-Year Writing Seminar ${ }^{3}$ | 0-3 |
| :--- | :--- |
| ENG $200 \quad$ Writing Seminar II |  |

Oral Communication 3

| CMM 100 Principles of Oral Communication |  |
| :---: | :--- |
| Mathematics | 3 |

Social Science 3

| SSC $200 \quad$ Social Science Integrated |  |
| :--- | :--- |
| Arts | 3 |

Natural Sciences ${ }^{4} \quad 7$

Crossing Boundaries $\quad$| variab |
| :--- |
| credit |

Faith Traditions
Practical Ethical Action
Inquiry
Integrative

| Advanced Study |  |  |
| :---: | :---: | :---: |
| Philosophy and/or Religious Studies |  |  |
| Historical Studies ${ }^{5}$ |  |  |
| Diversity and Social Justice |  | 3 |
| Major Capstone |  | 0-3 |
| Completed with ASI 110 and ASI 120. <br> Or ENG 100A and ENG 100B, or ENG 200H, by placement. <br> Completed with ENG 200 H or ASI 120. <br> Must include two different disciplines and accompanying lab. <br> 5 U.S. History AP credit will not satisfy this requirement. |  |  |
| Major Requirements |  |  |
| CHM 123 | General Chemistry | 3 |
| CMM 100 | Principles of Oral Communication | 3 |
| CPS 150 | Algorithms \& Programming I | 4 |
| ECE 101 | Introduction to Electrical \& Computer Engineering II | 0 |
| $\begin{aligned} & \text { ECE } 200 \\ & \text { or COP } 200 \end{aligned}$ | Professional Development Seminar Introduction to Engineering Cooperative Education | 0 |
| ECE 201 | Circuit Analysis | 3 |
| ECE 201L | Circuit Analysis Laboratory | 1 |
| ECE 203 | Introduction to MATLAB Programming | 1 |
| ECE 204 <br> \& 204L | Electronic Devices and Electronic Devices Laboratory | 4 |
| $\begin{aligned} & \text { ECE } 215 \\ & \& 215 \mathrm{~L} \end{aligned}$ | Introduction to Digital Systems and Digital Systems Laboratory | 4 |
| ECE 300 | Professional Development Seminar II | 0 |
| $\begin{aligned} & \text { ECE } 303 \\ & \& 303 \mathrm{~L} \end{aligned}$ | Signals \& Systems and Signals \& Systems Laboratory | 4 |
| $\begin{aligned} & \text { ECE } 304 \\ & \& 304 \mathrm{~L} \end{aligned}$ | Electronic Systems and Electronic Systems Laboratory | 4 |
| $\begin{aligned} & \text { ECE 314 } \\ & \& 314 \mathrm{~L} \end{aligned}$ | Fundamentals of Computer Architecture and Fundamentals of Computer Architecture Laboratory | 4 |
| ECE 332 | Electromagnetics | 3 |
| ECE 333 | Applied Electromagnetics | 3 |
| ECE 334 | Discrete Signals \& Systems | 3 |
| ECE 340 | Engineering Probability \& Random Processes | 3 |
| $\begin{aligned} & \text { ECE } 401 \\ & \& 401 \mathrm{~L} \end{aligned}$ | Communication Systems and Communication Systems Laboratory | 4 |
| ECE 415 | Control Systems | 3 |
| ECE 431L | Multidisciplinary Design I | 2 |
| ECE 432L | Multidisciplinary Design II | 3 |
| EGR 100 | Introduction to the University Experience for Engineers (2 semesters) | 0 |
| EGR 102 | Introduction to the University Experience for Engineers | 0 |
| b\|EGR 103 | Engineering Innovation | 2 |
| EGR 201 | Engineering Mechanics | 3 |
| EGR 202 | Engineering Thermodynamics | 3 |
| ENG 100 \& ENG 200 or ENG 200H | Writing Seminar I and Writing Seminar II Writing Seminar II | 6 |


| HST 103 | The West \& the World |  |
| :--- | :--- | ---: |
| or HST 198 | History Scholars' Seminar | 3 |
| MTH 168 | Analytic Geometry \& Calculus I | 4 |
| MTH 169 | Analytic Geometry \& Calculus II | 4 |
| MTH 218 | Analytic Geometry \& Calculus III | 4 |
| MTH 219 | Applied Differential Equations | 3 |
| MTH 310 | Linear Algebra \& Matrices | 3 |
| PHL 103 | Introduction to Philosophy | 3 |
| PHL 316 | Engineering Ethics | 3 |
| or PHL 319 | Information Ethics |  |
| PHY 206 | General Physics I Mechanics | 3 |
| PHY 210L | General Physics Laboratory I | 1 |
| PHY 232 | The Physics of Waves | 3 |
| REL 103 | Introduction to Religious and Theological Studies | 3 |
| Electives (Arts, History, Religion, Philosophy) | 12 |  |
| Technical electives ${ }^{1}$ | 12 |  |
| Total Hours |  | 134 |

1 Select from list approved by the Department of Electrical and Computer Engineering.

## Bachelor of Science in Computer Engineering (CPE) minimum 137 hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |  |
| :--- | :--- | :--- |
| REL 103 | Introduction to Religious and Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I $^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ | $0-3$ |  |

ENG 200 Writing Seminar II

| Oral Communication | 3 |
| :---: | :---: |
| CMM 100 | Principles of Oral Communication |
| Mathematics |  |
| Social Science |  |
| SSC 200 | Social Science Integrated |
| Arts | 3 |
| Natural Sciences ${ }^{4}$ | 3 |
| Crossing Boundaries | 7 |


| Faith Traditions |
| :--- |
| Practical Ethical Action |
| Inquiry |
| Integrative |

Advanced Study $\quad$ variab
Philosophy and/or Religious Studies

Historical Studies ${ }^{5}$

Diversity and Social Justice

Major Capstone 0-3

[^10]Completed with ENG 200H or ASI 120.
Must include two different disciplines and accompanying lab. U.S. History AP credit will not satisfy this requirement.

## Major Requirements

| CHM 123 | General Chemistry | 3 |
| :--- | :--- | :--- |
| CMM 100 | Principles of Oral Communication | 3 |
| CPS 150 | Algorithms \& Programming I | 4 |
| CPS 151 | Algorithms \& Programming II | 4 |
| CPS 341 | Discrete Structures | 3 |
| or MTH 308 | Foundations \& Discrete Mathematics |  |
| CPS 350 | Data Structures \& Algorithms | 3 |
| CPS 356 | Operating Systems | 3 |
| CPS 444 | UNIX/Linux Programming | 3 |
| ECE 101 | Introduction to Electrical \& Computer Engineering | 0 |
|  | II |  |
| ECE 200 | Professional Development Seminar | 0 |

or COP 200 Introduction to Engineering Cooperative Education
ECE 201 Circuit Analysis 3
ECE 201L Circuit Analysis Laboratory 1
ECE 203 Introduction to MATLAB Programming 1
ECE 204 Electronic Devices 4
\& 204L and Electronic Devices Laboratory
ECE 215 Introduction to Digital Systems 4
\& 215L and Digital Systems Laboratory
ECE 300 Professional Development Seminar II 0
ECE 303 Signals \& Systems 4
\& 303L and Signals \& Systems Laboratory
ECE 304 Electronic Systems 4
\& 304L and Electronic Systems Laboratory
ECE 314 Fundamentals of Computer Architectur
and Fundamentals of Computer Architecture Laboratory
ECE 334 Discrete Signals \& Systems 3
ECE 340 Engineering Probability \& Random Processes 3
ECE 431L Multidisciplinary Design I 2
ECE 432L Multidisciplinary Design II 3
ECE 444 Advanced Digital Design 3
ECE 449 Computer Systems Engineering 3
EGGR $100 \quad$ Introduction to the University Experience for 0
Engineers (2 semesters)
Introduction to the University Experience for 0
Engineers
Engineering Innovation 2
Engineering Mechanics 3
Engineering Thermodynamics 3
Writing Seminar I 6
and Writing Seminar II
Writing Seminar II
The West \& the World
3
or HST 198 History Scholars' Seminar
MTH 168 Analytic Geometry \& Calculus I 4
MTH 169 Analytic Geometry \& Calculus II 4

| MTH 218 | Analytic Geometry \& Calculus III | 4 |
| :--- | :--- | ---: |
| MTH 219 | Applied Differential Equations | 3 |
| PHL 103 | Introduction to Philosophy | 3 |
| PHL 319 | Information Ethics | 3 |
| PHY 206 | General Physics I - Mechanics | 3 |
| PHY 210L | General Physics Laboratory I | 1 |
| PHY 232 | The Physics of Waves | 3 |
| REL 103 | Introduction to Religious and Theological Studies | 3 |
| Computer Science elective | 3 |  |
| Electives (Arts, History, Religion, Philosophy) | 12 |  |
| Technical electives ${ }^{1}$ | 6 |  |
| Total Hours | 137 |  |

1 Select from list approved by the Department of Electrical and Computer Engineering.

## Concentration in Electrical Energy Systems (ENS)

The Electrical Energy Systems Concentration will prepare our Electrical and Computer Engineering students in all aspects of Electrical Energy Systems including generation, transmission, distribution, utilization, and storage, as well as enabling technologies for the smart grid.

Required ECE courses:

| ECE 316 | Introduction to Electrical Energy Systems | 3 |
| ---: | :--- | ---: |
| or ECE 499 | Special Problems in Electrical \& Computer Engineering |  |
| ECE 414 | Electromechanical Devices | 3 |
| ECE 471 | Contemporary Power Systems \& the Smart Grid | 3 |
| Select one course from: | 3 |  |


| ECE 472 | Smart Grid Technologies |  |
| ---: | :--- | :--- |
| MEE 473 | Renewable Energy Systems |  |
| Total Hours |  | 12 |

## Concentration in Electro-Optics (EOP)

The departments of Electrical and Computer Engineering and Physics, with the support of the Electro-Optics Graduate Program at University of Dayton, offers an undergraduate concentration in Electro-Optics. This multidisciplinary concentration is open to Electrical Engineering, Computer Engineering and Physics undergraduates with appropriate prerequisite background. This concentration will enable students to pursue new coop opportunities and possible careers in photonics, and better prepare students to pursue new coop opportunities and possible careers in photonics and better prepare students who wish to pursue graduate degrees in the area of optics. All the courses listed below are approved as free technical electives for ECE undergraduate students.

| ECE 443 | Introduction to Electro-Optics | 3 |
| :--- | :--- | :--- |
| PHY 404 | Physical Optics | 3 |
| Select two courses from: |  | 6 |
| EOP 501 | Geometric Optics |  |
| EOP 502 | Optical Radiation \& Matter |  |
| EOP 505 | Introduction to Lasers |  |
| EOP 506/ | Electro-Optical Devices $\&$ Systems |  |
| ECE 573 |  |  |


| EOP 513/ | Linear Systems \& Fourier Optics |
| :--- | :--- |
| ECE 572 |  |
| EOP 514/ | Guided-Wave Optics |
| ECE 574 |  |
| Total Hours | 12 |

## Concentration in Robotics (ROB)

Robotics (CPE Majors) 15
ECE 415 Control Systems 3
ECE 416 Introduction to Industrial Robotic Manipulators 3
ECE 447 Digital Control Systems 3
Select two courses from: 6

| CPS 480 | Artificial Intelligence |
| :--- | :--- |
| ECE 414 | Electromechanical Devices |
| ECE 444 | Advanced Digital Design |
| ECE 445 | Signal Processing |
| MEE 321 | Theory of Machines |
| MEE 434 | Mechatronics |
| MEE 438 | Robotics \& Flexible Manufacturing |

Robotics (ELE Majors) 12
ECE 416 Introduction to Industrial Robotic Manipulators 3
ECE 447 Digital Control Systems 3
Select two courses from: 6

| CPS 480 | Artificial Intelligence |
| :--- | :--- |
| ECE 414 | Electromechanical Devices |
| ECE 444 | Advanced Digital Design |
| ECE 445 | Signal Processing |
| MEE 321 | Theory of Machines |
| MEE 434 | Mechatronics |
| MEE 438 | Robotics \& Flexible Manufacturing |

## Minor in Computer Systems (COS)

This minor is open to chemical, civil, and mechanical engineering majors, and other students with appropriate prerequisite background who receive permission from the ECE Department Chairperson. The program builds strength in the area of computer systems and digital design, with emphasis on computer hardware.

| Computer Systems (non-MEE majors) |  | 16 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { CPS } 150 \\ & \text { or ECE } 444 \end{aligned}$ | Algorithms \& Programming I Advanced Digital Design | 4 |
| $\begin{aligned} & \text { ECE } 215 \\ & \& 215 \mathrm{~L} \end{aligned}$ | Introduction to Digital Systems and Digital Systems Laboratory | 4 |
| $\begin{aligned} & \text { ECE } 314 \\ & \& 314 \mathrm{~L} \end{aligned}$ | Fundamentals of Computer Architecture and Fundamentals of Computer Architecture Laboratory | 4 |
| EGR 203 | Electrical \& Electronic Circuits | 3 |
| EGR 203L | Electrical and Electronic Circuits Lab | 1 |
| Computer Systems (MEE majors) |  | 15 |
| CPS 150 | Algorithms \& Programming I (or equivalent) | 4 |
| $\begin{aligned} & \text { ECE } 215 \\ & \& 215 \mathrm{~L} \end{aligned}$ | Introduction to Digital Systems and Digital Systems Laboratory | 4 |


| ECE 314 | Fundamentals of Computer Architecture <br> and Fundamentals of Computer Architecture <br> L 314 L | 4 |
| :--- | :--- | :--- |
| ECE 444 | Advanced Digital Design | 3 |

## Minor in Signals and Systems (SAS)

This minor is open to chemical, civil, and mechanical engineering majors, and other students with appropriate prerequisite background who receive permission from the ECE Department Chairperson. The program provides the essential background in signals and systems theory including continuous and discrete systems. An advanced course is selected by the students to allow them to specialize in controls or signal processing.

| ECE 201L | Circuit Analysis Laboratory | 1 |
| :--- | :--- | ---: |
| ECE 203 | Introduction to MATLAB Programming | 1 |
| ECE 303 | Signals \& Systems |  |
| $\& 303 \mathrm{~L}$ | and Signals \& Systems Laboratory | 4 |
| ECE 334 | Discrete Signals \& Systems | 3 |
| ECE 415 | Control Systems | 3 |
| or ECE 445 | Signal Processing | 3 |
| ECE 201 | Circuit Analysis | 15 |

## Electrical Engineering

| First Year |  |  |
| :---: | :---: | :---: |
| Fall | Hours Spring | Hours |
| EGR 102 | 0 ECE 101 | 0 |
| PHY 206 (Satisfies CAP Natural Science) | 3 CHM 123 | 3 |
| EGR 103 | 2 CPS 150 | 4 |
| EGR 100 | 0 EGR 100 | 0 |
| MTH 168 (Satisfies CAP Math Requirement) | 4 MTH 169 | 4 |
| HST 103 (Satisfies CAP First Year Humanities Common) | 3 CMM 100 <br> (Satisfies <br> CAP <br> Communication) | 3 |
| PHL 103 (Satisfies CAP First Year Humanities Common) | 3 REL 103 <br> (Satisfies <br> CAP First <br> Year <br> Humanities Common) | 3 |
| ENG 100 (Satisfies CAP Writing Seminar) | 3,4 |  |
|  | 18-19 | 17 |
| Second Year |  |  |
| Fall | Hours Spring | Hours |
| ECE 200 | 0 PHY 232 | 3 |
| PHY 210 L | 1 ECE 215 | 3 |
| ECE 203 | 1 ECE 215L | 1 |
| EGR 201 | 3 MTH 219 | 3 |
| MTH 218 | 4 ECE 204 | 3 |
| ECE 201 | 3 ECE 204L | 1 |
| ECE 201L | 1 EGR 202 | 3 |
| ENG 200 (Satisfies CAP Second Year Writing Seminar) | 3-4 |  |
|  | 16-17 | 17 |


|  | $16-17$ | 17 |
| :--- | ---: | ---: |
| Third Year |  | Hours Spring |
| Fall | 3 ECE 300 | 0 |
| ECE 332 | 3 ECE 333 | 3 |
| ECE 314 | 1 ECE 340 | 3 |
| ECE 314L | 3 ECE 334 | 3 |


| ECE 303 | 3 ECE 304 | 3 |
| :--- | :--- | :--- |
| ECE 303L | 1 ECE 304L | 1 |
| Art Study (Satisfies CAP Art Study) and may also | 3 SSC 200 | 3 |
| satisfy CAP Crossing Boundaries Faith Traditions or <br> Diversity and Social Justice |  |  |

## 16

## Fourth Year

| Fall | Hours Spring | Hours |
| :---: | :---: | :---: |
| TECH Elective | 3 TECH Elective | 3 |
| TECH Elective | 3 TECH Elective | 3 |
| ECE 415 | 3 ECE 432L <br> (Satisfies CAP <br> Capstone Requirement) | 3 |
| ECE 431L | 2 Advanced PHL Ethics (Satisfies CAP Crossing Boundaries and Practical Ethical Action) | 3 |
| ECE 401 | 3 Advanced History (Satisfies CAP Crossing BoundariesFaith Traditions or Diversity and Social Justice) | 3 |
| ECE 401L | 1 |  |
| Advanced REL or PHL (Satisifies CAP Crossing Boundaries Faith Traditions, Diversity and Social Justice) | 3 |  |
|  | 18 | 15 |

Total credit hours: 134-136

## Computer Engineering

| First Year |  |  |
| :---: | :---: | :---: |
| Fall | Hours Spring | Hours |
| HST 103 (Satisfies CAP First Year Humanities Common) | 3 CPS 150 | 4 |
| ENG 100 (Satisfies CAP Writing Seminar) | 3,4 CMM 100 <br> (Satisfies <br> CAP <br> Communication) | 3 |
| PHL 103 (Satisfies CAP First Year Humanities Common) | 3 PHY 206 | 3 |
| CHM 123 | 3 PHY 210L | 1 |
| MTH 168 (Satisfies CAP Math Requirement) | 4 MTH 169 | 4 |
| EGR 103 | 2 REL 103 <br> (Satisfies CAP First <br> Year <br> Humanities Common) | 3 |
| EGR 102 | 0 ECE 101 | 0 |
| EGR 100 | 0 EGR 100 | 0 |
|  | 18-19 | 18 |
| Second Year |  |  |
| Fall CPS 151 | Hours Spring <br> 4 CPS 350 | Hours |


| ENG 200 (Satisfies CAP Second Year Writing | 3-4 ECE 203 | 1 |
| :---: | :---: | :---: |
| Seminar) |  |  |
| ECE 201 | 3 ECE 215 | 3 |
| ECE 201L | 1 ECE 215L | 1 |
| MTH 218 | 4 MTH 219 | 3 |
| EGR 201 | 3 EGR 202 | 3 |
| ECE 200 | 0 ECE 204 | 3 |
|  | ECE 204L | 1 |
|  | 18-19 | 18 |
| Third Year |  |  |
| Fall | Hours Spring | Hours |
| CPS 341 or MTH 308 | 3 CPS 356 | 3 |
| PHL 316 or PHY 319 Advanced PHL Ethics | 3 Art Study (Satisfies | 3 |
|  | CAP Art |  |
|  | Study) and |  |
|  | may also |  |
|  | satisfy CAP |  |
|  | Crossing |  |
|  | Boundaries |  |
|  | Faith |  |
|  | Traditions |  |
|  | or Diveristy |  |
|  | and Social |  |
|  | Justice |  |
| ECE 314 | 3 ECE 334 | 3 |
| ECE 314L | 1 ECE 340 | 3 |
| ECE 303 | 3 ECE 304 | 3 |
| ECE 303L | 1 ECE 304L | 1 |
| PHY 232 | 3 ECE 300 | 0 |
|  | 17 | 16 |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| CPS 444 | 3 ECE 449 | 3 |
| TECH Elect | 3 CPS Elect | 3 |
| SSC 200 | 3 TECH Elect | 3 |
| ECE 444 | 3 ECE 432L | 3 |
|  | (Satisfies |  |
|  | CAP |  |
|  | Capstone |  |
|  | $\begin{aligned} & \text { Requirement) Prereqs: } \\ & \text { ECE 431L, (ECE } \end{aligned}$ |  |
|  | 334 or ECE 340 |  |
|  | or CPS 356), |  |
|  | (ECE 444 or CPS |  |
|  | 444) |  |
| ECE 431L | 2 Advanced | 3 |
|  | REL (may |  |
|  | satisfy CAP |  |
|  | Crossing |  |
|  | Boundaries |  |
|  | Faith |  |
|  | Traditions |  |
|  | or Diversity |  |
|  | and Social |  |
|  | Justice) |  |
| Advanced History (may satisfy CAP Crossing | 3 |  |
| Boundaries-Faith Traditions or Diversity and Social Justice) |  |  |

Total credit hours: 137-139

## Courses

ECE 100. Introduction to Electrical \& Computer Engineering. 0 Hours
Introduction to electrical and computer engineering faculty, facilities, and curriculum. Career opportunities in electrical and computer engineering and areas of specialization are discussed.

ECE 101. Introduction to Electrical \& Computer Engineering II. 0 Hours Introduction to electrical and computer engineering faculty, facilities, and curriculum. Career opportunities in electrical and computer engineering and areas of specialization are discussed. Second semester seminar.
ECE 198. Multidisciplinary Research \& Innovation Laboratory. 1-6 Hours Students participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis, and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

ECE 200. Professional Development Seminar. 0 Hours
Presentations on contemporary and professional engineering subjects by students, faculty, and engineers in active practice. The seminar addresses topics in key areas that complement traditional courses and prepare distinctive graduates, ready for life and work. Registration required for all sophomore students.
ECE 201. Circuit Analysis. 3 Hours
Principles of linear circuit analysis and problem solving techniques associated with circuits containing both passive and active components. Includes analysis of linear circuits with direct current (DC) and alternating current (AC) excitation, as well as a study of transient behavior. Course includes an additional mandatory supervised weekly problem session. Prerequisite(s): MTH 168. Corequisite(s): ECE 201L.

## ECE 201L. Circuit Analysis Laboratory. 1 Hour

Laboratory course stressing experimental techniques, laboratory reporting, safety, and instrumentation. Experimental investigation of linear circuit component behavior and the DC, AC, and transient response of linear circuits. Corequisite(s): ECE 201 or EGR 203.
ECE 203. Introduction to MATLAB Programming. 1 Hour MATLAB system and development environment, vector and matrix operations using MATLAB, linear algebra and calculus using MATLAB, MATLAB graphics, flow control, symbolic math toolbox. Prerequisite(s): (CPS 132 or CPS 150) or equivalent.

## ECE 204. Electronic Devices. 3 Hours

Study of the terminal characteristics of electronic devices and basic single stage amplifier configurations using bipolar junction transistors and field-effect transistors. Analysis of the devices includes a qualitative physical description, volt-ampere curves, and the development of smalland large-signal equivalent circuit models. Prerequisite(s): EGR 203 or ECE 201. Corequisite(s): ECE 204L.

ECE 204L. Electronic Devices Laboratory. 1 Hour
Laboratory investigation of electronic devices: diodes, bipolar junction transistors, field-effect transistors and operational amplifiers. Corequisite(s): ECE 204.

ECE 215. Introduction to Digital Systems. 3 Hours
Introduction to binary systems, logic circuits, Boolean algebra, simplification methods, combinational circuits and networks, programmable logic devices, flip flops, registers, counters, memory elements, and analysis and design of sequential circuits. Prerequisite(s): EGR 203 or ECE 201. Corequisite(s): ECE 215L.

ECE 215L. Digital Systems Laboratory. 1 Hour
Laboratory investigation of digital logic circuits and systems covered in ECE 215. Logic gate characteristics; combinational logic design and analysis; latches and flip-flops; synchronous and asynchronous sequential logic; simple digital systems. Experiments include design and analysis of digital systems using breadboarding, FPGA boards, modeling and simulation tools, hardware description languages, and logic synthesis tools. Prerequisite(s): ECE 201, ECE 201L. Corequisite(s): ECE 215.
ECE 298. Multidisciplinary Research \& Innovation Laboratory. 1-6 Hours Students participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis, and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

## ECE 300. Professional Development Seminar II. 0 Hours

Junior level professional development seminar. Presentations on contemporary and professional engineering subjects by students, faculty, and engineers in active practice. The seminar addresses topics in key areas that complement traditional courses and prepare distinctive graduates, ready for life and work. Registration required for all junior ECE students. Prerequisite(s): ECE 200.

## ECE 303. Signals \& Systems. 3 Hours

Mathematical framework associated with the analysis of linear systems including signal representation by orthogonal functions, convolution, Fourier and Laplace analysis, and frequency response of circuits and systems. Prerequisite(s): ECE 204; MTH 219. Corequisite(s): ECE 303L.

## ECE 303L. Signals \& Systems Laboratory. 1 Hour

Laboratory investigation of signals and systems including signal decomposition, system impulse response, convolution, frequency analysis of systems, and filter design and realization. Prerequisite(s): ECE 204. Corequisite(s): ECE 303.

## ECE 304. Electronic Systems. 3 Hours

ELECTRONIC SYSTEMS Study of cascaded amplifiers, feedback amplifiers, linear integrated circuits, and oscillators including steady state analysis and analysis of frequency response. Prerequisite(s): ECE 303. Corequisite(s): ECE 304L.

## ECE 304L. Electronic Systems Laboratory. 1 Hour

Design, construction and verification of multistage amplifiers, differential amplifiers, feedback amplifiers, passive and active filters, and oscillators. Prerequisite(s): ECE 303. Corequisite(s): ECE 304.

## ECE 314. Fundamentals of Computer Architecture. 3 Hours

Study of computer systems organization, representation of data and instructions, instruction set architecture, processor and control units, memory devices and hierarchy, I/O devices and interfacing peripherals, high- to low-level language mapping, system simulation and implementation, applications and practical problems. Prerequisite(s): CPS 150; ECE 215. Corequisite(s): ECE 314L.
ECE 314L. Fundamentals of Computer Architecture Laboratory. 1 Hour Laboratory investigation of digital computer architecture covered in ECE 314. Computer sub-systems such as central processing units, control units, I/O units, and hardware/software interfaces will be experimentally considered. Simulation and implementation will be used to study applications and practical problems. Prerequisite(s): ECE 215. Corequisite(s): ECE 314.

ECE 316. Introduction to Electrical Energy Systems. 3 Hours A broad introduction to electric energy concepts. Generation, transmission, distribution, and utilization of electric energy. Renewable energy, three phase systems, transformers, power electronics, motors and generators. Contemporary topics. Prerequisite(s): EGR 203 or equivalent.

## ECE 332. Electromagnetics. 3 Hours

Study of vector calculus, electro- and magneto-statics, Maxwell's equations, and electromagnetic plane waves and their reflection and transmission from discontinuities. Prerequisite(s): PHY 232.
ECE 333. Applied Electromagnetics. 3 Hours
Electromagnetic theory applied to problems in the areas of waveguides, radiation, electro-optics and electromagnetic interference and electromagnetic compatibility. Prerequisite(s): ECE 332.
ECE 334. Discrete Signals \& Systems. 3 Hours
Introduction to discrete signals and systems including sampling and reconstruction of continuous signals, digital filters, frequency analysis, the z-transform, and the discrete Fourier transform. Prerequisite(s): ECE 303.
ECE 340. Engineering Probability \& Random Processes. 3 Hours Axiomatic probability, derived probability relationships, conditional probability, statistical independence, total probability and Bayes' Theorem, counting techniques, common random variables and their distribution functions, transformations of random variables, moments, autocorrelation, power spectral density, cross correlation and covariance, random processes through linear and nonlinear systems, linear regression, and engineering decision strategies. Prerequisite(s): ECE 303; MTH 218.

ECE 398. Multidisciplinary Research \& Innovation Laboratory. 1-6 Hours Students participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis, and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

## ECE 401. Communication Systems. 3 Hours

Study of amplitude, angle, pulse, and digital communication systems including generation, detection, and analysis of modulated signals and power, bandwidth, and noise considerations. Prerequisite(s): ECE 304, 340. Corequisite(s): ECE 401L.

## ECE 401L. Communication Systems Laboratory. 1 Hour

Design, fabrication, and laboratory investigation of modulators, detectors, filters, and associated communication components and systems. Prerequisite(s): ECE 304. Corequisite(s): ECE 401.

## ECE 414. Electromechanical Devices. 3 Hours

Properties and theory of electromechanical devices: nonlinear electromagnetic actuators; rotating machine analysis; field and circuit concepts and direct current, synchronous, and induction machines: specialpurpose machines and fractional horsepower machines. Prerequisite(s): ECE 316 or equivalent.

## ECE 415. Control Systems. 3 Hours

Study of mathematical models for control systems and analysis of performance characteristics and stability. Design topics include poleplacement, root locus, and frequency domain techniques. Prerequisite(s): ECE 303.

ECE 416. Introduction to Industrial Robotic Manipulators. 3 Hours Topics include homogeneous transformations, direct and inverse kinematics, trajectory generation, and selected topics of robot vision. Prerequisite(s): ECE 303.

## ECE 431L. Multidisciplinary Design I. 2 Hours

Application of engineering fundamentals to sponsored multidisciplinaryteam design projects. In a combination of lecture and lab experiences, students learn the product realization process and project management. Product realization topics include idea generation, proposal development, design specifications, conceptualization and decision analysis. Project management topics include cost estimation and intellectual property management. Design projects progress to the proof of concept and prototype development stages. Prerequisite(s): MEE students: EGM 303, MEE 321, and MEE 344 ECE students: ECE 304 and ECE 314.
ECE 432L. Multidisciplinary Design II. 3 Hours
One hour lecture and five hours of lab per week. Detailed evaluation of the Product Realization Process focusing on conceptual design, embodiment design, final design and prototyping is taught. Analysis of the design criteria for safety, ergonomics, environment, cost and sociological impact is covered. Periodic oral and written status reports are required. The course culminates in a comprehensive written report and oral presentation. Prerequisite(s): MEE majors: MEE 431L; CPE majors: ECE431L and (ECE334 or ECE340 or CPS356) and (ECE444 or CPS 444); ELE majors: ECE 431L and (ECE 333 or ECE 334 or ECE 340) and (ECE 401 or ECE 415).

## ECE 433. Project Management \& Innovation. 1 Hour

Introduces students and teams to project management, entrepreneurship, and innovation. Topics include project management, cost estimating, time value of money, patent law, marketing, finance, and business plan development. Prerequisite(s): Junior status.

## ECE 440. Physical Electronics. 3 Hours

Introduction to wave mechanics, electron ballistics, theory of metals and semiconductors, electron emission, space charge flow, and modern electron devices. Prerequisite(s): MTH 219; PHY 232.

## ECE 441. Integrated Circuit Electronics. 3 Hours

Integrated circuit design, construction and verification including the study of biasing, multistage differential and analog power amplification, and computer assisted design tools for "on-chip" design and layout. Prerequisite(s): ECE 304.

## ECE 442. Engineering Electromagnetics. 3 Hours

Processing Maxwell's equations and applying the predictions to the analysis and design of engineering systems that make use of electromagnetic energy from ELF through optical frequencies. Topics include propagation, radiation, interactions with matter, guided waves, and antenna fundamentals. Prerequisite(s): ECE 333.

## ECE 443. Introduction to Electro-Optics. 3 Hours

Introductory overview of electro-optics starting with Maxwell's equations and leading to lasers, holography, and other timely applications.
Prerequisite(s): ECE 332.
ECE 444. Advanced Digital Design. 3 Hours
Systems approach to digital design including: structured top-down development process using simple and complex logic modules from various logic families; practical aspects of the design, construction, and verification of digital subsystems; application of microcomputer and/or controller as a flexible logic device; real-time embedded systems design; and the use of HDL tools and simulation. Prerequisite(s): ECE 314.

ECE 445. Signal Processing. 3 Hours
Selected topics in digital signal and image processing with design projects. The design projects are determined by the instructor and may come from a variety of signal processing applications including medical image processing, video processing, computer vision, statistical signal processing, speech processing, radar signal processing, etc. Prerequisite(s): ECE 334.

## ECE 446. Microelectronic Systems Design. 3 Hours

Basic integrated circuit design concepts, system layout, application of design methodology, the fabrication process, manufacturing limitations of the design process, and CAD/CAE utilization to realize the design process. Prerequisite(s): ECE 304.

## ECE 447. Digital Control Systems. 3 Hours

Analysis and synthesis of feedback control systems including digital compensators. Topics include performance and stability analysis, regulator and servomechanism design using time and frequency domain methods, and digital implementation case studies. Prerequisite(s): ECE 415; ECE 334 or equivalent.

## ECE 448. Fiber Optic Communications. 3 Hours

General light guidance principles; ray optics; dispersion; single mode, multimode, and graded index fibers; basic laser and LED source principles; photodetectors; error probability in digital optical systems; rise time analysis; loss budget analysis; local area networks and long haul communication links. Prerequisite(s): ECE 333 Corequisite(s): ECE 401.

## ECE 449. Computer Systems Engineering. 3 Hours

An introduction to advanced computer architecture and computer systems design. Topics include: exploration of principle architecture features of modern computers, pipelining, memory hierarchy, I/O devices, interconnection networks, introduction to parallel and multiprocessor systems, and the use of hardware description languages (HDLs) in system implementation. Prerequisite(s): ECE 444; (CPS 346 or permission of instructor).

## ECE 450L. Projects Laboratory. 1-3 Hours

Project-oriented laboratory applying engineering skills in the design, development, and demonstration of electrical and electronic systems. Prerequisite(s): Permission of project advisor.

ECE 471. Contemporary Power Systems \& the Smart Grid. 3 Hours Introduction to electrical power systems; generation, transmission and utilization; power system analysis; power system control; energy management; and an introduction to smart grid technologies. Prerequisites(s): ECE 316 or equivalent.

## ECE 472. Smart Grid Technologies. 3 Hours

An introductory study of enabling technologies and energy issues necessary for full realizaton of the Smart Grid. Course topics vary. This course can be taken multiple times. Prerequisite(s): ECE 471 or equivalent.

## ECE 493. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program.

## ECE 494. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program. Prerequisite(s): ECE 493.

ECE 498. Multidisciplinary Research \& Innovation Laboratory. 1-6 Hours Students participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis, and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.
ECE 499. Special Problems in Electrical \& Computer Engineering. 1-6 Hours
Particular assignments to be arranged and approved by the department chairperson.

## Engineering Management, Systems and Technology

Majors:

- Bachelor of Science in Engineering Technology, Electronic and Computer Engineering Technology (p. 389)
- Bachelor of Science (p. 391) in Engineering Technology (p. 389), Industrial Engineering Technology (p. 391)
- Bachelor of Science (p. 393) in Engineering Technology, (p. 389) Global Manufacturing Systems Engineering Technology (p. 393)
- Bachelor of Science (p. 394) in Engineering Technology, (p. 389) Mechanical Engineering Technology (p. 394)

Minors:

- Automotive Systems (p. 396)
- Electronic and Computer Engineering Technology (p. 390)
- Engineering Management (p. 397)
- Engineering Technology (p. 396)
- Global Manufacturing Systems Engineering Technology (p. 394)
- Industrial Automation and Applied Robotic Systems (p. 396)
- Industrial Engineering Technology (p. 392)
- Integrated Arts and Technology (p. 396)
- Mechanical Engineering Technology (p. 395)
- Operations Engineering (p. 392)
- Quality Assurance (p. 392)
- Sustainable Manufacturing (p. 397)

The School of Engineering also offers a Bachelor of Science in Engineering Technology. The programs in which the degree is offered are electronic and computer engineering technology, global manufacturing systems engineering technology, industrial engineering technology, and mechanical engineering technology. Graduates from engineering technology are usually involved in the design, performance evaluation, service and sales of products, equipment, and manufacturing systems, or the management of these activities. The management of process operations and plant facilities are also important career paths.

The engineering technology programs provide: (1) specialized technical courses that emphasize rational thinking and the application of engineering and scientific principles to the practical solution of technological problems; (2) courses in applied mathematics and science sufficient to support the technical courses and to prepare the student for future growth; and (3) education to prepare students to effectively
communicate and to take places in society as responsible, humane, complete professionals.

The University of Dayton engineering technology programs prepare graduates who:

- are experienced and competent in applying engineering knowledge and problem solving skills to the needs of industry
- are effective communicators for varied audiences
- demonstrate a commitment to ethical and professional standards of conduct
- are engaged in continuing professional development and increasing professional responsibility within their field
- exhibit leadership qualities as appropriate for the practice of their profession
- are prepared to work within and lead diverse technical teams with a sensitivity towards other cultures and a respect for the individual
- are involved in service activities that benefit their profession and their community


## Electronic and Computer Engineering Technology

The Electronic and Computer Engineering Technology Program (ECT) prepares students for careers in the electronics and computer fields. The ECT curriculum, while including a strong emphasis on computers, centers on applied engineering topics in circuit analysis, analog and digital electronic design, digital communications, digital circuits, microprocessors, software, and data acquisition and instrumentation. The graduate is prepared to work in industry at a variety of tasks including analog and digital design, microprocessor hardware and software applications, electronic controls, automation, engineering sales and support, product design and development, and data communications. The curricula provide the strong foundation in the basic principles necessary to support any future career studies or development as dictated by changing technology or career roles.

## Faculty

Scott Schneider, Department Chairperson
Professors Emeriti: Farren, Hanneman, Hazen
Professor: Segalewitz
Associate Professors: Globig, Schneider
Lecturer: Esmaeili

## Bachelor of Science in Engineering Technology, Electronic and Computer Engineering Technology (ECT) minimum 131 hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected

| First-Year Humanities Commons ${ }^{1}$ | 12 |  |
| :--- | :--- | ---: |
| HST 103 | The West \& the World |  |
| REL 103 | Introduction to Religious and Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I $^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ | $0-3$ |  |
| ENG 200 | Writing Seminar II |  |


| Oral Communication |  | 3 |
| :---: | :---: | :---: |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| SSC 200 | Social Science Integrated |  |
| Arts |  | 3 |
| Natural Sciences |  | 7 |
| Crossing Boundaries |  |  |
| Faith Traditions |  |  |
| Practical Ethical Action |  |  |
| Inquiry |  |  |
| Integrative |  |  |
| Advanced Study |  |  |
| Philosophy and/or Religious Studies |  |  |
| Historical Studies ${ }^{5}$ |  |  |
| Diversity and Social Justice |  | 3 |
| Major Capstone |  | 0-3 |
| Completed with ASI 110 and ASI 120. <br> Or ENG 100A and ENG 100B, or ENG 200H, by placement. <br> Completed with ENG 200H or ASI 120. <br> Must include two different disciplines and accompanying lab. <br> U.S. History AP credit will not satisfy this requirement. |  |  |
| Major Requirements |  |  |
| $\begin{aligned} & \text { CHM } 123 \\ & \& 123 \mathrm{~L} \end{aligned}$ | General Chemistry and General Chemistry Laboratory | 4 |
| CMM 100 | Principles of Oral Communication | 3 |
| ECT 110 | Electrical Circuits I | 3 |
| ECT 110L | Electrical Circuits I Laboratory | 1 |
| ECT 120 | Electrical Circuits II | 3 |
| $\begin{aligned} & \text { ECT } 206 \\ & \& 206 \mathrm{~L} \end{aligned}$ | Electron Devices I and Electron Devices I Laboratory | 4 |
| $\begin{aligned} & \text { ECT } 224 \\ & \& 224 \mathrm{~L} \end{aligned}$ | Digital Computer Fundamentals and Digital Computer Fundamentals Laboratory | 4 |
| $\begin{aligned} & \text { ECT } 306 \\ & \& 306 \mathrm{~L} \end{aligned}$ | Electronic Devices II and Electronic Devices II Laboratory | 4 |
| ECT 357 | Microprocessors I | 3 |
| $\begin{aligned} & \text { ECT } 358 \\ & \& 358 \mathrm{~L} \end{aligned}$ | Microprocessors II and Microprocessors II Laboratory | 4 |
| ECT 361 | Programming Structures | 3 |
| ECT 362 | Concepts \& Applications of Computer Operating Systems | 3 |
| ECT 408 | Data Acquisition \& Measurements | 2 |
| ECT 452 | Feedback Controls | 3 |
| ECT 465 | Digital Data Communications | 3 |
| ECT 466 | Microcomputer Architecture | 3 |
| ECT 490 | Senior Project | 3 |
| EGR 100 | Introduction to the University Experience for Engineers (2 semesters) | 0 |
| EGR 102 | Introduction to the University Experience for Engineers | 0 |


| EGR 103 | Engineering Innovation |
| :---: | :---: |
| ENG 100 \& ENG 200 or ENG 200H | Writing Seminar I and Writing Seminar II ${ }^{1}$ Writing Seminar II |
| HST 103 or HST 198 | The West \& the World History Scholars' Seminar |
| IET 316 | Quantitative Analysis |
| blET 317 | Industrial Economic \& Financial Analysis |
| IET 323 | Project Management |
| MCT 110L | Technical Drawing \& CAD Laboratory |
| MCT 220 | Statics \& Dynamics |
| MFG 431 | Controls for Industrial Automation |
| MTH 137 | Calculus I with Review |
| bl\$TH 138 | Calculus I with Review |
| MTH 207 | Introduction to Statistics |
| PHL 103 | Introduction to Philosophy |
| PHY 201 <br> \& 201L | College Physics I and College Physics Laboratory I |
| REL 103 | Introduction to Religious and Theological Studies |
| SET 101 | Introduction to Engineering Technology II |
| SET 153L | Technical Computation Laboratory |
| $\begin{aligned} & \text { SET } 200 \\ & \text { or COP } 200 \end{aligned}$ | Professional Development for Sophomores Introduction to Engineering Cooperative Education |
| SET 300 | Professional Development for Juniors |
| SET 400 | Professional Development for Seniors |
| Electives |  |
| Technical electiv |  |
| Total Hours |  |
| The University's general reading and writing competency requirements are satisfied by completing ENG 100 and ENG 200, or ENG 200 H with a grade of C- or higher. Students admitted to the University Honors program and students with sufficiently high verbal scores on the SAT and ACT are placed in ENG 200H. ENG 200H is a one-semester course which satisfies the University requirement. Students who are placed in ENG 200 H do not receive credit for ENG 100 but are free to take elective course work in place of the waived first semester of composition. |  |
|  |  |

## Minor in Electronic and Computer Engineering Technology (ECT)

This minor provides a concentration in the electronic and computer field that will compliment the student's major program of study. It is open to all engineering technology majors except electronic or computer engineering technology. It is also available for other majors within the University if certain prerequisites have been met.

| ECT 120 | Electrical Circuits II | 3 |
| :--- | :--- | ---: |
| ECT 224 | Digital Computer Fundamentals | 4 |
| \& 224L | and Digital Computer Fundamentals Laboratory |  |
| Select one emphasis from: ${ }^{1,2}$ | $6-8$ |  |

## Analog Devices Emphasis

ECT 206 Electron Devices I
\& 206L and Electron Devices I Laboratory

| ECT 306 | Electronic Devices II <br> \& 306L |
| :--- | :--- |
| and Electronic Devices II Laboratory |  |

Total Hours
Courses cannot be already required for student's major.
2 Accompanying laboratories are recommended but not required.

## Industrial Engineering Technology

The Industrial Engineering Technology Program has as its objective providing specialized education to prepare students for management and technical staff positions in manufacturing and service organizations such as health care, banking, transportation, food service, and government. Graduates may be involved in the economic selection and location of equipment, the planning of work methods and expected output, quality assurance, facilities layout, and scheduling and controlling the flow of materials. The curriculum emphasizes courses in work measurement, planning and control of lean processes, human factors, safety, facilities layout design and simulation, economic and financial analysis, statistical process control, management of projects and global technical organizations, cost estimating and cost control, and mathematical decision-making.

## Faculty

Scott Schneider, Department Chairperson
Professors: Edmonson, Untener
Associate Professor: Blust
Assistant Professors: Appiah-Kubi

## Bachelor of Science in Engineering Technology, Industrial Engineering Technology (IET) minimum 132 hours



Crossing Boundaries variable credit

| Faith Traditions |  |
| :--- | :--- |
| Practical Ethical Action |  |
| Inquiry | variable |
| Integrative | credit |

Philosophy and/or Religious StudiesHistorical Studies ${ }^{5}$13-15 Diversity and Social Justice3
Major Capstone ..... 0-3
Completed with ASI 110 and ASI 120.
Or ENG 100A and ENG 100B, or ENG 200H, by placement.
Completed with ENG 200 H or ASI 120
Must include two different disciplines and accompanying lab.U.S. History AP credit will not satisfy this requirement.

## Major Requirements

| $\begin{aligned} & \text { CHM } 123 \\ & \& 123 \mathrm{~L} \end{aligned}$ | General Chemistry and General Chemistry Laboratory | 4 |
| :---: | :---: | :---: |
| CMM 100 | Principles of Oral Communication | 3 |
| ECT 110 <br> \& 110L | Electrical Circuits I and Electrical Circuits I Laboratory | 4 |
| EGR 100 | Introduction to the University Experience for Engineers (2 semesters) | 0 |
| EGR 102 | Introduction to the University Experience for Engineers | 0 |
| EGR 103 | Engineering Innovation | 2 |
| $\begin{aligned} & \text { ENG } 100 \\ & \& \text { ENG } 200 \\ & \quad \text { or ENG } 200 \mathrm{H} \end{aligned}$ | Writing Seminar I and Writing Seminar II ${ }^{1}$ Writing Seminar II | 6 |
| HST 103 or HST 198 | The West \& the World History Scholars' Seminar | 3 |
| IET 230 | Work Measurement | 3 |
| IET 316 | Quantitative Analysis | 3 |
| IET 317 | Industrial Economic \& Financial Analysis | 3 |
| IET 318 | Statistical Process Control | 3 |
| IET 323 | Project Management | 3 |
| IET 332 | Facilities Layout Design | 3 |
| IET 335L | Process Simulation and Analysis Lab | 1 |
| IET 408 | Lean Management and Six Sigma | 3 |
| IET 415 | Global Supply Chain Management | 3 |
| IET 418 | Cost Estimating \& Control | 3 |
| IET 420 | Industrial \& Environmental Safety | 3 |
| IET 435 | Human Factors | 3 |
| IET 490 | Senior Project | 3 |
| MCT 110L | Technical Drawing \& CAD Laboratory | 2 |
| MCT 111L | Introduction to Design Laboratory | 2 |
| MCT 220 | Statics \& Dynamics | 3 |
| MCT 313 | Industrial Mechanisms | 3 |
| MFG 108L | Manufacturing Processes Laboratory | 1 |


| MFG 204 | Materials \& Processes <br> and Materials \& Processes Laboratory | 4 |
| :--- | :--- | :---: |
| MFG 206L | Dimensional Metrology Laboratory | 1 |
| MFG 208L | Geometric Dimensioning \& Tolerancing Laboratory | 1 |
| MFG 438 | Sustainable Manufacturing \& Product Design | 3 |
| MTH 137 | Calculus I with Review | 4 |
| MTH 138 | Calculus I with Review | 4 |
| MTH 207 | Introduction to Statistics | 3 |
| PHL 103 | Introduction to Philosophy | 3 |
| PHY 201 | College Physics I | 4 |
| \& 201L | and College Physics Laboratory I |  |
| REL 103 | Introduction to Religious and Theological Studies | 3 |
| SET 101 | Introduction to Engineering Technology II | 0 |
| SET 153L | Technical Computation Laboratory | 1 |
| SET 200 | Professional Development for Sophomores | 0 |
| or COP 200 | Introduction to Engineering Cooperative Education |  |
| SET 300 | Professional Development for Juniors | 0 |
| SET 400 | Professional Development for Seniors | 1 |
| Electives |  | 15 |
| Technical electives ${ }^{2}$ | 15 |  |
| Total Hours |  | 132 |

1 The University's general reading and writing competency requirements are satisfied by completing ENG 100 and ENG 200, or ENG 200 H with a grade of C - or higher. Students admitted to the University Honors program and students with sufficiently high verbal scores on the SAT and ACT are placed in ENG 200H. ENG 200 H is a one-semester course which satisfies the University requirement. Students who are placed in ENG 200 H do not receive credits for ENG 100 but are free to take elective course work in place of the waived first semester of composition.
2 Select from list approved by the Department.

## Minor in Industrial Engineering Technology (IET)

This minor is open to all majors except industrial engineering technology. The program provides a concentration in the industrial field that will complement the student's major field of study. All prerequisites and corequisites must be followed.

Choose four courses from: ${ }^{1}$ 12

| IET 230 | Work Measurement |
| :--- | :--- |
| IET 317 | Industrial Economic \& Financial Analysis |
| IET 318 | Statistical Process Control |
| IET 319 | Quality Improvement Methods |
| IET 320 | Design and Analysis of Experiments |
| IET 321 | Quality Management |
| IET 332 | Facilities Layout Design |
| IET 408 | Lean Management and Six Sigma |
| IET 415 | Global Supply Chain Management |
| IET 418 | Cost Estimating \& Control |
| IET 420 | Industrial \& Environmental Safety |
| IET 435 | Human Factors |
| IET - Human Performance Emphasis ${ }^{2}$ |  |


| IET 415 | Global Supply Chain Management |  |
| :---: | :---: | :---: |
| IET 420 | Industrial \& Environmental Safety |  |
| IET 435 | Human Factors |  |
| IET - Production Management Emphasis ${ }^{3}$ |  | 18 |
| IET 230 | Work Measurement |  |
| IET 318 | Statistical Process Control |  |
| IET 332 | Facilities Layout Design |  |
| IET 408 | Lean Management and Six Sigma |  |
| IET 418 | Cost Estimating \& Control |  |
| IET 420 | Industrial \& Environmental Safety |  |
| IET - Cost Management Emphasis ${ }^{4}$ |  | 12 |
| IET 317 | Industrial Economic \& Financial Analysis |  |
| IET 408 | Lean Management and Six Sigma |  |
| IET 415 | Global Supply Chain Management |  |
| IET 418 | Cost Estimating \& Control |  |

## Minor in Operations Engineering (OPE)

This twelve hour minor is open to all engineering and engineering technology majors. Completion of this minor will provide the student with a strong foundation in the analytical tools needed to plan, design, optimize, and manage complex engineering operations. Students who anticipate moving into problem-solving and decision-support roles during their engineering careers may wish to consider this minor.

| ENM 500 or ISE 300 | Probability \& Statistics for Engineers Probability \& Statistics for Engineers | 3 |
| :---: | :---: | :---: |
| ISE 421 or MSC 521 | Introduction to Operations Research ${ }^{1}$ Introduction to Operations Research | 3 |
| MTH 367 | Statistical Methods I | 3 |
| Select one course from: |  | 3 |
| ENM 560 | Quality Assurance ${ }^{2}$ |  |
| ENM 561 | Design \& Analysis of Experiments |  |
| ENM 565 | Reliability Engineering I |  |
| ISE 460 | Quality Assurance |  |
| MSC 572 | System Simulation |  |
| Total Hours |  | 12 |
| ENM 500 (or <br> 2 ENM 500 (or | SE 300 or MTH 367) is a corequisite. ISE 300 or MTH 367) is a prerequisite. |  |

## Minor in Quality Assurance (QUA)

This minor is open to all majors. The program provides a concentration in the field of quality control, quality assurance, and quality management. Upon successful completion of this minor, the student will have command of statistical quality tools as well as the breadth of quality management concepts and experience in practical application of the tools. All prerequisites and corequisites must be followed.

| IET 318 | Statistical Process Control | 3 |
| :--- | :--- | ---: |
| IET 319 | Quality Improvement Methods | 3 |
| IET 320 | Quality Assurance Techniques | 3 |
| IET 321 | Quality Management | 3 |
| Total Hours |  | 12 |

## Global Manufacturing Systems Engineering Technology

Today's global economy has increasingly become borderless and is dominated by multinational companies. This requires tomorrow's engineers to be able to work efficiently in multicultural teams. The Global Manufacturing Systems Engineering Technology program is creating a new type of global engineer both answering industry's demand and giving the upcoming engineer a competitive advantage in today's market place.

In the Global Manufacturing Systems Engineering Technology program, state-of-the-art technology is used to plan, design, and implement the tools and machines needed to produce high quality products at competitive prices. Throughout the program, important concepts of lean enterprise, global competitiveness, green engineering concepts, and customer satisfaction will be applied.

The curriculum is highly interdisciplinary since the manufacturing professional must possess extensive technical skills and excellent humanistic skills in communications, computers, teamwork, information technology, globalism, and multiculturalism. The technical courses emphasize engineering materials and manufacturing processes; mechanical, hydraulic, and pneumatic automation and electronic controls; computer integrated manufacturing; manufacturing planning and control; extensive laboratory experiences; the technical sciences and applied mathematics from college algebra, probability, statistics, calculus, and linear programming. The curriculum contains strong components from the humanities, social sciences, and communications, plus foreign language and multicultural requirements. The technical electives allow the student versatility in developing technical breadth or depth. The program is designed to prepare graduates for challenging careers in manufacturing and serves as an excellent foundation for a variety of advanced degree options.

## Faculty

Scott Schneider, Department Chairperson
Professors Emeritus: Simon, Wolff
Professor: Untener
Associate Professor: Falkowski
Assistant Professor of Practice: Diller

## Bachelor of Science in Engineering Technology, Global Manufacturing Systems Engineering Technology (GMT) minimum 133 hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |  |
| :---: | :---: | :---: |
| REL 103 | Introduction to Religious and Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |


| SSC $200 \quad$ Social Science Integrated |  |
| :--- | :---: |
| Arts | 3 |
| Natural Sciences ${ }^{4}$ | 7 |
| Crossing Boundaries | variable |
| credit |  |

## Major Requirements

| CHM 123 <br> \& 123L | General Chemistry and General Chemistry Laboratory | 4 |
| :---: | :---: | :---: |
| CMM 100 | Principles of Oral Communication | 3 |
| $\begin{aligned} & \text { ECT } 110 \\ & \& 110 \mathrm{~L} \end{aligned}$ | Electrical Circuits I and Electrical Circuits I Laboratory | 4 |
| ECT 408 | Data Acquisition \& Measurements | 2 |
| EGR 100 | Introduction to the University Experience for Engineers (2 semesters) | 0 |
| EGR 102 | Introduction to the University Experience for Engineers | 0 |
| EGR 103 | Engineering Innovation | 2 |
| ENG 100 \& ENG 200 or ENG 200H | Writing Seminar I and Writing Seminar II ${ }^{1}$ Writing Seminar II | 6 |
| HST 103 | The West \& the World | 3 |
| IET 316 | Quantitative Analysis | 3 |
| IET 317 | Industrial Economic \& Financial Analysis | 3 |
| IET 318 | Statistical Process Control | 3 |
| IET 323 | Project Management | 3 |
| IET 408 | Lean Management and Six Sigma | 3 |
| MCT 110L | Technical Drawing \& CAD Laboratory | 2 |
| MCT 111L | Introduction to Design Laboratory | 2 |
| MCT 220 | Statics \& Dynamics | 3 |
| MCT 221 | Strength of Materials | 3 |
| MCT 313 | Industrial Mechanisms | 3 |
| MCT 336 <br> \& 336L | Fluid Power and Fluid Power Laboratory | 4 |
| MFG 108L | Manufacturing Processes Laboratory ${ }^{1}$ | 1 |
| MFG 204 <br> \& 204L | Materials \& Processes and Materials \& Processes Laboratory | 4 |
| MFG 206L | Dimensional Metrology Laboratory | 1 |


| MFG 208L | Geometric Dimensioning \& Tolerancing Laboratory | 1 |
| :--- | :--- | :--- |
| MFG 240 | Manufacturing \& Product Design | 3 |
| MFG 427 | Computer Integrated Manufacturing \& Global <br> Manufacturing | 3 |
| MFG 431 | Controls for Industrial Automation | 3 |
| MFG 432 |  <br>  <br> Processes | 3 |
| MFG 434 | Robotics \& Computer Numerical Control | 3 |
| MFG 438 | Sustainable Manufacturing \& Product Design | 3 |
| MFG 490 | Senior Project | 3 |
| MTH 137 | Calculus I with Review | 4 |
| MTH 138 | Calculus I with Review | 4 |
| MTH 207 | Introduction to Statistics | 3 |
| PHL 103 | Introduction to Philosophy | 3 |
| PHY 201 | College Physics I |  |
| \& 201L | and College Physics Laboratory I | 4 |
| REL 103 | Introduction to Religious and Theological Studies | 3 |
| SET 101 | Introduction to Engineering Technology II | 0 |
| SET 153L | Technical Computation Laboratory | 1 |
| SET 200 | Professional Development for Sophomores | 0 |
| or COP 200 | Introduction to Engineering Cooperative Education |  |
| SET 300 | Professional Development for Juniors | 0 |
| SET 400 | Professional Development for Seniors | 1 |
| Electives |  | 15 |
| Language requirements ${ }^{2}$ | 8 |  |
| Technical elective ${ }^{3}$ | 3 |  |
| Total Hours |  | 133 |

1 The University's general reading and writing competency requirements are satisfied by completing ENG 100 and ENG 200 or ENG 200 H with a grade of Cor higher. Students admitted to the University Honors program and students with sufficiently high verbal scores on the SAT and ACT are placed in ENG 200 H .
ENG 200 H is a one-semester course which satisfies the University requirement. Students who are placed in ENG 200 H do not receive credit for ENG 100 but are free to take elective course work in place of the waived first semester of composition.
2
Students who have no or limited experience in a foreign language will be required to complete a two-course language sequence either LNG 101/LNG 141 ( 6 sem. hours) depending on their beginning proficiency. Students entering the University of Dayton and enrolled in the program will fulfill this requirement. Students passing the proficiency examination of one or both foreign language course requirements will be required to complete additional Technical electives to fulfill program credits requirements.
3 Select from list approved by the Department.

## Minor in Global Manufacturing Systems Engineering Technology (GMT)

This minor is open to all engineering technology majors except global manufacturing systems. The program provides a concentration in manufacturing that will complement the student's major field of study. All prerequisites and corequisites must be followed.

| MFG 204 | Materials \& Processes |
| :--- | :--- |
| \& 204L | and Materials \& Processes Laboratory |

## Mechanical Engineering Technology

The Mechanical Engineering Technology Program emphasizes the practical application of the principles of the mechanical field. Career opportunities are in mechanical design, computer-aided design, product evaluation and development, manufacturing engineering, computeraided manufacturing, plant engineering, technical sales, technical service, fluid power, automation, and supervision. A significant portion of the graduates are in technical management. The curriculum includes a core of technical sciences; applied courses in design, thermodynamics, fluid mechanics, and manufacturing; extensive laboratory experiences; and mathematics from college algebra through probability, statistics, calculus, and differential equations. Courses are required in oral and written communication, with components in the humanities and social sciences to provide insight into the impact of technology on society. Concepts from basic education are stressed in technical courses. The curriculum is broad to prepare graduates for employment and provide a foundation on which to base continued study of changing technology.

## Faculty

Scott Schneider, Department Chairperson
Professors Emeritus: Mott, Wolff
Professor: Untener
Associate Professors: Blust, Falkowski
Assistant Professor of Practice: Diller

## Bachelor of Science in Engineering Technology, Mechanical Engineering Technology (MCT) minimum 132 hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$
HST 103 The West \& the World
REL 103 Introduction to Religious and Theological Studies
PHL 103 Introduction to Philosophy
ENG 100 Writing Seminar I ${ }^{2}$
Second-Year Writing Seminar ${ }^{3} \quad 0-3$
ENG 200 Writing Seminar II
Oral Communication 3
CMM 100 Principles of Oral Communication
Mathematics

| Social Science |  | 3 | MFG 108L | Manufacturing Processes Laboratory | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| SSC 200 | Social Science Integrated |  | MFG 204 | Materials \& Processes | 4 |
| Arts |  | 3 | \& 204L | and Materials \& Processes Laboratory |  |
| Natural Sciences |  | 7 | MFG 206L | Dimensional Metrology Laboratory | 1 |
| Crossing Boundaries |  | variab | MFG 208L | Geometric Dimensioning \& Tolerancing Laboratory | 1 |
|  |  | credit | MFG 240 | Manufacturing \& Product Design | 3 |
| Faith Traditions |  |  | MFG 431 | Controls for Industrial Automation | 3 |
| Practical Ethical Action |  |  | MTH 137 | Calculus I with Review | 4 |
| Inquiry |  |  | MTH 138 | Calculus I with Review | 4 |
| Integrative |  |  | MTH 207 | Introduction to Statistics | 3 |
| Advanced Study |  | variab | \|PHL 103 | Introduction to Philosophy | 3 |
|  |  | credit | PHY 201 | College Physics I | 4 |
| Philosophy and/or Religious Studies |  |  | \& 201L | and College Physics Laboratory I |  |
| Historical Studies ${ }^{5}$ |  |  | PHY 202 | General Physics | 4 |
| Diversity and Social Justice |  | 3 | \& 202L | and General Physics Laboratory |  |
| Major Capstone |  | 0-3 | REL 103 | Introduction to Religious and Theological Studies | 3 |
|  |  |  | SET 101 | Introduction to Engineering Technology II | 0 |
| Completed with ASI 110 and ASI 120. |  |  | SET 153L | Technical Computation Laboratory | 1 |
| 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement. |  |  | $\begin{aligned} & \text { SET } 200 \\ & \text { or COP } 200 \end{aligned}$ | Professional Development for Sophomores Introduction to Engineering Cooperative Education | 0 |
| 4 Must include two different disciplines and accompanying lab. |  |  | SET 300 | Professional Development for Juniors | 0 |
| 5 U.S. History AP credit will not satisfy this requirement. |  |  | SET 400 | Professional Development for Seniors | 1 |
| Major Requirements |  |  | Electives |  | 15 |
| $\begin{aligned} & \text { CHM } 123 \\ & \& 123 \mathrm{~L} \end{aligned}$ | General Chemistry and General Chemistry Laboratory | 4 | Technical electives ${ }^{2}$ |  | 12 |
|  |  |  | Total Hours |  | 132 |
| CMM 100 | Principles of Oral Communication | 3 |  |  |  |
| $\begin{aligned} & \text { ECT } 110 \\ & \& 110 \mathrm{~L} \end{aligned}$ | Electrical Circuits I and Electrical Circuits I Laboratory | 4 | The University's general reading and writing competency requirements are satisfied by completing ENG 100 and ENG 200 or ENG 200 H with a grade of |  |  |
| ECT 408 | Data Acquisition \& Measurements | 2 | or higher. Students admitted to the University Honors program and |  |  |
| EGR 100 | Introduction to the University Experience for Engineers (2 semesters) | 0 | students with sufficiently high verbal scores on the SAT and ACT are placed in ENG 200 H . |  |  |
| EGR 102 | Introduction to the University Experience for Engineers | 0 | ENG 200 H is a one-semester course which satisfies the University requirement. Students who are placed in ENG 200 H do not receive |  |  |
| EGR 103 | Engineering Innovation | 2 | credit for ENG 100 but are free to take elective course work in place of the waived first semester of composition. |  |  |
| \& ENG 200 | Writing Seminar I and Writing Seminar II ${ }^{1}$ | 6 | 2 Select from | first semester of composition. <br> st approved by the Department. |  |
| or ENG 200H | Writing Seminar II |  | Minor in Mechanical Endineerind |  |  |
| HST 103 | The West \& the World | 3 | Miliol 11 | eciailical Engileeiling |  |
| IET 316 | Quantitative Analysis | 3 | Technol | y (MCT) |  |
| IET 317 | Industrial Economic \& Financial Analysis | 3 | This minor is o | to all engineering technology majors except |  |
| IET 323 | Project Management | 3 | mechanical. The | rogram provides a concentration in the mechanical |  |
| MCT 110L | Technical Drawing \& CAD Laboratory | 2 | field that will co | lement the student's major field of study. All |  |
| MCT 111L | Introduction to Design Laboratory | 2 | prerequisites | orequisites must be followed. |  |
| MCT 220 | Statics \& Dynamics | 3 | Select four cour | from: ${ }^{1}$ | 12 |
| MCT 221 | Strength of Materials | 3 | MCT 221 | Strength of Materials |  |
| MCT 231 | Fluid Mechanics | 3 | MCT 231 | Fluid Mechanics |  |
| MCT 313 | Industrial Mechanisms | 3 | MCT 313 | Industrial Mechanisms |  |
| MCT 317 | Machine Dynamics | 3 | MCT 330 | Design of Machine Elements |  |
| MCT 330 | Design of Machine Elements | 3 | MCT 336 | Fluid Power |  |
| MCT 336 | Fluid Power | 4 | \& 336L | and Fluid Power Laboratory |  |
| \& 336L | and Fluid Power Laboratory |  | MCT 342 | Thermodynamics |  |
| MCT 342 | Thermodynamics | 3 | MCT 423 | Product Development |  |
| MCT 490 | Senior Project | 3 | MCT 430 | Design of Fluid Power Systems |  |


| MCT 432 | Heat Power |  |
| :--- | :--- | :--- |
| MCT 438 | Heat Transfer |  |
| MCT 440 | Applied Vibrations |  |
| MCT 445 | Experimental Mechanics |  |
| \& 445L | and Experimental Mechanics Laboratory |  |
| MCT 446 | Applied Finite Element Modeling | 12 |
| Total Hours |  |  |
| 1 | Courses selected may not be those already required for student's <br> major. |  |

## Minor in Automotive Systems (AST)

This minor is open to all engineering technology majors. It is also available for other majors within the University if certain prerequisites have been met. The program provides a concentration in the automotive field that will compliment the student's major program of study.

| ECT 456 | Automotive Electical \& Safety Systems | 3 |
| :--- | :--- | :--- |
| MCT 456 | Automotive Powertrain \& Chassis Systems | 3 |
| Select two courses from: |  |  |

## Total Hours

1 Courses cannot be required by student's major.

## Minor in Engineering Technology (EGT)

This minor is open to all majors in the College of Arts and Sciences, the School of Business Administration and the School of Education and Health Sciences with the appropriate prerequisite background and approval of the Engineering Management, Systems, and Technology Department Chairperson. The program introduces the principles of applied engineering and complements many majors at the University.

| Engineering Technology $^{1}$ | 15 |  |
| :--- | :--- | ---: |
| ECT 110 | Electrical Circuits I | 3 |
| IET 323 | Project Management | 3 |
| MCT 110L | Technical Drawing \& CAD Laboratory | 2 |
| MFG 204 | Materials \& Processes | 4 |
| \& 204L | and Materials \& Processes Laboratory |  |
| Select one course from: | 3 |  |
| ECT 120 | Electrical Circuits II |  |
| ECT 224 | Digital Computer Fundamentals |  |
| ECT 361 | Programming Structures |  |
| IET 317 | Industrial Economic \& Financial Analysis |  |
| IET 408 | Lean Management and Six Sigma |  |


| IET 415 | Global Supply Chain Management |
| :--- | :--- |
| IET 435 | Human Factors |
| MCT 220 | Statics \& Dynamics |
| MCT 231 | Fluid Mechanics |
| MFG 427 | Computer Integrated Manufacturing \& Global <br> Manufacturing |
| MFG 432 |  <br> Processes |
| MFG 434 | Robotics \& Computer Numerical Control |
| 1 | Prerequisites:SET 153L or equivalent competency and MTH 137 or <br> equivalent competency. |

## Minor in Industrial Automation and Applied Robotic Systems (ARS)

This minor is open to all majors in the School of Engineering. The program provides a concentration in the industrial automation and applied robotic systems field that will complement the student's major field of study. All prerequisites and corequisites must be followed.

| Industrial Automation and Applied Robotic Systems ${ }^{1}$ |  |  |
| :--- | :--- | ---: |
| ECT 452 | Feedback Controls | 3 |
| MFG 424 | Robotics | 3 |
| MFG 431 | Controls for Industrial Automation | 3 |
| MFG 434 | Robotics \& Computer Numerical Control | 3 |
| Total Hours |  | 12 |

1 If the minor's required courses are already required by the student's major, the student may select ECT 224/ECT 224L, MCT 313, and/ or MCT 317 to complete a total of at least twelve semester hours. Students in Engineering programs may not select courses with content similar to courses offered in their major.

## Minor in Integrated Arts and Technology (IAT)

The Integrated Arts and Technology minor allows students to connect their aptitude for technical discipline with their passion for the arts.
Students select one arts program (graphic design, music or theatre) and take at least 12 credits of coursework in that program. To put their knowledge to work in a practical and beneficial setting, students will also complete a service-learning project related to their arts program, which may provide academic credit.

This minor is open to all students enrolled in School of Engineering programs. All prerequisites and corequisites must be followed.

## Graphic Design Emphasis

Select 12 hours from:
CMM 344 Multimedia Design \& Production I 3
CMM 449 Topics in Electronic Media 3
VAD 220 Design Processes I 3
VAD 240 Form \& Concept 3
VAD 310 Computer Illustration 3
VAD 320 Design Processes II 3
VAD 344 Design for Multimedia I 3
VAD 351 Motion Design 3

| VAD 360 | Web Design | 3 |
| :--- | :--- | ---: |
| VAP 340 | Digital Processes II | 3 |
| ECT 400 | Selected Topics | $1-3$ |
| IET 400 | Selected Topics | $1-3$ |
| MCT 400 | Selected Mechanical Topics | $1-3$ |
| MFG 400 | Selected Manufacturing Topics | $1-3$ |

Technical Music Emphasis

| Select 12 hours from: |  |  |
| :--- | :--- | ---: |
| CMM 340 | Fundamentals of Broadcasting | 3 |
| CMM 341 | Audio Production | 3 |
| MUS 205 | Music, Technology and Culture | 3 |
| MUS 223 | Introduction to Music Technology | 2 |
| MUS 323 | Experiments in Digital Sound and Media | 3 |
| ECT 400 | Selected Topics | $1-3$ |
| IET 400 | Selected Topics | $1-3$ |
| MCT 400 | Selected Mechanical Topics | $1-3$ |
| MFG 400 | Selected Manufacturing Topics | $1-3$ |

Television and Stage Production Emphasis

| Select 12 hours from: |  |  |
| :--- | :--- | ---: |
| CMM 341 | Audio Production | 3 |
| CMM 342 | Fundamentals of Video Production | 3 |
| CMM 442 | Advanced Television Production | 3 |
| CMM 445 | Media Performance | 3 |
| THR 300 | Performance Practicum | $1-3$ |
| THR 307 | Light Design | 3 |
| THR 308 | Engineering for the Performing Arts | 3 |
| THR 309 | Sound Design | 3 |
| THR 311 | Design Concepts | 3 |
| THR 330 | Set Design | 3 |
| ECT 400 | Selected Topics | $1-3$ |
| IET 400 | Selected Topics | $1-3$ |
| MCT 400 | Selected Mechanical Topics | $1-3$ |
| MFG 400 | Selected Manufacturing Topics | $1-3$ |

## Minor in Sustainable Manufacturing (SMF)

This minor is open to all majors in the School of Engineering, except Global Manufacturing Systems Engineering Technology (GMT). The program provides a concentration in sustainable manufacturing that will complement the student's major field of study. All prerequisites and corequisites must be followed.

| Sustainable Manufacturing ${ }^{1}$ |  |  |
| :--- | :--- | ---: |
| ECT 461 | Power Distribution \& Control | 3 |
| MFG 204 | Materials \& Processes | 3 |
| MFG 204L | Materials \& Processes Laboratory | 1 |
| MFG 432 |  <br>  <br>  <br> MFG 438 | 3 |
| Total Housesses | Sustainable Manufacturing \& Product Design | 3 |


#### Abstract

1 If the minor's required courses are already required by the student's major, the student may select IET 420, MEE 472, MEE 473, MEE 478, and/or SEE 250 to complete a total of at least twelve semester hours. Students in Engineering programs may not select courses with content similar to courses offered in their major.


## Minor in Engineering Management (ENM)

This twelve credit hour minor is open to all engineering and engineering technology majors. Completion of this minor will provide the student with understanding of basic concepts relevant to the management of engineering operations. Students who anticipate moving from technical to managerial positions during their careers may wish to consider this minor.

| ENM 505 | Management of Engineering Systems | 3 |
| :---: | :--- | :--- |
| ENM 530 | Engineering Economy | 3 |
| or ISE 430 | Engineering Economy |  |

Select two courses from: 6

| ENM 500 | Probability \& Statistics for Engineers |
| :--- | :--- |
| ENM 515 | Human Factors Engineering |
| ENM 534 | Decision Analysis |
| ENM 539 | Project Management |
| ENM 560 | Quality Assurance |
| ENM 565 | Reliability Engineering I |
| ENM 582 | Engineering Organizational Development |
| ISE 300 | Probability \& Statistics for Engineers |
| ISE 421 | Introduction to Operations Research ${ }^{1}$ |
| ISE 455 | Production Engineering |
| ISE 460 | Quality Assurance |
| ISE 465 | Reliability \& Maintainability |
| MSC 521 | Introduction to Operations Research |
| MSC 555 | System Dynamics I |
| MSC 572 | System Simulation |
| Total Hours |  |

1 ENM 500 (or ISE 300 or MTH 367) is a prerequisite.

## Electronic and Computer Engineering Technology

First Year

| Fall | Hours Spring | Hours |
| :--- | :---: | ---: |
| EGR 102 | 0 SET 101 | 0 |
| EGR 100 | 0 EGR 100 | 0 |
| EGR 103 | 2 ECT 110 | 3 |
| SET 153L | 1 ECT 110L | 1 |
| MTH 137 (Satisfies CAP Math Requirement) | 4 MTH 138 | 4 |
| CHM 123 | 3 HST 103 | 3 |
|  | (Satisfies |  |
|  | CAP First- |  |
|  | Year |  |
|  | Humanities |  |
|  | Common) |  |
|  | 1 REL 103 |  |
|  | (Satisfies |  |
|  | CAP First- |  |
|  | Year |  |
|  | Humanities |  |
|  | Common) |  |


| ENG 100 (Satisfies CAP Writing Seminar) | 3,4 CMM 100 <br> (Satisfies <br> CAP <br> Communicatio | 3 | CHM 123L | 1 HST 103 <br> (Satisfies CAP FirstYear | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PHL 103 (Satisfies CAP First-Year Humanities | 3 |  |  | Humanities |  |
| Common) |  |  |  | Common) |  |
|  | 17-18 | 17 | ENG 100 (Satisfies CAP Writing Seminar) | 3,4 PHL 103 (Satisfies | 3 |
| Second Year |  |  |  | CAP First- |  |
| Fall | Hours Spring | Hours |  | Year |  |
| SET 200 | 0 MCT 220 | 3 |  | Humanities |  |
| ECT 120 | 3 ECT 206 | 3 |  | Common) |  |
| ECT 224 | 3 ECT 206L | 1 | REL 103 (Satisfies CAP First-Year Humanities | 3 |  |
| ECT 224L | 1 ECT 357 | 3 | Common) |  |  |
| ECT 361 | 3 MTH 207 | 3 |  | 17-18 | 17 |
| PHY 201 | 3 SSC 200 | 3 | Second Year |  |  |
| PHY 201L | 1 |  | Fall | Hours Spring | Hours |
| ENG 200 (Satisfies CAP Second Year Writing | 3-4 |  | SET 200 | 0 ECT 110 | 3 |
| Seminar) |  |  | MCT 110 L | 2 ECT 110L | 1 |
|  | 17-18 | 16 | MCT 220 | 3 IET 318 | 3 |
| Third Year |  |  | IET 317 | 3 MCT 313 | 3 |
| Fall | Hours Spring | Hours | MTH 207 | 3 MCT 111 L | 2 |
| SET 300 | 0 ECT 362 | 3 | ENG 200 (Satisfies CAP Second Year Writing | 3-4 MFG 208L | 1 |
| MCT 110L | 2 ECT 408 | 2 | Seminar) |  |  |
| IET 316 | 3 ECT 465 | 3 | CMM 100 | 3 CAP | 3 |
| ECT 306 | 3 MFG 431 | 3 |  | Advanced PHL/REL |  |
| ECT 306L | 1 TECH Elective | 3 |  | MFG 108L | 1 |
| ECT 358 | 3 CAP | 3 |  | 17-18 | 17 |
|  | Advanced |  | Third Year |  |  |
|  | PHL/REL |  | Fall | Hours Spring | Hours |
| ECT 358L | 1 |  | SET 300 | 0 IET 323 | 3 |
| CAP Advanced PHL/REL | 3 |  | IET 332 | 3 IET 316 | 3 |
|  | 16 | 17 | IET 408 | 3 IET 335L | 1 |
| Fourth Year |  |  | MFG 438 | 3 IET 418 | 3 |
| Fall | Hours Spring | Hours | PHY 201 | 3 TECH | 3 |
| SET 400 | 1 ECT 490 | 3 |  | Elective |  |
|  | (Satisfies |  | PHY 201L | 1 CAP | 3 |
|  | CAP |  |  | Advanced |  |
|  | Capstone |  |  | PHL/REL |  |
|  | Requirement) |  | SSC 200 | 3 |  |
| IET 317 | 3 ECT 452 | 3 | MFG 206L | 1 |  |
| IET 323 | 3 TECH | 3 |  | 17 | 16 |
|  | Elective |  | Fourth Year |  |  |
| ECT 466 | 3 TECH | 3 | Fall | Hours Spring | Hours |
|  | Elective |  | SET 400 | 1 IET 490 | 3 |
| TECH Elective | 3 CAP Arts | 3 |  | (Satisfies |  |
|  |  |  |  | CAP |  |
| CAP Advanced HST | 3 |  |  | Capstone |  |
|  | 16 | 15 |  | Requirement) |  |
| Total credit hours: 131-133 |  |  | IET 420 | 3 IET 415 | 3 |
|  |  | IET 435 | 3 TECH Elect | 3 |
| Industrial Engineering Technology |  |  | TECH Elect | 3 TECH Elect | 3 |
|  |  | TECH Elect | 3 CAP Arts | 3 |
| First Year |  |  |  |  | Study |  |
| Fall | Hours Spring |  | Hours | CAP Advanced HST | 3 |  |
| EGR 102 | 0 SET 101 | 0 |  | 16 | 15 |
| EGR 100 | 0 EGR 100 | 0 | Total credit hours: 132-134 |  |  |
| SET 153L | 1 MFG 204 | 3 |  |  |  |
| EGR 103 | 2 MFG 204L | 1 | Global Manufacturing Systems |  |  |
| MTH 137 (Satisfies CAP Math Requirement) | 4 IET 230 | 3 |  |  |  |
| CHM 123 | 3 MTH 138 | 4 | Engineering Technology |  |  |
|  |  |  | First Year |  |  |
|  |  |  | Fall | Hours Spring | Hours |
|  |  |  | EGR 102 | 0 SET 101 | 0 |


$\left.\left.\begin{array}{ll}\text { TECH Elective } & \begin{array}{l}3 \text { Advanced } \\ \text { HST } \\ \text { (Satisfies }\end{array} \\ \text { CAP Crossing }\end{array}\right\} \begin{array}{l}\text { Boundaries) } \\ \text { TECH Elective } \\ \text { CAP Arts } \\ \text { Study }\end{array}\right\}$

## Electronic Computer Tech Courses

## ECT 110. Electrical Circuits I. 3 Hours

Practical concepts of single voltage source DC and AC circuits: current, voltage, resistance, power, series and parallel circuits, capacitance, magnetic circuits, and inductance. Corequisite(s): MTH 137 or MTH 168; ECT 110L.
ECT 110L. Electrical Circuits I Laboratory. 1 Hour
Experiments in single voltage source DC and AC circuits to accompany ECT 110. Three laboratory hours per week. Corequisite(s): ECT 110.

## ECT 120. Electrical Circuits II. 3 Hours

Practical concepts of multiple voltage and current source DC and AC circuits: reactance, impedance, phase, circuit analysis, power factor, resonance, filters, and transformers. Circuit calculations using vectors, complex algebra, and simultaneous equations. Prerequisite(s): ECT 110; MTH 137 or MTH 168.

## ECT 206. Electron Devices I. 3 Hours

Fundamentals of semiconductor diodes, transistors (bipolar and field effect), amplifiers, biasing and small signal analysis. Prerequisite(s): ECT 120. Corequisite(s): ECT 206L.

## ECT 206L. Electron Devices I Laboratory. 1 Hour

To accompany ECT 206. Three hours of laboratory a week. Corequisite(s): ECT 206.

## ECT 224. Digital Computer Fundamentals. 3 Hours

Fundamental theory and techniques of electronic data processing to include binary arithmetic, switching theory (Boolean algebra), and basic circuitry (gates, adders, registers, and memory). Prerequisite(s): ECT 110. Corequisite(s): ECT 224L.

ECT 224L. Digital Computer Fundamentals Laboratory. 1 Hour
To accompany ECT 224. Three hours of laboratory a week. Corequisite(s): ECT 224.

## ECT 306. Electronic Devices II. 3 Hours

Fundamentals of integrated circuits, operational amplifiers, transistors, photoelectric devices, silicon-controlled rectifiers, and their associated circuits. Prerequisite(s): ECT 206; MTH 138 or MTH 168. Corequisite(s): ECT 306L.

## ECT 306L. Electronic Devices II Laboratory. 1 Hour

To accompany ECT 306. Three hours of laboratory a week. Corequisite(s): ECT 306.

## ECT 357. Microprocessors I. 3 Hours

Study of microprocessor architecture, hardware, software, applications, and development tools. Prerequisite(s): ECT 224.

## ECT 358. Microprocessors II. 3 Hours

Advanced microprocessors study including development tools and software with regards to interfacing equipment in applications. Prerequisite(s): ECT 224, ECT 361. Corequisite(s): ECT 358L.

3 ECT 358L. Microprocessors II Laboratory. 1 Hour
To accompany ECT 358. Emphasis on microcomputer programming. Three hours of laboratory a week. Corequisite(s): ECT 358.
ECT 361. Programming Structures. 3 Hours
3 The study of programming language concepts. Emphasis on the C language and its application to microcomputer hardware and software development. Prerequisite(s): SET 153L.
ECT 362. Concepts \& Applications of Computer Operating Systems. 3 Hours
Introduction to the fundamentals and applications of computer operating systems and the interaction of hardware and software. Operating systems for large-scale, mini-, and microcomputers introduced through case studies. Prerequisite(s): ECT 361.
ECT 400. Selected Topics. 1-4 Hours
Investigation and discussion of current technical topics in electronic and computer engineering technology. May be taken more than once. Prerequisite(s): Permission of department chairperson.
ECT 408. Data Acquisition \& Measurements. 2 Hours
Measurement and evaluation of the characteristics of engineering materials, structural mechanics, electromechanical systems, and physical systems. Emphasis on data acquisition, signal conditioning and manipulation, and virtual instrumentation. Prerequisite(s): ECT 110L; SET 153L; MTH 138 or MTH 168, MTH 207.
ECT 448. Intro to Linguistics. 3 Hours
ECT 452. Feedback Controls. 3 Hours
Study of principles of control including Nyquist criteria, Bode plots, PID loops, motor control virtual instrumentation, and advanced concepts. Laplace transform analysis is utilized. Prerequisite(s): ECT 306, ECT 408; MTH 138 or MTH 168.

## ECT 456. Automotive Electical \& Safety Systems. 3 Hours

Theory and design of charging systems, batteries, control systems, safety systems, and various sensor technologies. Overview of manufacturing and commercial aspects of the automotive industry. Prerequisite(s): ECT 110 or EGR 203.
ECT 461. Power Distribution \& Control. 3 Hours
Study of power distribution systems including components, basic operation, polyphase circuits, characteristics, and application. Emphasis on the generation of electric power, its transmission, and its application to high power systems. Prerequisite(s): ECT 110.

ECT 465. Digital Data Communications. 3 Hours
Study of communication methods and protocols. Applications to networks, satellite communication, phone systems, fiber optics, modems, and other data transmission. A special emphasis is placed on digital networks. Prerequisite(s): ECT 224.

## ECT 466. Microcomputer Architecture. 3 Hours

To develop an understanding of the basic hardware architecture of industry standard microcomputers including CPUs, standard busses, memory, mass storage devices, Systems-on-a-Chip and their implementation, I/O devices, and network interfaces. Study of architecture of recent microprocessors. Prerequisite(s): ECT 224, ECT 361.

ECT 490. Senior Project. 3 Hours
Advanced study and research of the product realization process focusing on conceptual design, embodiment design, final design, and prototyping or other design verification. Students work on externally sponsored engineering projects in multidisciplinary teams that perform engineering analysis that includes safety, ergonomics, environmental, cost and sociological impact of their designs. Prerequisite(s): CMM 100; ECT 306, ECT 358, ECT 408; IET 323.

## ECT 493. Honors Thesis. 3 Hours

HONORS THESIS Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program.

## ECT 494. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program. Prerequisite(s): ECT 493.

## Engineering Technology Courses

SET 100. Introduction to Engineering Technology I. 0 Hours
First semester of introduction to Engineering Technology seminar for all engineering technology majors. Introduction to the University of Dayton, the School of Engineering, the Department of Engineering Technology, engineering technology programs and careers. Emphasizes professional ethics, critical thinking and communications, and team dynamics. Academic policies, academic planning, registration procedures, counseling and career placement services.

## SET 101. Introduction to Engineering Technology II. 0 Hours

Second semester of introduction to Engineering Technology seminar for all engineering technology majors. Introduction to the University of Dayton, the School of Engineering, the Department of Engineering Technology, engineering technology programs and careers. Emphasizes professional ethics, critical thinking and communications, and team dynamics. Academic policies, academic planning, registration procedures, counseling and career placement services.
SET 102. Engineering Technology Transfer Seminar. 0 Hours A seminar for Engineering Technology majors who transferred from another academic institution. Introduction to the University of Dayton, the School of Engineering, the Department of Engineering Technology, Engineering Technology programs, and careers. Emphasizes professional ethics, critical thinking and communication, and team dynamics. Academic policies, academic planning, registration procedures, counseling, and career placement services.

## SET 153L. Technical Computation Laboratory. 1 Hour

Introduction to applications and use of computers for engineers with concentration on spreadsheets, electronic communications, and object oriented programming using Visual Basic.

## SET 198. Research \& Innovation Laboratory. 1-6 Hours

Students participate in 1) selection and design, 2) investigation and data collection, 3) analysis and 4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered. Prerequisite(s): Permission of department chairperson.

SET 200. Professional Development for Sophomores. 0 Hours Presentations on contemporary and professional engineering subjects by students, faculty, and engineers in active practice. The seminar addresses topics in key areas that complement traditional courses and prepare distinctive graduates, ready for life and work. Registration required for all Engineering Technology sophomore students.

## SET 298. Research \& Innovation Laboratory. 1-6 Hours

Students participate in 1) selection and design, 2) investigation and data collection, 3) analysis and 4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered. Prerequisite(s): Permission of department chairperson.

## SET 300. Professional Development for Juniors. 0 Hours

Presentations on contemporary and professional engineering subjects by students, faculty, and engineers in active practice. The seminar addresses topics in key areas that complement traditional courses and prepare distinctive graduates, ready for life and work. Registration required for all Engineering Technology sophomore students.

## SET 398. Research \& Innovation Laboratory. 1-6 Hours

Students participate in 1) selection and design, 2) investigation and data collection, 3) analysis and 4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered. Prerequisite(s): Permission of department chairperson.

## SET 400. Professional Development for Seniors. 1 Hour

Career planning for engineering technology majors. The job search process, resume preparation, the job interview, professional development. Required of all engineering technology majors in the junior or senior year.

## SET 498. Research \& Innovation Laboratory. 1-6 Hours

Students participate in 1) selection and design, 2) investigation and data collection, 3) analysis and 4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered. Prerequisite(s): Permission of department chairperson.

## SET 499. Seminar. 1 Hour

Career planning for engineering technology majors. The job search process, resume preparation, the job interview, professional development. Required of all engineering technology majors in the junior or senior year.

## Global Manufact Sys Egr Tech Courses

MFG 108L. Manufacturing Processes Laboratory. 1 Hour
Application of metal-cutting theory using single- and multiple-point cutting tools, basic metal removal process of toolroom and production machines. Experience on conventional milling machines, shapers, lathes, surface grinders, and drill presses. Three hours of laboratory a week.

## MFG 204. Materials \& Processes. 3 Hours

Chemical and physical properties of metals, ceramics, and polymers; casting processes; powdered metallurgy; metal forming; plastics processes. Oral and written presentation of a team case study. Corequisite(s): MFG 204L.

MFG 204L. Materials \& Processes Laboratory. 1 Hour
Testing of materials for tensile strength, impact and hardness properties, cooling curves and equilibrium diagram development, heat treating and hardenability curve determination, cold forming, plastics materials processing, micro polishing and metallography; visits to local industries. Three hours of laboratory a week. Corequisite(s): MFG 204.

## MFG 206L. Dimensional Metrology Laboratory. 1 Hour

Theory and practice of precision measurement including the surface plate, angle and sine plates; surface texture and roundness; optical microscope and profile projector; mechanical and electronic gages; coordinate measuring machine; length standards and height gages; fixed and functional gages; sources of measurement error. Three hours of laboratory a week. Prerequisite(s): MCT 110L.

MFG 208L. Geometric Dimensioning \& Tolerancing Laboratory. 1 Hour Study of the use of ANSI Y14.5M-1994, the engineering standard for geometric dimensioning and tolerancing. Includes the proper use of GD\&T symbols, reading and interpretation of engineering drawings, techniques for determining part adherence to design requirements and workmanship standards. Prerequisite(s): MCT 110L.

## MFG 240. Manufacturing \& Product Design. 3 Hours

Manufacturing planning; process planning; advanced cutting tools; workholders; power presses-blanking, forming, draw dies, fine blanking; group technology, gage, jig, and fixture design. Prerequisite(s): MCT 110L; MFG 108L, MFG 204.

## MFG 400. Selected Manufacturing Topics. 1-4 Hours

Investigation and discussion of current topics in manufacturing engineering technology. May be taken more than once. Prerequisite(s): Permission of department chairperson.

## MFG 424. Robotics. 3 Hours

Study of robotics including history, robot geometry, cost justification, end-effector (types, use, and design), sensors, and programming. Application of robots in industries. Robot programming and operation projects and end-effector design projects. Prerequisite(s): MCT 220, MCT 313.
MFG 427. Computer Integrated Manufacturing \& Global Manufacturing. 3 Hours
Computer Integrated Manufacturing (CIM) systems and interrelationships; group technology, computer-aided process planning, expert systems, local area networks, automated flow lines, data collection, and material handling. Also covered are global manufacturing issues and specific country concerns. Prerequisite(s): MFG 204, SET 153L.

## MFG 431. Controls for Industrial Automation. 3 Hours

Topics include: fundamentals of digital logic, pneumatic power, electromechanical sensors and actuators, pneumatic and electrical control circuit analysis and design, industry safety and design standards, concepts of mechatronics, programmable logic controllers, and networking communications. Prerequisite(s): ECT 110; SET 153 L .
MFG 432. Plastics, Composites \& Nano Materials \& Processes. 3 Hours Introduction to the more common plastics, composites, and nano engineering materials and their properties. Study of processes including extrusion, injection molding, blow molding, compression and transfer molding, and forming. Topics on part and tooling design. Prerequisite(s): CHM 123; MFG 204.

MFG 434. Robotics \& Computer Numerical Control. 3 Hours
Programming of CNC turning and machining centers and industrial robots; application of CAM software to design and edit CNC and robot programs, edit programs, and display tool and motion paths. Parametric part programming concepts to produce complex surfaces. Programming of robotic devices. Prerequisite(s): MCT 110L; MFG 108L; SET 153L.

MFG 435. Advanced Numerical Control. 3 Hours
Instruction in the programming of complex, multi-axis CNC machines. Extended parametric programming. Programming language techniques. Prerequisite(s): MFG 434.
MFG 438. Sustainable Manufacturing \& Product Design. 3 Hours
Design for the environment, sustainable manufacturing processes and business practices to support these topics are developed. Prerequisite(s):

## MFG 108L, MFG 204.

## MFG 490. Senior Project. 3 Hours

Advanced study and research of the product realization process focusing on conceptual design, embodiment design, final design, and prototyping or other design verification. Students work on externally sponsored engineering projects in multidisciplinary teams that perform engineering analysis that includes safety, ergonomics, environmental, cost and sociological impact of their designs. Prerequisite(s): CMM 100; IET 323; MFG 240, MFG 431.

## MFG 493. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program.

## MFG 494. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program. Prerequisite(s): MFG 493.

## Industrial Engineering Tech Courses

## IET 230. Work Measurement. 3 Hours

Fundamentals of work simplification, motion economy, and productivity improvement using the techniques of time-and-motion study. Setting of labor standards using the techniques of stop watch, pre-determined time, standard data, and work sampling. .

## IET 230L. Work Measurement Laboratory. 1 Hour

The application of real-world time-and-motion-study techniques such as operation process, worker-machine, and assembly charts. Calculations for time standards, production efficiency, line balance, cost reduction, labor, and equipment. A written and oral report on a team project. Three hours of laboratory each week. Prerequisite(s): MTH 137 Corequisite(s): IET 230.

## IET 316. Quantitative Analysis. 3 Hours

Introduction of the mathematical techniques used to support decision making and managerial analysis. Probability theory, decision theory, linear programming, queuing theory, matrix algebra, differential and integral calculus, and differential equations. Prerequisite(s): MTH 138 or MTH 168; MTH 207.

IET 317. Industrial Economic \& Financial Analysis. 1-3 Hours
Comparison of manufacturing or service industry projects and investments based on their economic value. Quantification of costs and benefits; analysis using present worth, annual worth, and rate of return methods. Study of simple and compound interest. Basic financial accounting concepts, including balance sheets, income statements, change of financial condition, etc. Prerequisite(s): MTH 137.

## IET 318. Statistical Process Control. 3 Hours

Statistics and probability theory applied to produce control charts (x-bar, $\mathrm{R}, \mathrm{s}, \mathrm{p}, \mathrm{u}$, and c) to monitor processes. Interpretation and application of these charts. Problem solving techniques, Pareto analysis, and modern quality management techniques. Prerequisite(s): MTH 138 or MTH 168, MTH 207.

## IET 319. Quality Improvement Methods. 3 Hours

Study of problem-solving methodologies and techniques. Team development. Students will learn to use Pareto diagrams, force field analysis, cause and effect diagrams, process mapping, and other problem-solving tools. Quality costs, product liability, and ethics are also covered. Prerequisite(s): IET 318.

## IET 320. Quality Assurance Techniques. 3 Hours

Students will be exposed to a variety of current quality assurance topics that companies use to improve quality, increase productivity, and reduce costs. Topics include: total preventive maintenance, quality function deployment, reliability engineering, design of experiments, and sample size selection. Prerequisite(s): IET 318; MTH 207.

## IET 321. Quality Management. 3 Hours

Provides students with an understanding of managing a total quality environment to improve quality, increase productivity and reduce costs. An introduction to Deming, Juran, and others. Total Quality Management implementation strategies, requirements of ISO 9000, QS 9000, and the Malcolm Baldrige award will be covered. Prerequisite(s): IET 318; MTH 207.

## IET 323. Project Management. 3 Hours

Study of the structure, techniques, and application of project management including project proposals, project plans, decision making, styles of management, and communications. Semester team project with written and oral presentations. Prerequisite(s): Junior or Senior status.

## IET 332. Facilities Layout Design. 3 Hours

Design of manufacturing and service facilities for the most efficient flow of raw materials, work-in-process, and completed stock through a work place. Facilities layout, material handling, and warehousing in relation to trends toward reduced inventory, smaller lot sizes, and just-in-time. Prerequisite(s): MCT 110L.

## IET 335L. Process Simulation and Analysis Lab. 1 Hour

Introduction to analysis of business, service and industry systems using a simulation software package. Topics covered include creation of simulation models in two and three dimensions that model processes and how to gather the appropriate input data and analyze the output data from the simulation software. Prerequisite(s): SET153L and Junior or Senior status.

## IET 346. Six Sigma Yellow Belt. 1.5 Hour

This course is designed to facilitate skill acquisition along with clinical reasoning and decision making as it relates to the physical therapy care and management of various advanced topics including cardiopulmonary rehabilitation, women's health issues, manual therapy strategies, electrotherapeutics as well as orthopedic, neurological, and pediatric therapeutic interventions. Prerequisite(s): Successful completion of all prior course work as outlined in the University of Dayton DPT curriculum.

## IET 400. Selected Topics. 1-4 Hours

Self-paced research course. Preparation of a documented written research project on an engineering technology subject. May not be taken more than once. Prerequisite(s): Permission of department chairperson.

## IET 408. Lean Management and Six Sigma. 3 Hours

This course aims to teach the tools and concepts used to improve business performance using the rigorous approach known as DMAIC. The course material covers a wide variety of analytical problem-solving strategies based on statistics and optimization. The course content also includes Lean Enterprise principles, such as poka-yoke, SMED, and pullpush systems. After successfully finishing this course, students will be equipped to help organizations achieve their operational excellence. Prerequisite(s): Junior or senior status.

## IET 415. Global Supply Chain Management. 3 Hours

This course is intended to educate students on the fundamental roles played by supply chain management in the Global economy. Students will gain knowledge on the management of local and global supply chain functions and their impact on industries, customers, and suppliers. Students will learn to optimize supply chain resources to reduce cost and improve revenue. Students will learn to utilize data and contemporary tools to make informed decisions in a global supply chain environment.

## IET 418. Cost Estimating \& Control. 3 Hours

Study of the fundamentals of cost estimating of labor, material, and overhead for products, projects, operations, and systems. The concepts of internal and external cost estimating, types of costs, budgets, and profit. Semester team and individual projects, written and oral. Study of job order and process cost accounting, activity based costing, and cost-volume-profit relationships. Prerequisite(s): MTH 137 or MTH 168.

## IET 420. Industrial \& Environmental Safety. 3 Hours

Application of safety techniques and principles to identify and correct unsafe situations and practices. Study of system safety, failure modes and effects analysis, fault tree analysis, preliminary hazard analysis, hazardous materials and practices, OSHA, health and personal protection.

## IET 423. The IET in Service Organizations. 3 Hours

Case studies, articles, guest speakers, and projects to provide insight into how industrial engineering technology skills and training can be applied to service industries including hospitals, banks, and eating and retailing establishments. IET major; junior status. Prerequisite(s): Junior or Senior status.

## IET 425. Elements of Cost Control. 3 Hours

Survey of the methods of breakdown and cost analysis of labor, material, and overhead used in manufacturing and service organizations.
Basic financial and cost accounting including balance sheets, income statements, change of financial condition, ratio analysis, and ActivityBased Costing. Prerequisite(s): MTH 137 or MTH 168.

## IET 435. Human Factors. 3 Hours

Methods to improve the interface between humans and their environment. Human characteristics are studied to determine the best way to design the task, product, work station, or other environmental features to accommodate the human. Written and oral projects. Prerequisite(s): (Junior or senior status) or permission of instructor.

## IET 446. Six Sigma Green Belt. 3 Hours

Learn, practice, and use six-sigma tools in preparation of a final certification project in a commercial business situation. Use, analyze and solve an identified business variation problem to achieve industry recognized certification.

## IET 490. Senior Project. 3 Hours

Advanced study and research of the product realization process focusing on conceptual design, embodiment design, final design, and prototyping or other design verification. Students work on externally sponsored engineering projects in multidisciplinary teams that perform engineering analysis that includes safety, ergonomics, environmental, cost and sociological impact of their designs. Prerequisite(s): CMM 100; IET 317, IET 323, IET 332, IET 408.

## IET 493. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program.

## IET 494. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis.
Restricted to students in University Honors Program. Prerequisite(s): IET 493.

## Mechanical Engineering Tech Courses

MCT 110L. Technical Drawing \& CAD Laboratory. 2 Hours
Technical sketching and shape description, orthographic projection theory, multi-view drawings, necessary views, sectional views, working and shop drawings, dimensioning practices, tolerancing, thread and fastener representation and nomenclature, assembly and detail drawings. Six hours of laboratory a week using instruments and commercial computer-aided design (CAD) software.

## MCT 111L. Introduction to Design Laboratory. 2 Hours

Advanced topics of Computer Aided Design using three-dimensional, parametric, solid modeling software. Laboratory assignments involving the CAD software are completed through a series of individual and team design projects. Introduction to design requirements, conceptualization, and design decisions. Computer drafting topics such as ANSIY 14.5M-1994 geometric dimensioning and tolerancing standards, weld symbols, machining and surface finish symbols. Blueprint reading. Prerequisite(s): MCT 110L or MEE 104L and MEE 227L.

## MCT 220. Statics \& Dynamics. 3 Hours

Study of forces on bodies at rest and in motion using Newton ¿is three laws of motion. Vectors, force systems, components, reactions, resultants, free body diagrams, equilibrium, centroids, moment of inertia, kinetics, and kinematics. Corequisite(s): MTH 137 or MTH 168.

## MCT 221. Strength of Materials. 3 Hours

Analysis and design of load-carrying members, considering stress, strain, and deflection. Study of direct tension, compression, and shear; torsion; shear and moment diagrams; bending; combined stress; analysis of columns; pressure vessels. Prerequisite(s): MCT 220; MFG 204, MFG 204L; MTH 137 or MTH 168.

## MCT 231. Fluid Mechanics. 3 Hours

Fluid properties, fluid statics including manometry, submerged surfaces, buoyancy and stability of floating bodies. The principles of fluid flow including Bernoulli's and energy equations, energy losses, and pump power. Analysis and design of pipe line systems and open channels; pump selection. Prerequisite(s): MTH 137 or MTH 168.

MCT 313. Industrial Mechanisms. 3 Hours
Design and analysis of linkages and cams. Graphical solutions to kinematics problems including the concepts of instantaneous motion and relative motion. Development and analysis of motion diagrams. Study of geometric features of gears and gear transmission systems. Prerequisite(s): MCT 110L, MCT 220; MTH 137 or MTH168.

## MCT 317. Machine Dynamics. 3 Hours

Principles of applied engineering mechanics as they relate to machines; static force analysis in both 2 and 3 dimensional systems, kinetics of machine components by the methods of force-mass-acceleration, workenergy, and impulse-momentum; machine balancing; introduction to mechanical vibrations. Prerequisite(s): MCT 111L, MCT 313; MTH 138 or MTH 168; SET 153L.

## MCT 330. Design of Machine Elements. 3 Hours

Analytical design techniques used to evaluate machine elements; stress analysis, working stress, failure theories, fatigue failure; design methods for spur gears, shafts, keys and couplings, roller and journal bearings, and springs. Original design project. Prerequisite(s): MCT 111L, MCT 221, MFG 208L.

## MCT 336. Fluid Power. 3 Hours

Study of hydraulic and pneumatic fluid power components and systems used in industrial, mobile, and aerospace applications; standard symbols in circuit design; circuit analysis; specification for pumps, valves, cylinders, and circuits; hydraulic fluids; filtration; electric motors; system efficiencies; proportional control and electrohydraulic servo control systems; seals; fluid conductors; pneumatic components and systems. Library research project. Corequisite(s): MCT 336L.

## MCT 336L. Fluid Power Laboratory. 1 Hour

To accompany MCT 336. Evaluation of fluid power components: pressure, flow, RPM, sound level, current, voltage, power, torque, and time. Graphical design, computational analysis, assembly, and testing of typical circuits and systems. Testing of hydraulic fluids for viscosity, pour point, flash and fire point, specific gravity. Three hours of laboratory a week. Corequisite(s): MCT 336.

## MCT 342. Thermodynamics. 3 Hours

Energy analysis of engineering systems using the concepts and laws of thermodynamics. The principle of the mechanical equivalent of heat, behavior of pure substances, use of thermodynamic property tables, and study of gas mixtures. Application of the Carnot cycle to both heat engines and reversed heat engines. Prerequisite(s): MCT 231; MTH 138 or MTH 168; SET 153L.

## MCT 400. Selected Mechanical Topics. 1-4 Hours

Investigations and discussion of cur-rent technical topics in mechanical engineering technology. Research report. May be taken more than once. Prerequisite(s): Permission of department chairperson.

## MCT 423. Product Development. 3 Hours

Synthesis of mechanical devices and systems. Emphasis on the integration of various machine elements into a single unit. Activities include design, scheduling, budgeting, purchasing, fabrication, assembly and performance testing of an original team project. Prerequisite(s): MCT 330.
MCT 430. Design of Fluid Power Systems. 3 Hours
Energy efficiency; pressure drop determinations, variable volume pressure-compensated pumps, accumulators, proportional and electrohydraulic valves, cylinder design, hydraulic motor selection; circuit design, open and closed loop systems, power unit design; sizing of electric motors; use of industrial data and National Fluid Power Assn.-JIC design standards. Individual design project. Prerequisite(s): MCT 336.

## MCT 432. Heat Power. 3 Hours

Applications of the principles of thermodynamic cycles. Analysis of energy transfer systems such as internal combustion and gas turbine engines. Power generation through steam cycles including reheat and regenerative cycles. Reversed heat engine cycles and vapor compression cycles used in heating and cooling. Prerequisite(s): MCT 342; SET 153L.

## MCT 438. Heat Transfer. 3 Hours

The principles of conduction, convection, and thermal radiation energy transfer. Conduction through series and parallel walls, pipes, and containers. Forced and free convection through films, thermal radiation of energy between surfaces, and the overall transfer of heat. Prerequisite(s): MCT 231; SET 153L.

## MCT 440. Applied Vibrations. 3 Hours

Free and forced vibration of single degree of freedom systems with and without damping. Industrial applications including reciprocating and rotating machinery, balancing, isolation, and noise reduction. Demonstrations of vibration sensors and instrumentation. Prerequisite(s): MCT 317; SET 153L.

## MCT 445. Experimental Mechanics. 3 Hours

The selection, application, and use of strain gages and strain gage rosettes. Transformation of stress and strain. Advanced mechanics of materials topics with empirical verification of theoretical predictions. Prerequisite(s): MCT 221. Corequisite(s): MCT 445L.
MCT 445L. Experimental Mechanics Laboratory. 1 Hour Installation of strain gauge rosettes. Experiments to determine the state of strain and stress in structures using strain gauges, photoelasticity, and brittle coatings. Vibration measurement using strain gauges, accelerometers, and motion transducers. Written and oral reports. Corequisite(s): MCT 445.

MCT 446. Applied Finite Element Modeling. 3 Hours
Introduction to the fundamentals of structural finite element modeling. Geometry creation, element types, material specification, problem solution and results postprocessing. A focus is placed on modeling techniques using commercially available software. Prerequisite(s): MCT 221; SET 153L.

MCT 456. Automotive Powertrain \& Chassis Systems. 3 Hours Theory and design of engines, transmissions, suspension, and chassis systems. Overview of manufacturing and commercial aspects of the automotive industry. Prerequisite(s): EGR 201 or MCT 220.

## MCT 490. Senior Project. 3 Hours

Advanced study and research of the product realization process focusing on conceptual design, embodiment design, final design, and prototyping or other design verification. Students work on externally sponsored engineering projects in multidisciplinary teams that perform engineering analysis that includes safety, ergonomics, environmental, cost and sociological impact of their designs. Prerequisite(s): CMM 100; IET 323; MCT 317, MCT 330.

## MCT 493. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program.

## MCT 494. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program. Prerequisite(s): MCT 493.

# Mechanical and Aerospace Engineering 

Major:

- Bachelor of Mechanical Engineering (p. 406)

Concentrations:

- Aerospace Engineering (p. 407)
- Energy Systems-Mechanical (p. 407)

Minors:

- Aerospace Engineering (p. 407)
- Human Movement Biomechanics (p. 407)
- Mechanical Systems (p. 408)

Mechanical engineers apply principles of motion, energy, force, materials, and mathematics to design and analyze a wide variety of products and systems. The field requires an understanding of core concepts including mechanics, kinematics, thermodynamics, heat transfer, materials science and controls. Mechanical engineers use these core principles along with tools like computer-aided engineering and product life cycle management to design and analyze manufacturing plants, industrial equipment and machinery, heating and cooling systems, automotive systems, aircraft, robotics, medical devices, and more. Today, mechanical engineers are pursuing developments in such fields as composites, mechatronics, and nanotechnology, and are helping to create a more sustainable future.

The mechanical engineering curriculum serves as a broad-based education for positions in these diverse fields or for graduate study leading to advanced degrees. The first part of the mechanical engineering curriculum provides a firm foundation in mathematics, physics, chemistry, computer-aided drawing and conceptual design and the humanities. The second part of the curriculum provides the engineering science fundamentals and laboratory experiences necessary for testing and design, as well as continued learning in the humanities, arts, and social sciences. The final part of the curriculum emphasizes synthesis of knowledge through major design projects. The curriculum includes sufficient elective courses to permit a concentration in aerospace, energy systems and engineering as well as minors in several other areas.

The education experience, guided by the University of Dayton Catholic and Marianist heritage, seeks to prepare graduates who will:

- have the ability to apply mathematics, science and engineering fundamentals and computational tools to design components, systems and/or processes
- have the ability to design and conduct experiments and analyze and interpret data
- have the ability to communicate their ideas/solutions effectively
- serve as effective team members and leaders
- understand the social, environmental and economic impact of engineering in a global context
- be able to think critically about contemporary issues
- continue their personal and professional development by engaging in lifelong learning
- integrate ethical action, integrity, and service into their profession and lives

Faculty
J. Kelly Kissock, Chairperson

Professors Emeriti: Chuang, Doepker, Doyle, Eastep, Eimermacher,

## Schauer

Professors: Altman, Ervin, Hallinan, Jain, Kashani, Kissock, Murray Associate Professors: Bigelow, Myszka, Petrykowski, Pinnell, Rumpfkeil Assistant Professors: Chiasson, Choi, Gunasekaran, Heyne, Kinney, Lowe, Reissman T.
Lecturers: Henrick, Perkins, Reissman M.

## Bachelor of Mechanical Engineering (MEE) minimum 132 hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$


| Faith Traditions | credit |
| :--- | :--- |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative | variab |
| Advanced Study | credit |

Philosophy and/or Religious Studies
Historical Studies ${ }^{5}$
Diversity and Social Justice
Major Capstone 0-3

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.
4 Must include two different disciplines and accompanying lab.
5 U.S. History AP credit will not satisfy this requirement.

## Major Requirements

| CHM 123 | General Chemistry | 3 |
| :---: | :--- | :---: |
| CHM 123L | General Chemistry Laboratory | 1 |
| or PHY 210L | General Physics Laboratory I |  |
| CMM 100 | Principles of Oral Communication | 3 |
| EGM 202 | Dynamics | 3 |
| EGM 303 | Mechanics II | 3 |


| EGR 100 | Introduction to the University Experience for Engineers (2 semesters) | 0 |
| :---: | :---: | :---: |
| EGR 102 | Introduction to the University Experience for Engineers | 0 |
| EGR 103 | Engineering Innovation | 2 |
| EGR 201 | Engineering Mechanics | 3 |
| EGR 202 | Engineering Thermodynamics | 3 |
| EGR 203 | Electrical \& Electronic Circuits | 3 |
| EGR 203L | Electrical and Electronic Circuits Lab | 1 |
| ENG 100 \& ENG 200 or ENG 200H | Writing Seminar I and Writing Seminar II Writing Seminar II | 6 |
|  | The West \& the World | 3 |
| or HST 198 | History Scholars' Seminar |  |
| MEE 101 | Introduction to Mechanical Engineering II | 0 |
| MEE 104L | Solid Modeling in Design | 2 |
| MEE 200 <br> or COP 200 | Professional Development for Sophomores I Introduction to Engineering Cooperative Education | 0 |
| MEE 300 | Professional Development for Juniors | 0 |
| MEE 308 | Fluid Mechanics | 3 |
| MEE 312 <br> \& 312L | Engineering Materials I and Materials Laboratory | 4 |
| MEE 314 | Computational Methods | 3 |
| MEE 321 | Theory of Machines | 3 |
| MEE 341 | Engineering Experimentation | 3 |
| MEE 400 | Professional Development for Seniors | 1 |
| MEE 410 <br> \& 410L | Heat Transfer and Thermo-Fluids Laboratory | 4 |
| MEE 427 or MEE 425 | Mechanical Design I <br> Aerospace Design | 3 |
| MEE 431L | Multidisciplinary Design I | 2 |
| MEE 432L | Multidisciplinary Design II | 3 |
| MEE 439 or MEE 440 | Dynamic Systems \& Controls Flight Vehicle Performance | 4 |
| MEE 460 | Engineering Analysis | 3 |
| MTH 168 | Analytic Geometry \& Calculus I | 4 |
| MTH 169 | Analytic Geometry \& Calculus II | 4 |
| MTH 218 | Analytic Geometry \& Calculus III | 4 |
| MTH 219 | Applied Differential Equations | 3 |
| PHL 103 | Introduction to Philosophy | 3 |
| PHY 206 | General Physics I-Mechanics | 3 |
| PHY 207 | General Physics II - Electricity \& Magnetism | 3 |
| REL 103 | Introduction to Religious and Theological Studies | 3 |
| Select one cours | from: | 3 |


| MEE 344 | Manufacturing Processes |  |
| :--- | :--- | ---: |
| MEE 401 | Aerodynamics |  |
| MEE 478 | Energy Efficient Manufacturing | 12 |
| Electives |  | 3 |
| Ethics elective $^{1}$ | 3 |  |
| Math $^{2}$ Science elective ${ }^{1}$ | 6 |  |
| MEE electives ${ }^{1}$ |  |  |


| Open electives ${ }^{1}$ |
| :--- |
| Total Hours |
| 1Select from list approved by the Mechanical and Aerospace <br> Engineering Department. <br> 1Select from list approved by the Mechanical and Aerospace <br> Engineering Department. <br> Concentration in Aerospace Engineering <br> (AEC) (132) |

This concentration is open only to mechanical engineering majors. The program provides a strong background for career specialization in the fields of aircraft and aerospace engineering.

| MEE 225 | Introduction to Flight | 3 |
| :--- | :--- | :--- |
| MEE 401 | Aerodynamics | 3 |
| MEE 409 | Aerospace Structures | 3 |
| MEE 425 | Aerospace Design | 3 |
| MEE 440 | Flight Vehicle Performance | 4 |
| Select one course from: | 3 |  |
| MEE 413 | Propulsion |  |
| Approved graduate AEE course |  | 19 |
| Total Hours |  |  |

## Concentration in Energy SystemsMechanical (MRS)

This concentration is open to all engineering students.

| Select two courses from: |  |
| :--- | :--- |
| ASI 320 | Cities \& Energy |
| CEE 390 | Environmental Pollution Control |
| CEE 434 | Water \& Wastewater Engineering |
| ECO 435 | Economics of the Environment |
| PHL 321 | Environmental Ethics |
| PHY 220 | Energy \& Environmental Physics |
| POL 371 | Environmental Policy |
| SEE 301 | Global Change \& Earth Systems |
| SEE 401 | Sustainability Research I |

Any approved Arts and Science energy/sustainability related elective
Select four courses from: 12

AEE 565 Fundamentals of Fuels \& Combustion
or MEE 565 Fundamentals of Fuels \& Combustion
AEE 566 Combustion Theory
MEE 413 Propulsion
MEE 420 Energy Efficient Buildings
MEE $456 \quad$ Energy Systems Engineering
MEE $457 \quad$ Building Energy Informatics
MEE 461 Solar Energy Engineering
MEE 462 Geothermal Energy Engineering
MEE 464 Sustainable Energy Systems
MEE 471 Design of Thermal Systems
MEE 472 Design for Environment

| MEE 473 | Renewable Energy Systems |
| :--- | :--- |
| MEE 478 | Energy Efficient Manufacturing |
| MEE 493 | Honors Thesis |
| MEE 511 | Advanced Thermodynamics |
| RCL 507 | Materials Advanced Energy Applications |
| RCL 511 | Advanced Thermodynamics |
| RCL 524 | Electrochemical Power |
| RCL 533 | Biofuel Production Processes |
| RCL 556 | Energy Systems Engineering |
| RCL 557 | Building Energy Informatics |
| RCL 561 | Solar Energy Engineering |
| RCL 562 | Geothermal Energy Engineering |
| RCL 563 | Wind Energy Engineering |
| RCL 564 | Sustainable Energy Systems |
| RCL 568 | Internal Combustion Engines |
| RCL 569 | Energy Efficient Buildings |
| RCL 571 | Design of Thermal Systems |
| RCL 572 | Design for Environment |
| RCL 573 | Renewable Energy Systems |
| RCL 578 | Energy Efficient Manufacturing |
| RCL 583 | Advanced Photovoltaics |
| RCL 590 | Special Problems in Renewable \& Clean Energy |
| RCL 595 | Renewable \& Clean Energy Project |
| RCL 599 | Renewable \& Clean Energy Thesis |
| Any approved engineering energy/sustainability related elective |  |
| Total Hours |  |

## Minor in Aerospace Engineering (AAE)

This minor is open to chemical, civil, and mechanical engineering majors. The program provides a strong background for career specialization in the fields of aircraft and aerospace engineering.

Select four courses from: 12

| AEE 558 | Computational Fluid Dynamics |
| :--- | :--- |
| MEE 225 | Introduction to Flight |
| MEE 401 | Aerodynamics |
| MEE 409 | Aerospace Structures |
| MEE 425 | Aerospace Design |
| MEE 440 | Flight Vehicle Performance |
| MEE 413 | Propulsion |
| Approved AEE related elective | 12 |

Total Hours

## Minor in Human Movement Biomechanics (HMB)

This minor focuses on the theory and techniques in the field of biomechanical engineering to understand the kinematics and kinetics of human motion. Courses in the minor will prepare students to apply mechanical engineering concepts to solve clinical, occupational, and sports biomechanics problems.

MEE 230 Introduction to Biomechanics 3
MEE 430/530 Biomechanical Engineering 3

| HSS 305 | Human Anatomy |  |
| :---: | :--- | :---: |
| or BIO 475 | Human Anatomy | 3 |
| Select one: |  | 3 |
| MEE 450 | Experimental Methods in Biomechanics |  |
| MEE 531 | Experimental Methods in Biomechanics |  |
| Approved minor elective | 12 |  |

## Minor in Mechanical Systems (MES)

This area concentrates on the study of design and analysis as well as modeling and control of mechanical systems. The activities in this area include, but are not limited to, computer-aided design, kinematic synthesis and analysis, acoustics and structural dynamics, noise and vibrations control, system modeling and identifications, and dynamics systems and control.

| Select three courses from: |  |
| :--- | :--- |
| ECE 416 | Introduction to Industrial Robotic Manipulators |
| ECE 545 | Automatic Control |
| MEE 428 | Mechanical Design II |
| MEE 430/530 | Biomechanical Engineering |
| MEE 434/537 | Mechatronics |
| MEE 503 | Introduction to Continuum Mechanics |
| MEE 519 | Analytical Dynamics |
| MEE 520 | Theoretical Kinematics |
| MEE 521 | Kinematic Principles in Design |
| MEE 522 | Geometric Methods in Kinematics |
| MEE 523 | Engineering Design Optimization |
| MEE 527 | Automatic Control Theory |
| MEE 535 | Advanced Mechanical Vibrations |
| MEE 545 | Computational Methods for Design |
| MEE 546 | Finite Element Analysis I |
| MEE 547 | Finite Element Analysis II |
| MEE 579 | Computer Aided Mechanical Design |
| Required: |  |
| MEE 203 | Intro to Mechanical Innovation |
| Total Hours |  |

1 Approval of Department Chair needed.

## First Year

| Fall | Hours Spring | Hours |
| :--- | :---: | ---: |
| ENG 100 (Satisfies CAP Writing Seminar) | 3,4 CMM 100 | 3 |
| PHL 103 (Satisfies CAP First-Year Hummanities | 3 REL 103 |  |
| Commons) | (Satisfies | 3 |
|  | CAP First |  |
|  | Year |  |
|  | Hummanities |  |
|  | Commons) |  |
| HST 103 (Satisfies CAP First-Year Hummanities | 3 MEE 104L | 2 |
| Commons) |  |  |
| PHY 206 | 3 CHM 123 | 3 |
| MTH 168 (Satisfies CAP Math Requirement) | 4 CHM 123L | 1 |
| EGR 103 | 2 MTH 169 | 4 |
| EGR 100 | 0 EGR 100 | 4 |
| EGR 102 | 0 MEE 101 | 0 |
|  | $18-19$ | 0 |


| Second Year |  |  |
| :---: | :---: | :---: |
| Fall | Hours Spring | Hours |
| ENG 200 (Satisfies CAP Second Year Writing Seminar) | 3-4 SSC 200 | 3 |
| EGR 201 | 3 EGM 202 | 3 |
| PHY 207 | 3 MEE 314 | 3 |
| MTH 218 | 4 MTH 219 | 3 |
| EGR 202 | 3 EGR 203 | 3 |
| MEE 200 (or COP 200) | 0 EGR 203L | 1 |
|  | 16-17 | 16 |
| Third Year |  |  |
| Fall | Hours Spring | Hours |
| CAP PHL or REL | 3 CAP PHL or REL | 3 |
| MEE 321 | $\begin{aligned} & 3 \text { MEE } 344 \text { (or } \\ & 478 \text { ) } \end{aligned}$ | 3 |
| MEE 312 | 3 MEE 341 | 3 |
| MEE 312L | 1 Open Elect | 3 |
| EGM 303 | 3 MEE 410 | 3 |
| MEE 308 | 3 MEE 410L | 1 |
| MEE 300 Professional Development I for Juniors | 0 |  |
|  | 16 | 16 |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| CAP Art | 3 CAP HST | 3 |
| MEE 431L | 2 MEE 432L <br> (Satisfies <br> CAP <br> Capstone Requirement) | 3 |
| MEE 427 | 3 MEE Elect | 3 |
| MEE 439 | 4 Open Elect | 3 |
| MEE Elect | 3 MEE 460 | 3 |
| MTH/SCI EL | 3 MEE 400 | 1 |
|  | 18 | 16 |

Total credit hours: 132-134

## Courses

MEE 100. Introduction to Mechanical Engineering I. 0 Hours
First semester of introduction to Mechanical Engineering. Seminars on course selection, campus policies, safety, and health. Introductions to campus services for learning, counseling, coop and job placement. Weekly meeting of first-semester, first-year mechanical engineering students. Orientation to engineering problem solving and team building through hands on applications.

MEE 101. Introduction to Mechanical Engineering II. 0 Hours
Second semester of introduction to Mechanical Engineering. Seminars on course selection, campus policies, safety, and health. Introductions to campus services for learning, counseling, coop and job placement.
MEE 104L. Solid Modeling in Design. 2 Hours
Introduction to engineering graphics and visualization. Instruction on sketching methods and proper techniques for parametric, solid modeling using computer aided design (CAD) software. Students will interpret and develop technical drawings that are used to communicate mechanical designs.

MEE 198. Research \& Innovation Laboratory. 0-6 Hours
Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis, and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

## MEE 200. Professional Development for Sophomores I. 0 Hours

 Exposure to breadth of Mechanical Engineering and opportunities available to students including minors and concentrations, research, and student organizations. Registration required for all MEE sophomores. Prerequisite(s): MEE 101.MEE 201. Professional Development for Sophomores II. 0 Hours Exposure to breadth of Mechanical Engineering and opportunities available to students including minors and concentrations, research and student organizations. Registration required for all MEE sophomores.

## MEE 203. Intro to Mechanical Innovation. 3 Hours

Application of the innovation process with emphasis on detailed mechanical design techniques, standards and guidelines. Experience is gained by completing individual and team design projects, and generating integrated CAD models. Prerequisite(s): EGR 103, MEE 104L.

## MEE 225. Introduction to Flight. 3 Hours

An introductory course designed to provide students with a basic understanding of the multitude of disciplines that comprise the aeronautical engineering profession. A background and brief history of flight are covered. Foundational knowledge of aerodynamics, propulsion, aerostructures, aircraft performance and aerospace vehicle design. Laboratory included. Prerequisite(s): PHY 206.

MEE 227L. Computer Graphics II. 1 Hour
Advanced engineering graphics and graphical communication in engineering; introduction to project design. Prerequisite(s): MEE 104L.

## MEE 230. Introduction to Biomechanics. 3 Hours

Introduction to the field of biomechanical engineering with an emphasis on human movement. Application of engineering concepts to solve clinical, occupational, and sports biomechanics problems with a focus on experimental data analysis, kinematics, research, product design, and technical reporting. Corequisite: EGR 201 or permission of instructor. Prerequisite(s): PHY 206 or permission of instructor.

## MEE 298. Research \& Innovation Laboratory. 0-6 Hours

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis, and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.
MEE 300. Professional Development for Juniors. 0 Hours
Presentations on contemporary mechanical engineering subjects by students, faculty, and engineers in active practice; student involvement in professional and service activities. Registration required of all MEE juniors. Prerequisite(s): MEE 200 or COP 200.

## MEE 308. Fluid Mechanics. 3 Hours

An introductory course in fluid mechanics. Fundamental concepts including continuity, momentum, and energy relations. Control volume analysis and differential formulations. Internal and external flows in laminar and turbulent regimes. One-dimensional compressible flows. Prerequisite(s): EGR 202. Corequisite(s): MTH 219.

## MEE 312. Engineering Materials I. 3 Hours

Atomic structure, bonding, and arrangement in solids. Mechanical and physical properties of solids, phase equilibria, and processing of solids. Strengthening methods in solids, principles of material selection, and characteristics of non-ferrous alloys, polymers, ceramic composites, and construction materials. Corequisite(s): EGM 303; MEE 312L.

## MEE 312L. Materials Laboratory. 1 Hour

Conducting mechanical and physical tests on solids including, but not limited to tension, compression, bending, hardness, and impact. Metallographic examination of surfaces. Test standards, data reduction, analysis, interpretation, and written and oral communication of test results. Corequisite(s): EGM 303; MEE 312.

## MEE 314. Computational Methods. 3 Hours

Detailed introduction to solving engineering problems through programming in the Matlab technical computing software package. Fundamentals of algorithms, including iterative processes, arrays and logic operations. Graphing of 2D and 3D functions. Graphical user interfaces. Focus on engineering applications that utilize the mathematical techniques of linear algebra, statistics and numerical methods. Prerequisite(s): MTH 169.

## MEE 321. Theory of Machines. 3 Hours

Analysis and synthesis of mechanisms using analytical and computerbased techniques. Applications include cams, gears, and linkages such as four-bar, slider-crank, and quick-return mechanisms. Gear train specification and force analysis. Position, velocity, and acceleration analysis and mechanical advantage of a wide variety of linkage systems. Prerequisite(s): EGR 201. Co-requisite(s): MEE 314 or ECE 203.

## MEE 341. Engineering Experimentation. 3 Hours

Basic sensors and instrumentation, design of experiments, data acquisition and processing, and uncertainty and statistical analysis of data. Measurement of strain, motion, pressure, temperature, flow and sound. Measurement applications to engineering phenomena or systems. Course will utilize a mix of lecture, laboratory experiments, and demonstrations. Also a term project to provide design of experiment experience. Corequisite(s): EGR 203.

## MEE 344. Manufacturing Processes. 3 Hours

Casting processes including casting defects and design of castings; metal working processes such as extrusion, forging, rolling and wire drawing; sheet metal forming; welding processes; powder metallurgy and design principles for P/M parts, metal removal processes; forming and shaping plastics and composite materials; rapid prototyping. Design principles for manufacturability. Includes laboratory. Prerequisite(s): MEE 312.

## MEE 398. Research \& Innovation Laboratory. 0-6 Hours

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis, and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

## MEE 400. Professional Development for Seniors. 1 Hour

Presentations on contemporary mechanical engineering subjects by students, faculty, and engineers in active practice; student involvement in professional and service activities. Registration required of all MEE seniors. Prerequisite(s): MEE 300.

## MEE 401. Aerodynamics. 3 Hours

Fundamentals of steady and inviscid aerodynamic flows. Emphasis on force and moment determination for airfoils and finite wings. Prerequisite(s): MEE 308.

## MEE 409. Aerospace Structures. 3 Hours

Structural properties of wing and fuselage sections. Nonsymmetrical bending of skin-stringer wing sections. Shear stresses in thin-walled and skin-stringer multiple-celled sections. Deflection by energy methods. Introduction to finite element stiffness method. Prerequisite(s): EGM 303.

## MEE 410. Heat Transfer. 3 Hours

Fundamentals of conduction, convection, and thermal radiation energy transfer. Conduction of heat in steady and unsteady state. Principles of boundary layer theory applicable to free and forced convection heat transfer for internal and external flows. Radiation analysis with and without convection and conduction. Prerequisite(s): MEE 308.

## MEE 410L. Thermo-Fluids Laboratory. 1 Hour

Hands-on opportunities for students to gain knowledge of instrumentation used for temperature, flow, heat, and pressure measurement and to visualize thermo-fluids phenomena in a rich problem solving context. Phenomena to be studied include: boundary layer and separation phenomena, internal flow characteristics, hydraulics, conduction, convection, and combustion. Corequisite(s): MEE 410.

## MEE 413. Propulsion. 3 Hours

Principles of propulsive devices, aerothermodynamics, diffuser and nozzle flow, energy transfer in turbo-machinery; turbojet, turbo-fan, propfan engines; turbo-prop and turboshaft engines. RAM and SCRAM jet analysis and a brief introduction to related materials and air framepropulsion interaction. Prerequisite(s): MEE 308.

## MEE 415. Professional Development I. 0 Hours

Presentations on contemporary mechanical engineering subjects by students, faculty, and engineers in active practice; student involvement in professional and service activities. Registration required of all MEE juniors.

## MEE 416. Professional Development II. 1 Hour

Presentations on contemporary mechanical engineering subjects by students, faculty, and engineers in active practice; student involvement in professional and service activities. Registration required of all MEE seniors.

## MEE 417. Internal Combustion Engines. 3 Hours

Combustion and energy release processes. Applications to spark and compression ignition, thermal jet, rocket, and gas turbine engines. Emphasis on air pollution problems caused by internal combustion engines. Idealized and actual cycles studied in preparation for laboratory testing of I. C. engines. Prerequisite(s): EGR 202 or permission of instructor.

## MEE 420. Energy Efficient Buildings. 3 Hours

Provides knowledge and skills necessary to design and operate healthier, more comfortable, more productive, and less environmentally destructive buildings. A specific design target of $\mathrm{E} / 3$ (typical energy use divided by three) is established as a goal. Economic, thermodynamic, and heat transfer analyses are utilized. Extensive software development. Prerequisite(s): MEE 410.

## MEE 425. Aerospace Design. 3 Hours

Capstone Air Vehicle Design project that involves both individual and team-based conceptual and preliminary design and sizing. This course integrates the knowledge acquired from the disciplinary subjects already taken (aerodynamics, aerospace structures, propulsion, flight dynamics and intro to flight) in order to size an air vehicle based on a set of requirements. Prerequisite(s): (MEE 225, MEE 401) or permission of instructor. Corequisite(s): MEE 409.

## MEE 427. Mechanical Design I. 3 Hours

Stress and deflection analysis of machine components; theories of failure; fatigue failure of metals. Design and analysis of mechanical components such as gears, shafts, bearings and springs. Prerequisite(s): EGM 303; MEE 321.

## MEE 428. Mechanical Design II. 3 Hours

Advanced topics in stress and deflection analysis; analysis and design of mechanical elements such as gears, journal and ball bearings, belts, brakes, and clutches; principles of fracture mechanics; failure analysis; machinery construction principles. Contemporary design methods and issues associated with the product development cycle. Prerequisite(s): MEE 427.

## MEE 430. Biomechanical Engineering. 3 Hours

Application of engineering principles to clinical, occupational, and sports biomechanics topics. The course focuses on biomechanical analysis, particularly kinematics and kinetics of human movement, with emphasis on both research and product design.

## MEE 431L. Multidisciplinary Design I. 2 Hours

Application of engineering fundamentals to sponsored multidisciplinaryteam design projects. In a combination of lecture and lab experiences, students learn the product realization process and project management. Product realization topics include idea generation, proposal development, design specifications, conceptualization and decision analysis. Project management topics include cost estimation and intellectual property management. Design projects progress to the proof of concept and prototype development stages. Prerequisite(s): EGM 303, MEE 321, and (MEE 344 or MEE 478 or RCL 578, or MEE 401 or MEE 409).

## MEE 432L. Multidisciplinary Design II. 3 Hours

One hour lecture and five hours of lab per week. Detailed evaluation of the Product Realization Process focusing on conceptual design, embodiment design, final design and prototyping is taught. Analysis of the design criteria for safety, ergonomics, environment, cost and sociological impact is covered. Periodic oral and written status reports are required. The course culminates in a comprehensive written report and oral presentation. Prerequisite(s): MEE 431L.
MEE 433. Project Management \& Innovation. 1 Hour
Introduces students and teams to project management, entrepreneurship, and innovation. Topics include project management,cost estimating, time value of money, patent law, marketing, finance, and business plan development. Prerequisite(s): Junior status.

## MEE 434. Mechatronics. 3 Hours

Emphasis on the integration of sensors, micro-controllers, electromechanical actuators, and control theory in a 'smart' system for a semester long design project. Topics include: sensor signal processing, electromechanical actuator fundamentals, interfacing of sensors and actuators to micro-controllers, digital logic, and programming of microcontrollers, programmable logic controllers and programmable logic devices. Equal mix of lecture and laboratory. Prerequisite(s): (ECE 201 or EGR 201) and (ECE 201L or EGR 203L).

## MEE 438. Robotics \& Flexible Manufacturing. 3 Hours

Overview of industrial robots; physical configuration, operation, and programming of robots; actuators, drive mechanisms, sensors, vision systems, controls, and control methods for robots; economic considerations; and automated factory concept. Prerequisite(s): MEE 321.

## MEE 439. Dynamic Systems \& Controls. 4 Hours

Dynamic systems modeling with special emphasis on mechanical systems (one and two degrees of freedom). Covers both transfer function and state space modeling techniques. Analogues drawn between mechanical, electrical, fluid, and thermal physical domains. System nonlinearities and model linearization methods are discussed. Analytical solutions of linear ordinary differential equations using Laplace transformation and state space theory. Feedback control theory, including root locus and frequency response techniques. Prerequisite(s): EGM 202; MTH 219.

## MEE 440. Flight Vehicle Performance. 4 Hours

This course is intended to introduce the student to the flight mechanics of aerospace vehicles. Some familiarity with aircraft performance, static stability and control is assumed, but not required. We will use modern analysis methods to develop the topical details including: 1) a study of aerodynamics involved in-flight vehicle motion to obtain an understanding of influence coefficients; 2) use of linear algebra to develop a rational approach to modeling aircraft dynamics; 3) an introduction to modern control theory methodology; and 4) problems and examples that illustrate the use of desktop computational tools currently available. Prerequisite(s): (EGM 202; MEE 401, MEE 225; MTH 219) or permission of instructor.

## MEE 450. Experimental Methods in Biomechanics. 3 Hours

This course is focused on developing and applying advanced experimentation skills with a specific focus on techniques associated with the study of human movement. Emphasis on equipment and technology, data analysis and interpretation, statistical methods, and technical reporting. Prerequisite(s): MEE 341 Engineering Experimentation or permission of instructor.
MEE 456. Energy Systems Engineering. 3 Hours
This course is aimed at providing fundamental knowledge of thermodynamics, fluid mechanics, and heat transfer in context of Energy Systems Engineering. A Just-in-Time approach to learning and applying these topics will be used. Projects will anchor all class activities. In addition to providing knowledge and experience of thermodynamics, fluid mechanics, and heat transfer, this course seeks to provide students the analysis skills necessary to determine the importance of energy conversion technologies, with special emphasis on energy efficiency and renewable energy (tidal, hydroelectric, wind, solar and geothermal). Corequisite(s): MEE 410.

## MEE 457. Building Energy Informatics. 3 Hours

The focus of the course is the collection and analysis of energy data sets to reduce energy consumption and/or energy demand. Students will typically utilize monthly energy data from multiple buildings, real time energy data, and building energy audit data. Students will disaggregate/ aggregate data to develop energy use benchmarks, identify priority buildings/actions for energy reduction, identify problems, and estimate savings. Programming in Matlab and an introduction to sql dbase management are covered. Corequisite(s): MEE 410.

## MEE 460. Engineering Analysis. 3 Hours

Case study approach to engineering problem solving. Emphasis on breaking down problems to tractable parts, modeling physical systems and selection of solution techniques. Problems related to thermal, fluid, structural, and dynamic systems. Problems typically involve solution of ordinary and partial differential equations, Fourier analysis of periodic behavior, simulation, optimization and/or statistical analysis. Analytical and numerical solution techniques, with an emphasis on selecting the most appropriate technique and understanding the limitations of the analysis. Prerequisite(s): MEE 410.

## MEE 461. Solar Energy Engineering. 3 Hours

This course will cover the theory, design and application of two broad uses of solar energy: (i) direct thermal and (ii) electrical energy generation. The majority of the course will focus on thermal applications, with emphasis on system simulation and design for buildings and other systems. This course will expose students to the development and use of solar design and simulation tools. Most of the tools will be implemented in Excel and TRNSYS, but students are welcome to use other software tools such as Engineering Equation Solver, (EES) or MATLAB. Some of the class time will be devoted to demonstrate the development and use of these tools to solve homework problems. Corequisite(s): MEE 410.

## MEE 462. Geothermal Energy Engineering. 3 Hours

This course will cover the theory and design of three broad uses of geothermal energy: (i) heat pump applications, (ii) direct uses, and (iii) electrical energy generation. The majority of the course will focus on heat pump applications, with emphasis on ground heat exchanger simulation and design for buildings and other systems. Closed-loop, open-loop, and hybrid geothermal heat pump systems will be examined. Heating, cooling, and electricity generating applications using hot geothermal reservoirs will also be discussed. This course will expose students to the development and use of geothermal design and simulation tools. Most of the tools will be implemented in Excel, but students are welcome to use other software tools such as Engineering Equation Solver (EES) or MATLAB. The course notes explain the development and use of these tools, which will be used to solve homework problems. Corequisite(s): MEE 410.

## MEE 463. Wind Energy Engineering. 3 Hours

Introduction to wind energy engineering, including wind energy potential and its application to power generation. Topics include wind turbine components; turbine fluid dynamics and aerodynamics; turbine structures; turbine dynamics, wind turbine controls; fatigue; connection to the electric grid; maintenance; web site assessment; wind economics; and wind power legal, environmental, and ethical issues. Corequisite(s): MEE 410.

## MEE 464. Sustainable Energy Systems. 3 Hours

Survey of conventional fossil-fuel and renewable energy with an emphasis on system integration. Basic concepts of climate physics will be addressed along with estimates of fossil resources. Corequisite(s): MEE 410.

## MEE 471. Design of Thermal Systems. 3 Hours

This course integrates thermodynamics, heat transfer, engineering economics, and simulation and optimization techniques in a design framework. Topics include design methodology, energy analysis, heat exchanger networks, thermal-system simulation and optimization techniques. Prerequisite(s): MEE 410.

## MEE 472. Design for Environment. 3 Hours

Emphasis on design for environment over the life cycle of a product or process, including consideration of the mining, processing, manufacturing, use, and post-life stages. Course provides knowledge and experience in invention for the purpose of clean design, life cycle assessment strategies to estimate the environmental impact of products and processes, and cleaner manufacturing practices. Course includes a major design project.
MEE 473. Renewable Energy Systems. 3 Hours
Introduction to the impact of energy on the economy and environment. Engineering models of solar thermal and photovoltaic systems. Introduction to wind power. Fuel cells and renewable sources of hydrogen.

MEE 478. Energy Efficient Manufacturing. 3 Hours
This course presents a systematic approach for improving energy efficiency in the manufacturing sector. Current patterns of manufacturing energy use, the need for increased energy efficiency, and models for sustainable manufacturing are reviewed. The lean-energy paradigm is applied to identify energy efficiency opportunities in industrial, electrical, lighting, space conditioning, motor drive, compressed air, process heating, process cooling, and combined heat and power systems. Prerequisite(s): (EGR 202 or equivalent) or permision of instructor.

## MEE 490. Special Topics in Mechanical \& Aerospace Engineering. 3

## Hours

Particular assignments to be arranged and approved by the department chairperson.

## MEE 493. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program.

## MEE 494. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program. Prerequisite(s): MEE 493.
MEE 498. Research \& Innovation Laboratory. 0-6 Hours
Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis, and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.
MEE 499. Special Problems in Mechanical \& Aerospace Engineering. 1-6

## Hours

Particular assignments to be arranged and approved by department chairperson.
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[^0]:    - Adhere to the Standards of Conduct as outlined in the Academic Honor Code.

[^1]:    - Online (https://flyerexpress.udayton.edu/AddFlyer.aspx)
    - In person at the Campus Card Services office in the Kennedy Union lobby

[^2]:    - Accreditation Council for Education, Nutrition and Dietetics (ACEND) for the didactic program in dietetics
    - Accreditation review Commission on Education for the Physician Assistant (ARC-PA)
    - American Bar Association (ABA) for the School of Law
    - Association to Advance Collegiate Schools of Business (AACSB International) for the baccalaureate, accounting and Master of Business Administration programs of the School of Business Administration
    - Commission on Accreditation in Physical Therapy Education (CAPTE)
    - Council for Accreditation of Counseling and Related Educational Programs (CACREP)
    - Engineering Accreditation Commission of ABET, http://www.abet.org, for programs in chemical engineering, civil engineering, computer engineering, electrical engineering and mechanical engineering
    - Engineering Technology Accreditation Commission of ABET, http:// www.abet.org, for programs in electronic and computer engineering technology, industrial engineering technology, manufacturing engineering technology and mechanical engineering technology
    - Masters in Psychology Accreditation Council (MPAC) for the Master of Arts program in Clinical Psychology
    - National Association of Schools of Art and Design (NASAD)
    - National Association of Schools of Music (NASM)
    - National Association of Schools of Public Affairs and Administration (NASPAA)
    - National Council for Accreditation of Teacher Education (NCATE)

[^3]:    Total credit hours: 128-130

[^4]:    - Bachelor of Science, Environmental Geology (p. 180)

[^5]:    - Bachelor of Arts, History (p. 198)

[^6]:    Common Academic Program (CAP)
    *credit hours will vary depending on courses selected
    First-Year Humanities Commons ${ }^{1}$
    HST 103 The West \& the World

[^7]:    - Bachelor of Science in Education, Adolescence to Young Adult Education (p. 343)
    - Bachelor of Science in Education (p. 344), Early Childhood Education (p. 344)
    - Bachelor of Science in Education (p. 345), Early Childhood Leadership and Advocacy (p. 345)

[^8]:    1 Completed with ASI 110 and ASI 120.

[^9]:    - Electronic and Computer Engineering Technology

[^10]:    Completed with ASI 110 and ASI 120.

