

University of Portland Bulletin 2021-2022



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UNIVERSITY CALENDAR

Fall Semester

2021-22	Day(s)	2022-23	Fall Semester
Aug. 23	Mon.	Aug. 29	Semester begins: Classes begin at 8:10 a.m.
Aug. 23	Mon.	Aug. 29	Late registration begins
Aug. 27	Fri.	Sept. 2	Last day to drop courses with full tuition refund
Aug. 27	Fri.	Sept. 2	Last day to register or change registration (drop/add)
Sept. 6	Mon.	Sept. 5	Labor Day (classes in session, offices closed)
Oct. 1	Varies	Oct. 3	Last day to apply for degree in May
Oct. 8	Fri.	Oct. 14	Mid-semester (academic warnings)
Oct. 11-15	Mon.-Fri.	Oct. 17-21	Fall vacation, no classes
Nov. 8-11	Mon.-Thurs.	Nov. 7-10	Online advanced registration for spring semester, seniors and juniors
Nov. 14-17	Sun.-Wed.	Nov. 13-16	Online advanced registration for spring semester, sophomores and freshmen
Nov. 25-26	Thurs.-Fri.	Nov. 24-25	Thanksgiving vacation - no classes (begins 4 p.m. Wednesday)
Nov. 29	Mon./Wed.	Nov. 23	Last day to change pass/no pass
Nov. 29	Mon./Wed.	Nov. 23	Last day to withdraw from courses
Dec. 3	Fri.	Dec. 9	Last day of classes
Dec. 6-9	Mon.-Thurs.	Dec. 12-15	Semester examinations
Dec. 9	Thurs.	Dec. 15	Meal service ends with evening meal
Dec. 10	Fri.	Dec. 16	Christmas vacation begins, residence halls close
Dec. 14	Tue.	Dec. 20	All grades due in registrar's office, 9:00 a.m.

Spring Semester

2021-22	Day(s)	2022-23	Spring Semester
Jan. 10	Mon.	TBD	Semester begins: Classes begin at 8:10 a.m.
Jan. 10	Mon.	TBD	Late registration begins
Jan. 14	Fri.	Jan. 20	Last day to drop courses with full tuition refund
Jan. 14	Fri.	Jan. 20	Last day to register or change registration (drop/add)
Jan. 17	Mon.	Jan. 16	MLK Day (no classes, offices closed)
Feb. 1	Varies	Feb. 1	Last day to apply for degree in August
Feb. 21	Mon.	Feb. 27	Advanced registration for Summer Session begins
Feb. 25	Fri.	Mar. 3	Mid-semester (academic warnings)
Mar. 7	Varies	Mar. 1	Last day to apply for degree in December
Feb 28-Mar 4	Mon.-Fri.	Mar. 6-10	Spring vacation, no classes
Mar. 21-24	Mon.-Thurs.	Mar. 20-23	Online advanced registration for fall semester, seniors and juniors
Mar. 27-30	Sun.-Wed.	Mar. 26-29	Online advanced registration for fall semester, sophomores and freshmen
Apr. 6	Wed.	Apr. 12	Last day to change pass/no pass
Apr. 6	Wed.	Apr. 12	Last day to withdraw from courses
Apr. 12	Tue.	Apr. 4	Founders' Day (special schedule) - Classes with 4 p.m. or later start times are in session.
Apr. 15-18	Fri.-Mon.	Apr. 7-10	Easter vacation – no classes (begins 4 p.m. Thursday, ends 4 p.m. Monday. Monday classes with 4 p.m. or later start times are in session.)
Apr. 22	Fri.	Apr. 28	Last day of classes

Apr. 25-28	Mon.- Thurs.	May 1-4	Semester examinations
Apr. 28	Thurs.	May 4	Meal service ends with evening meal
May 1	Sun.	May 7	Commencement
May 2	Mon.	May 8	Residence halls close for graduating students
May 3	Tue.	May 9	All grades due in registrar's office, 9:00 a.m.
May 16	Mon.	May 15	Continuous registration for Summer Session

Summer Session

2022	Day(s)	2023	Summer Session
May 16	Mon.	May 15	Classes begin
Aug. 4	Thurs.	Aug. 3	Summer Session ends

THE UNIVERSITY OF PORTLAND

Notes About This Bulletin

The *University of Portland Bulletin* has been published solely for information; information as of June 1, 2021. Every effort has been made to ensure its accuracy. Its contents do not constitute a contract between the University and its students. If regulations, program requirements, or services described herein conflict with current practice the latter will prevail.

Course descriptions appear alphabetically by subject following the Information Services Division section. Course offerings and class times are published online in the Dynamic Course Schedule on the website of the Office of the Registrar. The University reserves the right to modify, change, or discontinue at any time, any element in its structure or organization, including its professional schools, departments, programs of study, undergraduate and graduate majors, and individual courses, as well as any other services offered, or fees charged.

The *University of Portland Bulletin* is published by the Office of the Provost, University of Portland, 5000 N. Willamette Boulevard, Portland, Oregon 97203-5798, Herbert Medina, Ph.D., provost, publisher.

Contacts

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Equal Opportunity and Nondiscrimination Policy

The University of Portland does not discriminate in its educational programs, admissions policies, scholarship and loan programs, athletic and other school-administered programs, or employment on the basis of race, color, national or ethnic origin, sex, disability, age, or sexual orientation. The University expressly reserves its rights and obligations to maintain its commitment to its Catholic identity and the doctrines of the Catholic Church.

The designated coordination point for University compliance with Section 504 of the Rehabilitation Act of 1973 and for the Americans with Disabilities Act (ADA) is Eric C. Barger, Vice President for Financial Affairs, in coordination with the University Health Center, Human Resources, and the Office of University Events. Mr. Barger may be contacted at:

Eric Barger
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411 Waldschmidt Hall
(503) 943-7507
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Policy on Disability and Accessibility

The University of Portland's Policy on Disability and Accessibility is available as a PDF.

Policy on Service and Support Animals

The University of Portland's Policy on Service and Support Animals is available as a PDF.

Title IX Coordinators

All inquiries concerning the application of Title IX and its implementing regulations may be referred to the University's Title IX co-coordinators or to the Assistant Secretary for Civil Rights of the Department of Education. The University's Title IX team includes:

Meg Farra
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James Peña is a confidential resource.

Statement on Inclusion

At the University of Portland, a Catholic University guided by the Congregation of Holy Cross, all dimensions of our communal life—teaching and learning, faith and formation, and service and leadership—are informed and transformed by prayer, scripture, and the Christian tradition. Our belief in the inherent dignity of each person is founded upon the social teaching of the Catholic Church. At the center of that teaching is the fundamental mandate that every person, regardless of race, color, religion, gender, sexual orientation, social or economic class, age, or disability shall be treated with respect and dignity.

Moreover, we seek to create and sustain an inclusive environment where all people are welcomed as children of God and valued as full members of our community. We condemn harassment of every kind, and assert that no one in our community should be subject to physical or verbal harassment or abuse. Further, no one shall be denied access to programs, services, and activities for any unlawful reason. We provide all who live, learn, and work at the University the opportunity to actively participate in a vibrant, diverse, intellectual community that offers a broad range of ideas and perspectives, so that we may all learn from one another.

This statement was adopted by the board of regents on May 13, 2011.

Accreditation

The University of Portland is accredited by the Northwest Commission on Colleges and Universities, 8060 165th Avenue N.E., Ste. 100, Redmond, WA, 98052-3981.

The bachelor's and master's degrees in theater are accredited by the National Association of Schools of Theatre, 11250 Roger Bacon Drive, Suite 21, Reston, VA, 20190, (703) 437-0700.

The bachelor's degree in music is accredited by the National Association of Schools of Music, 11250 Roger Bacon Drive, Suite 21, Reston, VA, 20190, (703) 437-0700.

The Dr. Robert B. Pamplin, Jr. School of Business Administration's undergraduate and graduate programs are accredited by the Association to Advance Collegiate Schools of Business (AACSB International), 777 South Harbour Island Boulevard, Suite 750, Tampa, FL 33602-5730, (813) 769-6500 (Fax: 813-769-6559).

The School of Education is accredited undergraduate and graduate level through the National Council for Accreditation of Teacher Education (NCATE) and Council for the Accreditation of Educator Preparation (CAEP), 2010 Massachusetts Avenue NW, Suite 500, Washington, D.C., 20036-1023, (202) 466-7496.

The bachelor of science degree programs in civil, electrical, and mechanical engineering are accredited by the Engineering Accreditation Commission and that in computer science is accredited by the Computing Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD, 21202, (410) 347-7700.

The School of Nursing baccalaureate, master's, and doctoral degree programs are accredited by the Commission on Collegiate Nursing Education (CCNE), One Dupont Circle, NW, Suite 530, Washington, DC, 20036-1120, (202) 887-6791.

The bachelor's degree in social work is accredited by the Council on Social Work Education, 1725 Duke Street, Suite 500, Alexandria, VA, 22314-3457, phone (703) 683-8080; Fax: (703) 683-8099; E-mail: info@cswe.org.

Documents describing the University of Portland's accreditation can be reviewed by contacting the Office of the Provost at staten@up.edu. Contact information for filing a complaint with each accrediting body is listed above; contact the accrediting agency directly for procedures for filing such a complaint.

Approvals

The School of Education is approved at the undergraduate and graduate level by the Oregon Teacher Standards and Practices Commission (TSPC): Public Service, 255 Capitol, N.E., Suite 105, Salem, OR 97310-1332, (503) 378-3586, and the Campus Alberta Quality Council, Alberta Advanced Education and Technology, Office of the Minister, Edmonton, Alberta, T5K 2B6 (780) 427-2025.

The School of Nursing is approved by the Oregon State Board of Nursing, 800 N.E. Oregon St., Suite 465, Portland, OR, 97232, (503) 731-4745.

The School of Nursing Integrative Health Coaching Program is an Approved Health and Wellness Coach Training & Education Program by the National Board for Health and Wellness Coaching (NBHWC). Graduates of this program are eligible to apply for the HWC Certifying Examination to become National Board Certified Health & Wellness Coach (NBC-HWC).

The bachelor of science degree in chemistry (option 1) is approved by the American Chemical Society, Committee on Professional Training, 1155 Sixteenth Street, N.W., Washington, DC, 20036, (202) 872-4589.

Memberships

American Association of Higher Education

American Council on Education

Association of American Colleges and Universities

Association of Catholic Colleges and Universities

Association of Governing Boards of Colleges and Universities

National Association of Independent Colleges and Universities

National Catholic Education Association

Oregon Alliance of Independent Colleges and Universities

Western Association of Graduate Schools

Consumer Information Reports

Consumer Information

The University of Portland wants to ensure that all current and prospective students, current and future employees, and the general public have easy access to important information regarding campus safety, academic regulations, financial aid availability, and other general information about the University. This information has been compiled and is available at up.edu/disclosures. Printed copies are available upon request from the Provost's office.

GENERAL INFORMATION

Introduction

The University of Portland was founded in 1901 by the Most Reverend Alexander Christie, Archbishop of Portland, with support and counsel from Rev. John A. Zahm, C.S.C., provincial of the American Province of the Congregation of Holy Cross, a Catholic religious community that shared his belief in the importance of education. In 1902, Archbishop Christie asked the Congregation to assume control of the University. For the next 65 years Holy Cross was solely responsible for the University's operation.

In 1967, as a means of ecumenical outreach and to involve lay people in the governance of the University, Holy Cross transferred control to a board of regents, but continued its commitment to offer the University the service of its members. As a result, the University of Portland is Oregon's Catholic university, governed by an independent board of regents composed of men and women of various religious denominations, with Holy Cross priests and brothers as members of its faculty, staff, and administration.

The University places superb teaching as both its first virtue and a central tenet of its mission. The five colleges of the campus — the College of Arts and Sciences, the Pamplin School of Business Administration, the Shiley School of Engineering, and the Schools of Education and Nursing — offer an education that stresses broad liberal arts learning, the development of personal skills, and the opening of the mind, the heart, and the soul. Ranked by *U.S. News & World Report* magazine as one of the ten best regional universities in the West, the University offers some 1,300 courses, 45 undergraduate programs of study, and 14 graduate degrees.

The University is situated on a bluff near the confluence of the Willamette and Columbia rivers in one of the large metropolitan areas of the West. Located in a residential section of the city of Portland, the 150-acre campus offers lawns, hundreds of trees, and beautiful buildings in a quiet, peaceful setting which is conducive to the learning process. Proximity to the river has suggested nautical names for the University's athletic teams, the Pilots, and the student publications, *The Beacon* and *The Log*.

Mission

The University of Portland, an independently governed Catholic university guided by the Congregation of Holy Cross, addresses significant questions of human concern through disciplinary and interdisciplinary studies of the arts, sciences, and humanities and through studies in majors and professional programs at the undergraduate and graduate levels. As a diverse community of scholars dedicated to excellence and innovation, we pursue teaching and learning, faith and formation, service and leadership in the classroom, residence halls and the world. Because we value the development of the whole person, the university honors faith and reason as ways of knowing, promotes ethical reflection, and prepares people who respond to the needs of the world and its human family.

The mission includes three core themes: Teaching and Learning, Faith and Formation, and Service and Leadership. The three core themes capture the essential elements of the mission and collectively express the essence of the University of Portland.

The goals/objectives supporting the core themes are:

- Core Theme: Teaching and Learning — A university with premier academic programs.
- Core Theme: Faith and Formation — A campus-wide culture that promotes human formation and integrates reason, faith, and ethical values
- Core Theme: Service and Leadership — A community that demonstrates service and leadership for the common good.

Seal of the University

The arms of the University of Portland are a green shield bearing a silver cross moline and crossed anchors. Beneath the cross and anchors are six wavy bars of silver and blue and on a blue chief, an open book with gold clasps. This is an adaptation of the arms of the Congregation of Holy Cross and the city of Portland. The motto is placed on a scroll under the shield and is "Veritas vos liberabit" ("The truth will set you free"). The supporters flanking the coat of arms are limbs of oak and laurel, symbolic of strength and success.

UNIVERSITY ACADEMIC PROGRAMS OF STUDY

The University of Portland consists of one college with 15 departments, four professional schools, and a graduate school. Undergraduate majors are available in all departments of the College of Arts and Sciences and in each of the professional schools.

The Graduate School offers advanced degrees in the schools/departments of business administration, communication studies, education, engineering, and nursing.

Students entering the University indicate the program of studies they wish to follow and will be under the direction of the dean of the college or school administering that program. Students may elect at any time to petition for a change of major or change of school.

Undergraduate Programs

College of Arts & Sciences

Biology⁷⁷, B.S., B.A.

Chemistry⁸¹, B.S.

Communication⁸⁷, B.A.

Economics⁹², B.A.

English⁹⁵, B.A.

Environmental Ethics and Policy⁹⁹, B.A.

Environmental Science¹⁰³, B.S.

French Studies¹¹⁸, B.A.

Gender, Women, and Sexuality Studies¹¹¹, B.A.

General Studies¹¹⁴, B.S., B.A.

German Studies¹¹⁹, B.A.

History¹¹⁴, B.A.

Mathematics¹²³, B.S., B.A.

Mathematics, Applied¹²⁶, B.S.

Music¹³³, B.A.

Organizational Communication⁸⁸, B.S.

Philosophy¹³⁷, B.A.

Physics¹⁴¹, B.S., B.A.

Political Science & Global Affairs¹⁴⁷, B.A.

*Pre-law study

†Pre-medicine study

Psychology¹⁴⁹, B.A.

Social Work¹⁵¹, B.A.

Sociology¹⁵³, B.A.

Criminology Track of Sociology Major¹⁵⁵, B.A.

Spanish¹²⁰, B.A.

Theater129, B.A.

Theology156, B.A.

**Law school require a bachelor's degree for admission, but no specific major is required; there is no "pre-law major" as such. Students are helped to select a program acceptable to various law schools.*

†Both chemistry and biology provide a complete preparatory program for dentistry, medicine, pharmacy, optometry, or veterinary medicine.

Dr. Robert B. Pamplin, Jr. School of Business

Accounting166, B.B.A.

Economics, B.B.A168.

Finance172, B.B.A.

Marketing174, B.B.A.

Operations and Technology Management176, B.B.A.

B.B.A./M.B.A. Program for Accounting Majors183

School of Education

Elementary EducationError! Bookmark not defined., B.A.Ed.

Secondary EducationError! Bookmark not defined., B.S.S.E.

Donald P. Shiley School of Engineering

Civil Engineering220, B.S.C.E.

Computer Science224, B.S.C.S.

Electrical Engineering229, B.S.E.E.

Mechanical Engineering233, B.S.M.E.

Post Baccalaureate Professional Computer Science Degree228, Prof-B.C.S.

School of Nursing

Integrative Health & Wellness239, B.S.

Nursing242, B.S.N.

Minor Programs

Minors consist of no fewer than 12 and no more than 18 credit hours of upper-division courses excluding prerequisites. Academic regulations governing courses applied to major programs also apply to minors.

Approved minors include:

Biology57

Business Administration178

Chemistry57

Communication58

Computer Engineering232

Computer Science224

Constitutional Studies58

Economics179

Education214

English59
 Entrepreneurship179
 Environmental Engineering223
 Environmental Policy59
 Environmental Science62
 Fine Arts63
 French64
 Gender, Women, and Sexuality Studies64
 German66
 Global Business181
 Hellenic Studies66
 History68
 Innovation236
 Integrative Health & Wellness239
 Mathematics68
 Music68
 Neuroscience69
 Philosophy70
 Physics70
 Political Science & Global Affairs70
 Psychology70
 Social Justice70
 Sociology73
 Spanish73
 Sustainability182
 Theater7373
 Theology74
 Writing74

Graduate Programs

The Graduate School offers rigorous educational experiences in a personalized learning environment. The University of Portland's graduate curricula are designed to provide candidates with the cutting-edge knowledge and skills they need to provide insightful, global, and ethical leadership within their professions, both now and into the future. See the Graduate School249 section of the *Bulletin* for descriptions of the degrees listed below, information about the curriculum for each graduate degree, and for information about non-degree graduate study.

The degrees currently offered in the Graduate School are:

Business:

Master of Business Administration (M.B.A.)253

Master of Business Administration in Nonprofit Management (M.B.A.)269

Master of Science in Finance (M.S.)263

Master of Science in Operations and Technology Management (M.S.)260

Communications Studies:

Master of Arts in Communication (M.A.)280

Master of Science in Management Communication (M.S.)281

Education:

Master of Arts (M.A.)291

Master of Education (M.Ed.)288

Master of Arts in Teaching (M.A.T.)285

Master of Arts in Higher Education and Student Affairs (M.A. H.E.S.A.)293

Doctor of Education (Ed.D.)295

Engineering:

Master of Engineering (M.E.)307

Master of Biomedical Engineering (M.B.M.E.)307

Nursing:

Doctorate of Nursing Practice (D.N.P.)311

SPECIAL ACADEMIC PROGRAMS

In addition to the major and minor academic programs, the University also offers special opportunities through which students may gain particular credentials or otherwise enhance their education.

Undergraduate Scholarly Engagement

John C. Orr, Ph.D., assistant provost for scholarly engagement & career readiness

The Office of Undergraduate Scholarly Engagement provides opportunities for students to develop as thinkers, researchers, and public intellectuals beyond the parameters of the classroom. Whether learning about scholarship opportunities, receiving assistance when writing personal statements, searching for research opportunities, or developing through the Honors Program, students who use this office are assisted in discerning a possible future and a means to reach it.

For more information, please contact the Director of Undergraduate Scholarly Engagement, Buckley Center 114, University of Portland, 5000 North Willamette Blvd., Portland, OR 97203. Telephone: (503) 943-8264. Toll free: (800) 227-4568. E-mail: scholars@up.edu.

Honors Program

John C. Orr, Ph.D., assistant provost for scholarly engagement & career readiness

Honors Program Mission

The Mission of the University of Portland Honors Program is to enhance the intellectual life of the University community by mentoring high achieving and intrinsically motivated students to serve as public intellectuals at the University and beyond. The Honors Program will foster in these passionate and gifted students a love for the life of the mind and the desire to enrich their communities.

Curriculum of the Honors Program

The Honors Program curriculum is composed of eighteen credit hours, twelve of which also fulfill requirements in the individual student's academic degree program.

Each year, Honors students take one three credit hour course that fulfills a course requirement for their academic degree program. In the first and second year, the Honors course fulfills a Core Curriculum requirement. In the third and fourth year, the Honors course fulfills an academic major course requirement.

The additional six credit hours are spread over the student's four-year career. In the first year, students enroll in HON 101, a two credit hour course that meets prior to the start of their first semester at UP. In the second year, students take HON 201, a one credit hour course, and in the third year, students take HON 301, a one credit hour course. In addition, students take two Readings Courses of their choice, normally in their third and fourth year. Readings Courses are one credit hour courses designed to offer Honors students learning experiences outside of their disciplinary academic home.

First year: HON 101 (2 credits hours) and Core Requirement (3 credit hours)

Second year: HON 201 (1 credit hour) and Core Requirement (3 credit hours)

Third year: HON 301 (1 credit hour), Readings Course (1 credit hour), and Major Requirement (3 credit hours)

Fourth year: Readings Course (1 credit hour) and Senior Honors Project (3 credit hours)

Mentored Reflection

During the first two years in the Honors Program, students focus on reflectively integrating their classes and experiences. Each student is assigned a faculty mentor to aid in this process. Mentors will meet with their students over lunch or coffee or on a walk around campus. During these encounters, discussions ensue about how ideas from classes fit together, where the student's passions are leading him or her, and what intellectual avenues he/she might want to pursue. In their sophomore and junior years, Honors students take a one-credit course each year designed to aid them in defining a possible future and charting the means to reach it. In HON 201, students develop a personal statement that can be modified for graduate school and major fellowship applications. The course culminates in a reflective retreat where students present their personal statements and receive feedback from their peers.

In HON 301, students investigate the nature of their chosen fields of study with an eye on the future. In addition to understanding what is unique about many different fields of study, students anticipate how their fields are transforming and what their entry into them will comprise in years to come. The course culminates in a project that explains these matters to students from other disciplines.

For details contact the Director of Undergraduate Scholarly Engagement, Buckley Center 114, University of Portland, 5000 North Willamette Blvd., Portland, OR 97203. Telephone: (503) 943-8264. Toll free: (800) 227-4568. E-mail: honors@up.edu.

Fellowships and Grants

John C. Orr, Ph.D., assistant provost for scholarly engagement & career readiness

The Fellowships and Grants program works with students who are applying for major scholarships, such as Truman, Rhodes, Marshall, Fulbright, among many others. The program provides assistance in identifying the appropriate grant for individual students as well as assistance in the writing and revising of the essays that each grant requires. The office also provides assistance for recommenders who are writing letters in support of student applications. The final assembly of the application is often handled by this office. Several of the major scholarships require a University endorsement, coordinated by the Fellowships and Grants program. In addition, students are encouraged to work with the office when applying for any major scholarship.

For more information, please contact the Director of Undergraduate Scholarly Engagement, Buckley Center 114, University of Portland, 5000 North Willamette Blvd., Portland, OR 97203. Telephone: (503) 943-8264. Toll free: (800) 227-4568. E-mail: scholars@up.edu.

Undergraduate Research

John C. Orr, Ph.D., assistant provost for scholarly engagement & career readiness

The Undergraduate Research program provides opportunities for University of Portland students to engage in research and creative activities by encouraging and supporting faculty and student partnerships in scholarly pursuits. In many instances, the student joins the faculty member in research that is a part of the faculty member's research agenda. In addition to exposing students to an enhanced pedagogical environment, these collaborations will assist students in honing their skills and discerning their career path and future direction. The Undergraduate Research program exists to oversee the undergraduate research experience across the institution by ensuring that students have a coherent and quality experience with clearly defined learning objectives and expected outcomes.

For more information, please contact the Director of Undergraduate Scholarly Engagement, Buckley Center 114, University of Portland, 5000 North Willamette Blvd., Portland, OR 97203. Telephone: (503) 943-8264. Toll free: (800) 227-4568. E-mail: ur@up.edu.

Franz Center for Leadership, Entrepreneurship, and Innovation

Dave Houghlum, Ph.D., director of leadership

Kay F. Molkentin, M.B.A., director of entrepreneurship

Salvador Orara, M.F.A., director of innovation

The Franz Center for Leadership, Entrepreneurship, and Innovation provides students, faculty, and staff with the opportunity to develop boundary crossing mindsets. The vision is to provide students with the abilities to solve ultra-complex problems of the future in a diverse, multi-cultural, rapidly changing, global society and who will possess the wisdom, drive, and curiosity to give back to the world. Students who choose to pursue and complete any of these programs gain an advantage of developing a unique background that differentiates them from fellow graduates and inevitably practitioners within their respective domains and practices. The Franz Center is devoted to increasing the capacity of every student on campus to be a values-based leader, entrepreneur, and innovator.

The Franz Center for Leadership, Entrepreneurship, and Innovation is located in Franz Hall. For further information, visit www.up.edu/franzcenter or contact the Franz Center at (503) 943-7769, franzcenter@up.edu.

Entrepreneur Scholars Program

Kay Molkentin, M.B.A., director of entrepreneurship

The Entrepreneur Scholars Program is a comprehensive entrepreneurial development program incorporating classroom activity and extensive applied experience, cultivating the entrepreneurial mindset and skillset to “make ideas happen.” The mission of this program is to enable high potential students to transform ideas, create value, solve problems, develop new products and services, and impact the world through their lives and careers. Participation is by application, is open to students from all disciplines, and is limited to 25 students per year. Students generally apply in the sophomore or junior year for participation in the next academic year. As a 9-credit hour program, students complete three required 3-credit hour courses: ENT 480 *Creating a World-Class Venture*, ENT 481 *Entrepreneur Apprenticeship*, and ENT 482 *Global Entrepreneurship*. With two additional 3-credit courses, students can achieve the minor in entrepreneurship. Each Entrepreneur Scholar pays \$4,000, which covers most of the costs of this unique combination of classroom work, interaction with world class entrepreneurs and enterprises, and domestic and international travel. Scholarships are available for students with financial need and made possible through the generosity of individual and corporate donors. Past experiences have taken place in Australia, Brazil, Chile, China, Malaysia, South Africa, the United Arab Emirates, Vietnam, and Ukraine, as well as locally and in U.S. business centers. Entrepreneur Scholars is the only program globally to have twice received the United States Association of Small Business and Entrepreneurship (USASBE) Specialty Model Program Award.

For more information about the program, visit the Entrepreneur Scholars website or contact Kay Molkentin, director of entrepreneurship, University of Portland, 5000 N. Willamette Blvd., Portland, OR 97203-5798. Telephone (503) 943-7782, molkenti@up.edu.

Innovation Minor Program

Salvador Orara, M.F.A., director of innovation

The innovation minor provides a formal structure to introduce and develop the innovative mindset. The innovative mindset understands and applies design as the synthesis of thought and action in identifying and solving problems and imagining new futures. Practices of engagement, social inequities, technological advancements, environmental change: everything in this world has been designed. Through project-based coursework embedded with experiential learning opportunities students gain skillsets found in practices of design strategy, ethnographic fieldwork, making and prototyping, and persuasive storytelling. The experience culminates in a team-driven industry sponsored practicum that may engage with an individual, a family, a local community, organization, the city of Portland, and beyond.

Limited to 25 students, the program is open to all majors and concentrations creating spaces for interdisciplinary collaboration and opportunities for students to push the boundaries of their areas of interest. Students are encouraged to apply in their first or second year with each cohort starting in the Spring semester. As a 15-credit program, students complete four required 3-credit courses and an additional 3-credit elective. The innovation minor courses are: INV 200 *Solving Problems and Imagining New Futures*, INV 300 *Design Ethnography*, INV 350 *Critical Making and Prototyping*, and INV 400 *Transdisciplinary Practicum*. Students are encouraged to consult with their academic advisors for more information on how the innovation minor courses may count towards professional electives or outside electives.

The Innovation Minor website for examples of the student experience. For more information about the program contact Salvador Orara, director for innovation, University of Portland, 5000 N. Willamette Blvd., Portland, OR 97203-5798. Telephone (503) 943-7841, email orara@up.edu.

Leader Certificate Program

David Houghlum, Ph.D., Director of Leadership

The University’s Leader Certificate Program is focused on preparing the next generation of leaders with the knowledge, tools, and mindset that model, motivate, and engage others to make right and just choices for the common good. The one-credit course Foundations of Leadership (LDR 225) introduces students to the program. During this course, students explore what it means to be a leader using the 7 Leader Habits within Common Leader Vocabulary, assess and understand their strengths, explore several leadership theories, and create a personalized leader development plan. Scholarships may be available to students in need of financial assistance. The one-credit Leadership Practice (LDR 325) is the experiential component of the program. During this course, a leader coach guides each student along his or her journey consisting of 3 leader habit development opportunities. The one-credit course Applied Leadership Reflection (LDR 425) is taken by students during their final semester in the program. The culmination assignments of a student’s leadership journey are a written philosophy of leadership and an updated leadership development action plan that each student will take with them into the world to increase

their capacity for good. Students who successfully complete all requirements of the program will be awarded a leadership certificate from the Franz Center.

For more information about the program, contact the Franz Center for Leadership, Entrepreneurship, and Innovation, University of Portland, 5000 N. Willamette Blvd., Portland, OR 97203-5798. Telephone (503) 943-7769.

Garaventa Center for Catholic Intellectual Life and American Culture

Karen E. Eifler, Ph.D., co-director

Rev. Charles B. Gordon, C.S.C., Ph.D., co-director

Sarah Nuxoll, program assistant

The University of Portland Garaventa Center for Catholic Intellectual Life and American Culture was dedicated in 2005 as a gift from the Garaventa family of Concord, California.

The Garaventa Center explores and deploys the fruits of faith, reason, and imagination that constitute the Catholic intellectual tradition to illuminate and enliven something that is implicit but often unregarded: the working of grace in human communities. The Garaventa Center fosters an ongoing conversation that is spiritually, morally, and ethically grounded through a variety of programs including lectures, podcasts, multi-disciplinary symposia, and art exhibits. The Garaventa Center is especially committed to challenging members of the University of Portland and the broader Catholic community to draw on the wisdom and living tradition of the Church and the Congregation of Holy Cross to integrate faith and reason into every facet of their lives.

The University of Portland Garaventa Center for Catholic Intellectual Life and American Culture is located in Suite 330 in Franz Hall and can be contacted at (503) 943-8014 or eifler@up.edu. For the latest information on upcoming programs, consult the Garaventa Center website.

Air Force ROTC Air and Space Studies

Col. Robert (Scott) Grainger, professor of air and space studies

Faculty: Cowan, Heimermany, Raitt, Zander

Air Force Reserve Officer Training Corps (AFROTC) is a three or four-year college-based program designed to educate and train men and women to become officers in the United States Air Force. Each semester, cadets participate in air and space studies, leadership laboratory, and physical training where they will grow mentally and physically while acquiring the leadership skills to become commissioned officers in the U.S. Air Force. AFROTC offers students a pathway to enter the U.S. Air Force as second lieutenants following graduation.

For the first two years in AFROTC, students are enrolled in the General Military Course, consisting of three credit hours per term, with no military obligation. The summer between sophomore and junior year, students compete to attend Field Training, a two-week training in which cadets are evaluated on their potential to be Air Force officers. Upon completion of Field Training, cadets enter the Professional Officer Course, consisting of five credit hours per term, where they participate in planning, organizing, and conducting the Leadership Laboratory training.

The three-year program is similar to the four-year program but requires students in their first year of AFROTC to be concurrently enrolled in both first-year and sophomore courses, a total of four credit hours per term. This option is only offered to fall term sophomores or students with three years left until graduation.

AFROTC offers a variety of scholarships that vary from high school and in-college programs. Visit the AFROTC Scholarship website for more information.

Entry Requirements: All students accepted into the Professional Officer Course during junior or senior year must:

1. Be a citizen of the United States.
2. Successfully pass a physical examination (paid for by the Air Force).
3. Successfully pass the Air Force Physical Fitness Assessment.
4. Meet minimum predetermined academic and qualitative selection standards.

For further information about the academic program, cadet life, or scholarships, visit the University of Portland AFROTC site or contact the Air and Space Studies Program, University of Portland, 5000 N. Willamette Blvd., Portland, Oregon 97203-5798. Email: rotc695@up.edu, Phone: (503) 943-7216 or toll free (800) 227-4568, ext. 7216,

Army ROTC Military Science and Leadership

LTC Jeremy Rockwell, Professor of Military Science and Leadership

Faculty: Averkamp, Deville, Harrison, Ramirez

The University of Portland, in cooperation with the U.S. Army, established the Department of Military Science and Leadership to operate the Army Reserve Officer Training Corps (ROTC). Army ROTC develops leaders through practical study and immersive training experiences while providing numerous scholarship opportunities and incentives. Students who successfully complete all ROTC requirements earn a commission as an officer in the U.S. Army while achieving a degree (undergraduate or graduate) in an academic discipline of their choice. First- and second-year courses are open to any University student and may be taken without obligation to the U.S. Army.

Program Description

Army ROTC is traditionally a four-year program. Individuals with prior military service, members of Reserve or National Guard units and summer ROTC leadership training course attendees may obtain advanced placement credit and enter and complete the program in two years. Normally, all students enroll in a military science leadership course, leadership laboratory and a physical fitness course per semester. The Army ROTC program consists of two phases, basic and advanced military science and leadership.

Basic Course

All students are eligible for enrollment in basic military science and leadership courses without incurring a military obligation. Requirements for completion of the basic course are MSL 101, MSL 102, MSL 201, and MSL 202, and associated labs and physical training classes. Before starting their junior semester, transfer students can attend the Basic Camp Lateral Entry (LE) course located at Fort Knox, KY, to fulfill basic military science course requirements.

Advanced Course

Upon fulfillment of the basic military science and leadership requirements, students are eligible for entrance into advanced military science and leadership course. Advanced military science and leadership consists of twelve academic credits of classroom instruction and associated labs and physical training. Students also attend a paid, five-week advanced leadership and tactics practicum, Cadet Summer Training-Advance Camp, between their junior and senior years.

In addition, advanced military science and leadership students become the student leaders for the University of Portland Pilot Battalion.

Completion of all military science and leadership requirements qualifies the student to apply for Congressional appointment as a commissioned officer in the United States Army.

Entry Requirements

All students accepted into the advanced course must:

1. Be a citizen of the United States.
2. Successfully pass the Army physical fitness test; meet height and weight standards.
3. Successfully pass a physical examination (paid for by the Army).
4. Meet minimum predetermined academic and qualitative selection standards.

For further information, contact the Army Department of Military Science and Leadership, University of Portland, 5000 N. Willamette Blvd., Portland, Oregon 97203-5798. Telephone (503) 943-7353. Toll Free (800) 227-4568, ext. 7353.

Nursing Program

Army ROTC offers challenging training for students interested in a bachelor of science in nursing degree. In addition to clinical and academic experiences, cadets learn leadership and organizational skills, enhancing their clinical decision-making and critical task management. Army ROTC pays for summer clinical and lecture classes, in addition to ROTC scholarships and University incentives. Students spend three weeks working in a military hospital.

Financial Assistance

Each advanced military science and leadership student receives a subsistence allowance of \$420 per month. Cooperative programs available with the Army Reserve and Army National Guard pay advanced military science and leadership non-scholarship students approximately \$4,000 per year for the simultaneous membership program (SMP) in Army ROTC and a Reserve or National Guard unit.

Scholarships

All first-year, sophomore, and graduate students may compete for ROTC scholarships covering full tuition and fees. All Army ROTC scholarship recipients also receive \$420 per month for up to ten months of each school year, plus a \$1,200 allowance per school year for books. Students need not be enrolled in Army ROTC to apply for and compete for two- and three-year ROTC scholarships. No commitment is incurred until the student accepts an offered scholarship and receives payment for school expenses. For more information, call the Army ROTC department at (503) 943-7353.

Sojourner Scholar Certificate Program

Eduardo R. Contreras, Ed.D., associate provost for international education, diversity, and inclusion

The Sojourner Scholar Program is a certification program that allows students various pathways within their degree programs to demonstrate the highest level of the University's Global and Intercultural Learning Outcomes. A Sojourner Scholar is prepared to work in the world on global issues with care and understanding for the complexity of human interactions and how they are expressed in cultures around the world. A Sojourner Scholar can use a second language confidently as a means of bridging cultures and developing empathy and shared understanding in a variety of contexts.

Elements of the Program

Second-language proficiency and significant intercultural and international undergraduate experiences are key components of the program. Sojourner Scholars will work closely with a faculty mentor in their degree programs to create a pathway and to present their experiences and work to the University of Portland community.

I. Language Requirement:

All Sojourner Scholars must demonstrate proficiency in at least one language other than English. This is defined as achieving the equivalent of Intermediate High in French, Intermediate High in Spanish, Intermediate High in German according to the ACTFL Proficiency Guidelines, or for other languages the equivalent level according to the Defense Language Institute.

II. Required Courses:

All Sojourner Scholars will be required to take:

1. POL 205 World Politics — 3 credit hours
2. An intercultural competence course from the following — 3 credit hours:
 - SW/SOC 325492 Cultural Diversity and Cultural Competence
 - CST 431379 Intercultural Communication and Identity
 - CST 411379 Communication Across Barriers
 - CST 432379 Gender and International Development.

Other intercultural competence courses may be added to this list upon petition to the CISGO Executive Committee.

1. One course in Political Science or History from the following — 3 credit hours

- HST 251, HST 254438, HST 256438, HST 346440, HST 347440, HST 351440, HST 354440, HST 355440, HST 356440, HST 375441
- POL 302, POL 350480, POL 353480, POL 371481, POL 372, POL 376481, POL 377, POL 462
- 1. Prior to the first study abroad experience, Sojourner Scholars must take CHN/FRN/GRM/SPN 191 Maximizing Study Abroad — 1 credit hour
- 2. Sojourner Scholar Seminar. In this seminar, students will create a portfolio that will demonstrate how they have accomplished the outcomes of the program. — 1 credit hour

Total credit hours of required courses: 11

*Note: In the case that a student has completed a course that is equivalent to a required course, the student may submit a petition for a Sojourner Scholars course exception to the Executive Board of the Collaborative for International Studies and Global Outreach (CISGO.)

III. Courses in students' degree programs (6 credit hours). Some or all of these courses may be taken abroad.

Students in CAS:

Two additional courses from the following (6 credit hours total):

- Any upper-division CHN, FRN, GRM, SPN above 202 (except for SPN 307)
- ECN 426, ECN 440
- ENG 301, ENG 302, ENG 326, ENG 329, ENG 337, ECN 440, ENG 337, ENG 338, ENG 371, ENG 372, ENG 373, ENG 375, ENG 401, ENG 404
- ENV 314, ENV 324, ENV 348
- HST 330, HST 332, HST 333, HST 334, HST 335, HST 342, HST 346, HST 347, HST 351, HST 354, HST 355, HST 356, HST 357, HST 358, HST 359, HST 375
- MUS 309, MUS 411, MUS 414
- PHL 331, PHL 336, PHL 338, PHL 339, PHL 371, PHL 372, PHL 373, PHL 374, PHL 410
- POL 321, POL 348, POL 350, POL 351, POL 353, POL 371, POL 372, POL 376, POL 377, POL 450, POL 462, POL 470
- PSY 450
- SW/SOC 325, SOC 333
- SW 468/SPN 468
- THE 333, THE 351/451, THE 352/452

Note: Professional school students with a second major in the College of Arts & Sciences may follow the CAS pathway or the pathway associated with their primary major.

Students in Pamplin School of Business:

Two additional courses from the following (6 credit hours total):

- BUS 360
- BUS 441
- BUS 443
- ECN 440
- ECN 426
- ECN 429

Students in School of Nursing:

Two additional courses/sections (6 credit hours total):

One NRS 4XX - specific course will be developed to meet the criteria for the program. The second course will be designated separate sections of NRS 440 Social Justice and Population Health. These courses will explore the differences in healthcare culture and delivery in other countries, and specifically evaluate the health outcomes of those in the target population.

Additionally, the following opportunity is available to upper division nursing students:

- Participation in the capstone experience with Faith in Practice

Students in School of Education:

Two additional courses from the following (6 credit hours total):

- ED 330
- ED 404
- ED 407
- ED 409
- ED 410
- ED 454
- ED 481

Note: Specific programs within these schools may develop special pathways by petitioning the CISGO Executive Board.

IV. Abroad Experiences:

All Sojourner Scholars must have at least one significant international/intercultural experience meeting the requirements described below. In some cases, a student may have two or more international/intercultural experiences none of which by themselves meet the requirements, but which taken together are able to do so. It is the responsibility of the student to make the case in the portfolio that the learning outcomes have been met through the conjunction of these experiences.

1. Experiences must meet 4 of the 7 criteria for the Sojourner Level of Immersion listed here:
 - a. Duration — 12 weeks to one year
 - b. Required language — work or instruction is conducted mostly in the host language
 - c. Faculty (or supervisor) interaction — mostly host faculty or supervisor, e.g., direct university enrollment with host faculty
 - d. Course work — advanced course work in host language only
 - e. Mentoring or guided cultural reflection — orientation, re-entry program, ongoing reflection program, and required participation in-country activities or mentorship
 - f. Experiential learning initiatives — extensive community service, volunteering, local club activities, language exchange, etc.
 - g. Housing — homestay, international student dorm, or host roommate
2. The student may combine several abroad experiences in making their case for Sojourner designation.

Note: If the student's destination host language is English, students will be asked to describe the ways in which American English differs from the English spoken in their host country in an essay that demonstrates their understanding of the nuances between different types of English. For Sojourner Scholar designation, the student who studies in an English-speaking country will also need to demonstrate proficiency in a language that is not English.

V. Portfolio

All Sojourner Scholars will compile a portfolio of work (which will include a final paper) that they will use to document how they have achieved the learning outcomes of the program. Their Sojourner faculty mentor will advise them in putting together

the experiences and documentation that will form their portfolio. Additionally, the one-credit Sojourner Scholar Seminar will support and guide them in assembling their portfolio. The CISGO Executive Board will evaluate the completed portfolios and students will present their portfolios in a public presentation open to the University of Portland community.

For further information, contact the Collaborative for International Studies and Global Outreach (CISGO), 5000 N. Willamette Blvd., Portland, OR 97203-5798, (503) 943-7857, or contrera@up.edu

World Citizen Certificate Program

Eduardo R. Contreras, Ed.D., associate provost for international education, diversity, and inclusion

The World Citizen Program is a certificate program that allows students various pathways within their degree programs to demonstrate the intermediate level of the University's Global and Intercultural Learning Outcomes. A World Citizen can work successfully with partners from other cultures locally and abroad and has a good understanding of how one's own culture informs and influences one's worldview, values, and beliefs. World Citizens achieve intermediate second-language proficiency and are able to use their second-language skills to accomplish everyday interactions.

Elements of the Program

I. Language Requirement

All World Citizens must demonstrate proficiency in at least one language other than English. This is defined as achieving the equivalent of Novice-High to Intermediate-Low in Chinese, French, German, Spanish, or for other languages at the equivalent level according to the Defense Language Institute. This may be demonstrated through the STAMP 4S exam (given on campus for French, Spanish, German, and Chinese) or through an alternative means that can be explained by the student in the portfolio.

II. Required Courses

Every World Citizen will be required to take:

1. POL 205 World Politics — 3 credit hours
2. One intercultural competence course — 3 credit hours:
 - SW/SOC 325 Cultural Diversity and Cultural Competence
 - CST 431 Intercultural Communication and Identity
 - CST 411 Communication Across Barriers
 - CST 432 Gender and International Development

Other intercultural competence courses may be added to this list upon petition to the CISGO Executive Committee.

Total credit hours of required courses: 6

III. Courses in students' degree programs (6 credit hours). Some or all of these courses may be taken abroad.

Students in the College of Arts & Sciences:

Two additional courses from the following (6 credit hours total):

- Any upper-division CHN, FRN, GRM, SPN above 202 except for SPN 307
- ECN 426, ECN 439, ECN 440
- ENG 301, ENG 302, ENG 326, ENG 329, ENG 337, ENG 338, ENG 371, ENG 372, ENG 373, ENG 375, ENG 401, ENG 404
- ENV 314, ENV 324, ENV 348
- HST 330, HST 332, HST 333, HST 334, HST 335, HST 342, HST 346, HST 347, HST 351, HST 354, HST 355, HST 356, HST 357, HST 358, HST 359, HST 375

- MUS 309, MUS 411, MUS 414
- PHL 331, PHL 336, PHL 338, PHL 339, PHL 371, PHL 372, PHL 373, PHL 374, PHL 410
- POL 321, POL 348, POL 350, POL 351, POL 353, POL 356, POL 371, POL 372, POL 373, POL 374, POL 376, POL 377, POL 450, POL 453, POL 455, POL 462, POL 470, POL 474
- PSY 450
- SW/SOC 325, SOC 333
- SW 468/SPN 468
- THE 333, THE 351/451, THE 352/452, THE 358/458

Note: Professional school students with a second major in the College of Arts & Sciences may follow the CAS pathway or the pathway associated with their primary major.

Students in Pamplin School of Business:

Two additional courses from the following (6 credit hours total):

- BUS 360
- BUS 441
- BUS 443
- ECN 440
- ECN 426
- ECN 429

Students in School of Nursing:

Two additional courses/sections (6 credit hours total):

One NRS 4XX - specific course will be developed to meet the criteria for the program. The second course will be designated separate sections of NRS 440 Social Justice and Population Health. These courses will explore the differences in healthcare culture and delivery in other countries, and specifically evaluate the health outcomes of those in the target population. Additionally, the following opportunity is available to upper division nursing students:

- Participation in the capstone experience with Faith in Practice

Students in School of Education:

Two additional courses from the following (6 credit hours total):

- ED 330
- ED 404
- ED 407
- ED 409
- ED 410
- ED 454
- ED 481

Students in the Shiley School of Engineering

One or two of the following (3-6 credit hours total):

- EGR 480 Global Engineering
- EGR 380 Medical Instrument Repair in the Developing World

- an engineering course and/or capstone with an international component approved by Shiley School of Engineering

If only one option chosen from above, choose one of the following:

- participation in an engineering study abroad program
- participation in the Engineering Grand Challenge Scholars Program on a project that has a global component
- participation in an Engineering Co-Curricular Initiative activity that requires inter-cultural exposure
- participation in an international engineering internship

IV. Intercultural and International Experiences

All World Citizens must have at least one significant international and/or intercultural experience meeting the requirements described below. In some cases, a student may have two or more international and/or intercultural experiences which taken together meet the international and/or intercultural experience requirement. It is the responsibility of the student to make their case in the portfolio that the learning outcomes have been met through these experiences.

1. All World Citizens must participate in an intercultural and/or international experience that includes mentoring or guided cultural reflection, e.g., orientation, re-entry program, ongoing reflection program, and required participation in activities or mentorship with the host community or the local cultural community.
2. Experiences must meet 2 of 4 of the following listed criteria for the World Citizen level of Immersion. Duration must be at least six weeks:
 - a. Faculty or service/work supervisor maintains a relationship with the student while engaged in experiences, and contributes an assessment of the student's intercultural experience
 - b. Required language — able to communicate at a novice-high to intermediate-low level to fulfill day-to-day tasks in the host language while abroad or working locally within a community requiring intercultural competence and second-language proficiency.
 - c. Course work — introductory course work in second language and/or in intercultural communication
 - d. Experiential learning initiatives — extensive community service, volunteering, local club activities, language exchange, etc., while participating in the study/service/work abroad or intercultural study/service/work locally

Note: International students, whose native language is not English, may choose to demonstrate professional application of their native language and English language, plus 2 of 4 criteria listed above.

V. Portfolio and Portfolio Presentation

Each student will compile a portfolio of work that will document in an accompanying executive summary (about 1-2 pages) that they have achieved the learning outcomes of the program. Their World Citizen faculty mentor will assist them in putting together the experiences and documentation that will form the basis of their portfolio. The completed portfolio and summary will be evaluated by the CISGO Executive Committee. In addition, the student will present their portfolio in a public presentation open to the University of Portland community.

Studies Abroad

Maraina Montgomery, M.Ed., director

There are many opportunities for students at the University of Portland to study abroad. The University provides an academic-year program in Salzburg, Austria, fall and spring semester programs in Fremantle, Australia, or a spring semester in Galway, Ireland. There are also summer-study programs in Salzburg, London, Tokyo, and Quito. The University is also a member of the Independent Liberal Arts Colleges Abroad (ILACA) consortium, which offers a fall or spring semester Spanish language immersion program in Granada, Spain. In partnership with the Institute for the International Education of Students (IES Abroad), the University offers students a variety of options abroad, including a one-semester program in Nantes, France, for students interested in advanced studies in the French language. Business internships are also available at a variety of sites through IES Abroad.

For information concerning these programs, visit the Studies Abroad website at www.up.edu/studyabroad or contact the Office of Studies Abroad, University of Portland, 5000 N. Willamette Blvd., Portland, Oregon, 97203-5798. Telephone (503) 943-7857.

Australia

TBD, director

Fall or spring semester programs are available in Fremantle, the port city for Perth, Western Australia, by arrangement with the University of Notre Dame Australia, an independent Catholic institution with a wide range of offerings in the arts, humanities, social sciences, and business. The program is designed for juniors; nursing and business students may participate as sophomores. The program includes a field trip to an aboriginal community near Broome.

Galway

Spring only instruction is available in Galway, a university city on the west coast of Ireland. The program is designed for juniors with strong academic backgrounds, for study in a wide range of disciplines, especially history, literature and social sciences.

Granada, Spain

This semester program is designed to give students the full experience of Spanish life by living with a host family. Program excursions to Madrid, Toledo, and Segovia will give students a broader look at Spanish culture. Students will practice language skills and experience Spanish culture first hand. All instruction is in Spanish. Prerequisites: SPN 301 and 302. The spring program is especially appropriate for native speakers and heritage speakers. Offered both in the fall and spring.

London Summer Programs

The London programs are five-week opportunities for firsthand study of English culture. The programs are based in residential facilities in London, convenient to most major sites in the city. It is open to all qualified students after their first year.

The six-credit hour curriculum consists of two three credit hour courses taught by University of Portland professors. The courses are drawn from the arts and sciences. Specialized summer courses are also available in London for business students and nursing students.

Specialized five week summer courses are available in London for business, nursing, and science students. There are also options to take core classes. Students live in downtown London and take excursions in Greater London and Northern England.

Quito, Ecuador

On this 6-week summer program, students will have the opportunity to enhance Spanish skills in the classroom and with a home stay family. Students will also learn about the cultures of Ecuador and other Latin American countries through readings and discussions in class, and program excursions that will explore the location surrounding Quito. Excursions include visits to Mitad del Mundo (equator), Otavalo (nearby indigenous city), Atacames (Coastal city), and a tour of the Ecuadoran jungle. All program activities will be done in Spanish. These excursions are part of the program expenses.

There is also a Fall option for seniors in Social Work to take their practicum in Quito. Students must have completed SPN 301 and SPN 302 or their equivalents and be majors in Social Work.

Rome, Italy

This semester program, with an emphasis on International Relations, is designed for students in the junior year, fall or spring. The program is offered through John Cabot University in the center of Rome, near the Vatican. Students live with other international students in controlled-access apartments. Previous language experience is not required, but all students take at least one course in Italian while in Rome.

Salzburg

René Horcicka, Ph.D., director in residence

Faculty: E. Aussermair, J. Aussermair, Feldner, Hieke, Horcicka, Leitner, Nadel

Students can enhance their education at the University of Portland by participating in the University's oldest studies abroad program, which is located in Salzburg, Austria. Since 1964, the Salzburg Program, an academic year of studies in the humanities, has provided an opportunity for students to immerse themselves in a different culture, travel to all corners of Europe, and experience personal growth as a member of the University community in Salzburg.

On the fall tour, students examine firsthand the art, religion, and history of France, and Germany. The spring tour takes students to the culture treasures in Greece and Italy. A three-week break between semesters and three-day weekends allow for independent travel throughout Austria and other parts of Europe. Salzburg lies within a day's train trip to Berlin, Paris, Amsterdam, Zurich, Rome, Budapest, Prague, and many places in between.

At the University of Portland Center in Salzburg, students enroll in courses taught in English by an Austrian faculty. A German language course is also required in order to enhance each student's ability to communicate with Austrian and German people. Another important aspect is the community living situation at the University of Portland Center. All students are actively involved in the various academic, cultural, social, and spiritual aspects of the program.

The full-year Salzburg Program is open to all students, semester-only options are available for students in majors such as nursing and engineering normally for their sophomore year. The University also offers two summer sessions in Salzburg, including courses in communication, engineering, history, literature, mathematics, science, philosophy, political science, psychology, and theology.

Tokyo

An educational, cultural experience is available in Tokyo. Although a basic Japanese course is offered, this is not a language program. Instead, students participate in courses taught in English by specialists on Japan-related topics. In addition, conducted tours enable students to learn about the people of Japan firsthand. Course offerings in Asian studies discuss Japanese social structure, economics, history, art, religion, and business and management practices.

The program is open to all qualified students, with a preference for global business majors. Those interested should apply early to ensure acceptance. Satisfactory academic achievement and favorable personal recommendations are required.

Students will choose two courses from among several offered by Sophia University. Six undergraduate credits may be earned.

Initiative for Christian Antiquities

Rev. Richard Rutherford, C.S.C., Ph.D., Emeritus, director

The Initiative for Christian Antiquities is designed to support research projects across the University devoted to study and preservation of the material heritage of ancient Christianity in all its forms.

Currently two projects realize the Initiative's goals:

- **Research and Archaeology @ Pollentia (RAP)**, is an official Studies Abroad program involving UP faculty/student research teams in collaboration with University of Barcelona archaeologists. RAP is devoted to a joint study of early Christianity in the Balearic Islands, particularly an early Christian cemetery in the ancient Roman city of Pollentia on Mallorca.
- **Baptisteries of the Early Christian World** is an international collaboration developing a catalog of ancient baptismal architecture with publication projected for 2021-22 by Brill Publishers.

The Initiative maintains research contact with regional scholars and programs through its participation in the annual gathering of the Northwest Early Christian Studies Seminar.

For more information about the program, contact the Initiative for Christian Antiquities at (503) 943-4685 or ruther@up.edu. For information about past research expeditions to Pollentia, see sites.up.edu/pollentia.

Cross-Registration Program

Full-time University of Portland students may participate in a cross-registration program sponsored by the member institutions of the Oregon Alliance of Independent Colleges & Universities (OAICU).

The program allows students to take a maximum of one undergraduate course per semester on a "space available" basis at a participating institution. There is no additional cost for tuition if the student is enrolled full-time at their home institution. The program is not available during the summer semester.

Interested students should first contact their academic advisor and dean for course approval. Contact the Office of the Registrar for the OAICU cross-registration form and additional information at (503) 943-7321.

Participating institutions include Corban University, George Fox University, Lewis & Clark College, Linfield College, Mt. Angel Seminary, Multnomah University, National University of Natural Medicine, Northwest Christian University, Pacific Northwest College of Art, Pacific University, Reed College, University of Portland, University of Western States, Warner Pacific College, Western Seminary, and Willamette University.

For detailed information, email registrar@up.edu or call (503) 943-7321.

STUDENT ACADEMIC RESOURCES

Shepard Academic Resource Center

Brenda Greiner, M.A., director

The Shepard Academic Resource Center (SARC) was established under the Office of the Provost by regent Steve Shepard. Its objective is to provide access, outreach and resources for students to achieve learning excellence and academic success. The SARC is a division of academic resources, programs and advocacy for all students. It is comprised of Accessible Education Services, First Generation Student Support, First Year Experience, Learning Assistance Counseling, and the Learning Commons.

The Shepard Academic Resource Center is located in Buckley Center 101 and can be reached at (503) 943-7895 or SARC@up.edu. The center's webpage is located at www.up.edu/SARC.

Accessible Education Services

Melanie J. Gangle, M.S., manager

In keeping with the central tenets of its mission – teaching and learning, faith and formation, and service and leadership – the University of Portland is committed to the full access and inclusion of all qualified students in its programs. It is the policy of the University to ensure that students with disabilities have equal opportunity for participation in the University's academic programs and activities, in accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Amendments Act.

Accessible Education Services (AES) works in partnership with students with disabilities, faculty and staff to coordinate reasonable accommodations and access to the University's programs and activities. Appropriate documentation of a disability must be provided by the student before any consideration of accommodations or support can be provided. Guidelines for providing disability documentation are available from the AES website and assistance is available from AES staff upon request. Students with disabilities are encouraged to contact the AES staff for further information during the admission process and at the beginning of each semester at (503) 943-8985 or www.up.edu/aes.

First Generation Student Support

Matthew Daily, M.Ed. associate director

The first-generation community (FGEN) serves as a resource for all students and families to ensure a smooth and successful transition from high school to college life and beyond. UP defines a first-generation student as one where neither of the student's parents/guardians has earned a 4-year college degree. Typically, the FGEN student population at UP rests between 20-25% of the student population annually.

The mission of FGEN is to create a sense of community for all, as well as to make clear all systems and resources of support available on campus. Throughout the academic year, the FGEN community sponsors workshops and social events, as well as highlights events of interest for all students. In addition, the program offers a peer to peer mentorship program open all students new to UP. Finally, leadership opportunities exist that allow FGEN students to within the FGEN community that allow for personal formation and development. Students are encouraged to browse through the resources available on the FGEN website to get a better sense of UP's FGEN community.

The FGEN community is located within the SARC, Buckley Center 101. For more information, contact FGEN at firstgen@up.edu, (503) 943-7895, or go to the FGEN webpage at www.up.edu/fgen.

First-Year Experience

Brenagh Sanford, M.Ed., assistant director

First-Year Experience (FYE) offers programs and academic outreach to first year students at key times during the first year of studies at UP. The Anchor Seminar and Workshop, led by faculty and upper-class students introduces the Core Curriculum, addresses academic life at the university, and the values of a liberal arts education while facilitating a positive transition into UP's holistic community. In coordination with the academic and student affairs divisions, FYE collaborates in planning for

first-year student registration and orientation to campus. FYE also conducts intentionally timed outreach and provides referrals to campus resources assisting first-year students to resolve issues with academic and career planning, financial aid, registration, and social adjustment. Additionally, FYE offers one on one academic coaching in the spring semester for first-year students.

Learning Assistance Counseling

Br. Thomas Giumenta, C.S.C., learning assistance counselor

The Learning Assistance program offers individual assessment, course and workshop training, and counseling opportunities to help students make more efficient use of their time, energy, and personal resources. The program focuses on academic issues which generally confront all university students, such as:

- Understanding and meeting classroom expectations
- Developing effective study strategies
- Dealing with test anxiety
- Enhancing test-taking abilities
- Improving concentration and memory
- Increasing academic motivation and self-confidence
- Balancing work, school, and social life
- Improving reading or writing skills
- Finding academic resources, support, and assistance.

Learning assistance is provided in the Learning Commons, Buckley Center 163. For more information, contact the Learning Commons at (503) 943-8716 or go to the Learning Assistance Counseling webpage at www.up.edu/sarc/services/learning-assistance-counseling.

The Learning Commons

The power of peers is central to the Learning Commons mission of facilitating students' active and self-regulated learning potential through trained peer educators.

Students can access the Learning Commons' peer educators by appointment in BC 163 or from anywhere online to enhance their learning strategies, writing, presentation, and group collaboration skills. Programs include the Writing Center, Math Resource Center, Natural Sciences Center, Language Studio, Speech and Presentation Lab, Group Work Lab, and tutoring support in nursing, business, and economics. The Commons develops facilitated Peer Assisted Learning (PAL) collaborative learning groups, and supplemental embedded tutoring for select courses. Additionally, the Commons offers study strategies tutoring in The Study.

Typically, nearly one-third of UP students take advantage of the Learning Commons' programs. The effectiveness and impact of the programs are assessed through direct observation of peer educators' engagement with students, indirect assessment through debriefings, and student surveys that measure confidence, motivation, learning strategies, and attribution of grade improvement through engagement with our peer staff.

All Learning Commons peer educators are highly trained through either for-credit training courses, certification training programs (ITTPC Level 1), or program specific training curricula.

As one of the five divisions of the Shepard Academic Resource Center, the Learning Commons provides consultative support to divisions and programs across campus to improve their efforts to increase student success. Examples include PAL and embedded tutoring programs that were developed with professional schools at UP. The Learning Commons can facilitate stakeholder planning of student success initiatives that involve peer learning support.

For more information, contact the Learning Commons at (503) 943-8002, learning@up.edu, or go to the Learning Commons webpage at www.up.edu/learningcommons.

Career Education Center

Amy E. Cavanaugh, M.S., M.B.A., director

The Career Education Center supports students in all aspects of career development, including guidance in identifying skills, interests, and values as they relate to choice of major and vocation and opportunities to learn about industries and professional pathways. The Career Education Center provides students and alumni with the resources and tools to explore and apply to meaningful professional experiences. Students can connect to a variety of work-integrated learning opportunities and meet with professional staff to discern post-graduate options, including full-time employment, post-graduate volunteer service, and graduate and professional school. The Career Education Center hosts a variety of programs that provide students an opportunity to meet employers and alumni including employer information sessions, site visits, career panels, and career fairs.

First-year through seniors from all majors are strongly encouraged to visit and utilize the Career Education Center, located in Franz Hall. Professional staff are available for individual appointments or workshops to coach students through every stage of college and career development:

- Individual career advising including internship and job search assistance, feedback on resumes and cover letters, interview preparation, mock interviews, networking, and LinkedIn.
- Career counseling appointments including choosing and changing a major as well as career exploration.
- Workshops on various topics, including resume writing, internship and job searching, how to work a job fair, and interviewing.
- Connections to employers and alumni through employer information sessions, on-campus interviews, career panels, and internship/job fairs.
- Guidance in making connections with recruiters and alumni for informational interviews.
- Access to Handshake, a centralized database for internships, summer, part-time, and full-time opportunities.
- Guidance in discernment and application to full-time jobs, post-graduate service, and graduate/professional school.

For details contact the director, Career Education Center, 5000 N. Willamette Blvd., Portland, Oregon 97203-5798. Phone (503) 943-7201 or (800) 227-4568. E-mail: cavanaugh@up.edu. Webpages: www.up.edu/career and www.up.edu/career/internship.

Internship

An internship is a form of supervised experiential learning that combines critical thinking and intentional reflection within a framework of liberal arts or professional education. By completing internships, students are able to sharpen professional skills, develop career interests and employer contacts, assess strengths, and connect classroom theories to practical, real world settings. Internships offer employers the ability to evaluate and mentor upcoming talent.

A search for a valuable internship experience requires an investment of a good deal of time, dedication, patience, and effort on part of the student. Completing an internship search process empowers students to learn valuable career development skills that will be used in future employment searches for the rest of their careers.

Internship Types

Internships vary in their ability to provide the student payment and/or academic credit for the experience. The four basic internship types include:

1) credit and paid; 2) credit and unpaid; 3) independent and paid; and 4) independent and unpaid.

Ideally, the best scenario for a student is to receive credit and payment for their internship experience so that they are being propelled further towards graduation in completion of credits while receiving payment to offset the costs of completing the internship for credit.

While independent internships do not have a formal program of delivery at the University of Portland, these experiences are regarded as extremely formative for students to gain necessary professional skills, explore career interests, and develop employer contacts to be successful post-graduation.

Credit and site hour requirements for academic credit internships

<i>Credit Hours</i>	<i>Internship Site Hours</i>	<i>Faculty Instruction Hours</i>
1	40 internship site hrs (3 hrs/wk for 14 wks) + 5 faculty instruction hrs	5
2	80 internship site hrs (6 hrs/wk for 14 wks) + 10 faculty instruction hrs	10
3	120 internship site hrs (9 hrs/wk for 14 wks) + 15 faculty instruction hrs	15

Additional topics on internships at the University of Portland:

- What makes a quality internship?
- UP internship learning agreement for students
- Faculty resources
- Employer resources

For additional information, please visit the UP internship portal at www.up.edu/career/internship.

UNIVERSITY ACADEMIC REGULATIONS

The following articles set forth the rules and regulations of the University whereby the deans administer the academic affairs of the respective college and schools under the coordinating direction of the provost. All students, including those who participate in intercollegiate athletics, are responsible for knowledge of these regulations and will be governed by them. Additional regulations for graduate students can be found in the Graduate School section.

I. Code of Academic Integrity

Academic integrity is openness and honesty in all scholarly endeavors. The University of Portland is a scholarly community dedicated to the discovery, investigation, and dissemination of truth, and to the development of the whole person. Membership in this community is a privilege, requiring each person to practice academic integrity at its highest level, while expecting and promoting the same in others. Breaches of academic integrity will not be tolerated and will be addressed by the community with all due gravity.

The University of Portland defines academic integrity as “openness and honesty in all scholarly endeavors.” This standard is to be upheld by faculty, students, administration, and staff to the extent that their roles in the University involve or influence scholarly activities, both on and off campus.

The University expects each faculty member and each student to engage in and promote scholarship in such a way that peers and experts will recognize the individual's work as a scholarly undertaking, thorough and consistent with regard to the standards of one's discipline, appropriately cautious and self-critical, and cognizant and respectful of the contributions of others, including differing or opposing points of view.

The University's interest in maintaining compliance with this standard is grounded in nothing less than its identity as a scholarly community in the Roman Catholic tradition. As a Roman Catholic institution of higher learning, the University seeks to provide an educational opportunity for its students within a Judeo-Christian context that promotes respect, honesty, and fairness in service to God and neighbor. In the words of its mission, the University is committed to providing “an environment that fosters development of the whole person,” including the moral and ethical self, and to promoting “a concern with issues of justice and ethical behavior” that is “central to the daily life of the University.”

As a scholarly community, the University believes that it is vital to the academic process, as well as desirable in itself, to maintain an environment in which ideas, accomplishments, and information can be exchanged freely and creatively without misgivings as to the honesty and openness of one's colleagues. Beyond this, the University's stature and reputation as a scholarly community depend on the quality of its research and pedagogy, as well as its ability to certify its achievements in these areas. In conferring credentials, recognizing competencies, and awarding degrees, honors, promotions, and distinctions to students, faculty, and other associates of the University, it is imperative that the University have full confidence that all concerned parties have conducted themselves in accordance with its standard of academic integrity.

In line with this, the University holds that a consistent, active commitment to its standard of academic integrity not only benefits all members of the University community, but also is the responsibility of each and every member, without exception. Thus, each person who participates in the mission of the University of Portland and shares its privileges is accountable to the University not only for their own individual actions with regard to the standard of academic integrity, but also for the actions of groups of which they are a part. Furthermore, each person is responsible for encouraging academic integrity in others by means of direct communication and personal example, for discouraging breaches of academic integrity, for confronting persons who commit breaches, and for reporting breaches to the appropriate authorities.

Guidelines for Implementation of the University's Code of Academic Integrity

Examples of Violations of Academic Integrity

Violations of academic integrity include cheating, forgery and plagiarism. The following are presented as examples only, not as a comprehensive list. For further examples or more precise information, one should consult the recognized sources of authority in a particular field of study. Students should consult directly with their teachers. Ignorance of these or other breaches of academic integrity will not be deemed by the University as an excuse for failure to meet its expectations.

Cheating — Cheating is the violation of the letter or spirit of an academic endeavor in order to gain an advantage, put someone else at a disadvantage, or both. It includes, but is not limited to: [1] using or attempting to use unauthorized materials, notes,

information, and study aids on an examination; [2] copying someone else's paper; [3] fabricating or falsifying information; [4] submitting the work of another as one's own; [5] using or circulating previous examination materials without the instructor's permission; [6] submitting the same work for more than one class without the permission of both instructors; [7] accessing or using computer information without authorization; [8] encouraging, assisting, or otherwise facilitating any violation of academic integrity; [9] any form of intentional obstruction or destruction that inhibits the progress, accomplishment, or evaluation of academic endeavors in order to gain an advantage, put someone else at a disadvantage, or both.

Forgery — Forgery refers to falsifying or inventing information, data, or citations. It includes, but is not limited to: [1] fraudulently using academic records; [2] falsifying or inventing academic credentials or letters of recommendation; [3] falsifying official signatures of any member of the University community; [4] altering documents affecting academic records.

Plagiarism — Plagiarism is the use or representation of words or ideas of another without attribution, so that they appear to be one's own. It includes, but is not limited to: [1] using another's words, ideas, methodology, or formulation of a problem without proper acknowledgment; [2] using approximate wording or paraphrasing inappropriately; [3] claiming someone else's work as one's own; [4] allowing students or research assistants to gather research information without recognition of their work; [5] failure to acknowledge all sources of information or contributions to an assignment or other academic work.

Levels of Violations

All violations of academic integrity will be penalized as appropriate. In determining the appropriate penalty, consideration should be given to the knowledge-level and experience of the person committing the violation, the degree of intention in the violation, the nature of the violation, and whether or not this is a first offense or a repeat offense. The following penalties are at the discretion of the dean's office.

Level 1 — Level 1 violations may occur because of the violator's lack of knowledge in cases where this knowledge could be reasonably expected. The violation is not intentional and is the first offense. In general, the nature of the violation is minor and may involve only one assignment in a course. Penalties are educative rather than punitive, and may include: [1] making up the assignment; [2] requiring the student to rewrite a paper for a minimally passing grade; [3] requiring acquisition of specific knowledge related ethics; [4] community service for a specified number of hours.

Level 2 — Level 2 violations are of a more serious nature. The violation occurs when the violator has some knowledge or experience and the violation was committed with some degree of intent. Penalties may include: [1] an academic warning for a stated period of time (not to exceed one year) during which time any further violation will constitute grounds for a Level 3 penalty; [2] assigning no credit to the work; [3] assigning a failing grade in the course; [4] writing a short paper on the ethical issues related to the violation and what was learned from the experience.

Level 3 — Level 3 violations are of a very serious nature. The violation is intentional and premeditated. It directly benefits the violator or harms others, or both. The nature of the violation is major. Repeated Level 2 violations may constitute a Level 3 offense. Mitigating circumstances may include the acceptance of responsibility by the violator when confronted. Penalties may include: [1] academic probation for a stated period of time (may exceed one year and include the loss of some or all benefits of programs, university related scholarships, and the like); during this time any further violation will constitute grounds for a Level 4 penalty; [2] assigning a failing grade in the course; [3] restitution for damages; [4] suspension from the University for one or more semesters with notification that further violations will result in dismissal from the University; [5] withdrawal of University funding.

Level 4 — Level 4 violations are the most serious violations. The violation is intentional and premeditated. It directly benefits the violator and harms others. Repeated Level 2 or 3 violations may constitute a Level 4 offense. Penalties may include: [1] dismissal from the University; [2] permanent notation on the student's transcript; [3] restitution for damages; [4] revocation of an awarded degree.

Procedures for Addressing Violations

All individuals accused of a violation of academic integrity have the right to notice of the specific charges, a fair consideration of the charges, a fair review of the evidence, and confidentiality as allowed by law and in fairness to other affected persons.

Any person who believes that there has been a violation of the policy and wishes to report it, should report it to an appropriate faculty member or associate dean.

Process for Addressing Academic Integrity Violations

1. The faculty member will: a) Meet with the student to discuss the incident and to determine the likelihood that a violation occurred, b) Gather and preserve any relevant evidence, c) Document the incident and the evidence as soon as possible.

2. If the faculty member determines that a violation is likely to have occurred, the faculty member must report the violation to his or her associate dean and supply the relevant documentation, including a short memorandum describing the incident, the evidence and the recommended penalty. In addition, the faculty member needs to inform the student that the associate dean will set up a meeting to discuss the alleged violation. Normally the faculty member is expected to make a recommendation within one week after receiving a report or witnessing an incident.
3. Throughout the process, the faculty member should preserve the student's confidentiality to the greatest extent possible and generally not discuss the student's connection with academic dishonesty to anyone other than the associate dean.
4. The associate dean will review the material submitted and then set up a meeting with the student. After separate conversations with the faculty member, student and any other relevant witnesses, the associate dean will determine if an integrity violation has occurred. If a violation has occurred, the associate dean will determine the appropriate penalty, in consultation with the faculty member and after reviewing the student's file for previous violations. The associate dean will inform the student in writing of the charge and the penalty. The associate dean must maintain a file of all reports.
5. The associate dean of the college or school where the violation occurred will inform the associate dean of the student's college or school of the violation in writing. The associate dean from the student's college or school will generally meet with the student to discuss the incident and any previous integrity violation in their college or school. The student may be subject to additional penalties from his or her college or school.
6. All final decisions and penalties must be conveyed to the student in writing.
7. If the student is an athlete or a cadet in ROTC, the student's associate dean will report the violation to the appropriate individuals.
 - a. For athletes, the associate dean must notify in writing the Director of Academics and Student Athlete Development and the Athletics Director of the integrity violation. For ROTC students, the associate dean must notify in writing the commander of the student's detachment (Army or Air Force).

Appeals

Students may appeal the decision of the associate dean in writing to the associate provost, making clear the basis of the appeal. The appeal may be based solely on one of the following criteria: 1. The procedures for addressing violations of academic integrity outlined in the Bulletin were not followed during the student's original review; 2. New and significant evidence is available which was unknown and could not have been known at the time of the initial review; or 3. The student has been treated in a capricious or prejudiced manner. The associate provost will consult with the associate dean, the faculty member and the student involved and will review all the materials associated with the case. The student will be informed in writing of the final decision on the appeal. The decision of the associate provost is final.

II. Course Registration

1. The dates for registration of students in both semesters and summer session are set forth in the University calendar contained in this *Bulletin*.
2. Providing the general requirements for admission to the University are met, the dean of each college or school of the University has the sole right to admit and register students in his or her college or school.
3. Students will not receive credit for any class for which they are not properly registered. Students who register for a class, fail to attend, and fail to withdraw properly will be assigned a grade of F for the course.
4. No one may register for any course after the latest date for registration. Students may change courses (drop/add) with the permission of the dean of the college or school involved during the first week at the beginning of the semester.
5. Students may not register for more than 18 semester hours of credit (twelve semester hours in the summer session), without the consent of their dean.
6. The University reserves the right to cancel courses for which there is not sufficient registration, to close enrollment in courses which are filled, and to modify course offerings when necessary. Every effort will be made to announce such changes promptly.
7. The dates for closing the late registration and the latest date for dropping or adding of classes are listed in the University calendar.

8. Registration is not complete until a student has been cleared by the Office of Student Accounts (by payment of all tuition and fees by the tuition due date.) The University reserves the right to cancel the registration of any student who has not been cleared once the semester has begun.
9. Advanced undergraduate students may enroll in a graduate course for either undergraduate credit or reservation for possible graduate credit. The written approval of the department chair, dean, and graduate program director is required.
10. Certain departments/schools offer courses which represent guided inquiry by special arrangement with faculty members, or which carry varying amounts of credit based upon the level of work being submitted. These directed study or variable credit courses require the written approval of the instructor and dean of the school in which the course is offered.
11. Students who register for classes but decide not to attend for the semester, must cancel their registration in writing at the Office of the Registrar by the last day for registration. If classes have begun, students must complete a leave of absence or withdrawal form in order to cancel their registration.

III. Course Requirements

1. If an instructor is 10 minutes late, the class is considered dismissed.
2. The instructor of a class determines the requirements for the successful completion of a given course. The instructor will inform students through a written syllabus of these requirements and grading policies within the first week of the opening of the class. In those cases in which a student misses class meetings due to participation in activities which are officially approved by the provost, the student will be permitted to fulfill the missed requirements of the course.
3. As a general standard, one semester credit hour is to represent 45 hours of student involvement. One semester credit hour equals one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks. In the fall and spring semesters the portion of this involvement that is dedicated to recitation or lecture is established as 55 minutes in length per week over 14 weeks. In summer sessions and in other time-shortened arrangements an equivalent of this dedication is required exclusive of registration and final examination periods.

Curriculum committees in each college or school and the University Curriculum and Academic Regulations Committee provide periodic compliance reviews for new and existing programs to evaluate the application of its policy on credit hour across the institution to assure that credit hour assignments are accurate and reliable. Departments are responsible for submitting new course approval requests that include a detailed description of how credit value is justified. All syllabi are retained in the respective academic units.

IV. Examinations

In courses that require end-of semester examinations, the examinations are to be given only during the scheduled times published by the registrar. During the week prior to final examination week, no examinations may be given, except in laboratory practica. All classes must meet during final examination week and in accordance with the final exam schedule.

V. Grades and Credits

1. **Midterm Grades and Academic Warnings** Instructors are required to give a mid-term grade to each student in 100 and 200 level courses at the mid-point of each semester. These grades are entered in the student's record but they do not become a part of the academic history that appears on the transcript. In upper-division courses, instructors should provide either mid-term grades for the entire class, or give a written academic warning to each student who is failing or near failing. A copy of this warning will be kept on record by the Office of the Registrar.
2. **Change of Grades** No one but the instructor of a course can give a grade in that course or change a grade once given. The change of any grade other than I, IP, or the original data entry error must be justified in writing to the associate provost.
3. **Grade Report** A grade report for each student is available online during the week following the close of each semester. A paper copy will be mailed to the student's permanent address upon request. Grades will not be released or redirected over the telephone. If the student has any account balances or obligations such as tuition, library or parking fines, loans, etc., a hold will be placed on grade reports, transcripts, and/or diplomas until paid.
4. **Grading System** The grading system is based upon achievement in course work attempted. The grades and points of this grade point average (G.P.A.) system are as follows:

Points per Semester Hour Grade

A	4.0	C	2.0
A-	3.7	C-	1.7
B+	3.3	D+	1.3
B	3.0	D	1.0
B-	2.7	D-	.7
C+	2.3	F	.0

In addition, the following symbols are used:

P -- Pass

NP -- No Pass

AD -- Audit

I -- Work Incomplete

IP -- In Progress (given only for Thesis 599 and other approved courses)

W -- Withdrew (with permission)

NG -- No Class Grade Register Submitted

The G.P.A. is the total points divided by the total semester hours in which grades of A through F are received. All courses which the student does not successfully complete will be denoted on the transcript by the symbol I, IP, F, or NP.

5. **Incomplete** The grade I is allowed only with approval of the dean or the dean's representatives. An incomplete may be given when a student needs no further formal instruction but is unable to complete some requirements of the course due to circumstances beyond their control. The instructor must inform the dean or the dean's representative in writing indicating both the reasons for the incomplete and the agreed upon date for completion of the requirement (not to exceed one year). The I will convert to an F if the requirement is not completed within one year.
6. **Pass/No Pass** Certain courses, because of their content and scope, are graded on the pass/no pass basis. These courses are determined by the dean of the college or professional school which offers the courses involved upon recommendation of the faculty of a department or professional school. Such courses will not be subject to the regulations on student options below. Courses that are required by the University core, college curriculum, or departmental program may not be taken pass/no pass, except in cases where the grade mode for the course has been designated in the Bulletin by the individual school or department as pass/no pass. To fulfill the remaining credit hours for graduation, three courses may be taken pass/no pass. The student's dean or the dean's representatives must approve a student's request to take a course pass/no pass. Courses attempted under the pass/no pass system and completed successfully will carry academic credit and the designation P, while unsuccessful performance will carry no credit, but will be listed as NP on the student's transcript. However, neither result will be included in the computation of the grade point average. Grades assigned will include P for performance ranging from D- to A and NP for F. The instructor will not be made aware that a student is enrolled under the system. The grade the instructor submits will be translated into either P or an NP by the registrar. Within the parameters above, one change in registration from regular status to pass/no pass or vice versa will be allowed in a given course up to the date listed in the University calendar.
7. **Auditing Courses** Students who wish to attend classes but who do not desire credit may enroll as auditors. Regularly matriculated students may audit courses only with the approval of their dean or the dean's representatives. Auditors must furnish sufficient evidence of their ability to take the courses involved. They are not required to perform any of the work assigned in the course, nor may they take the examinations. Those who audit courses are not eligible for credit by examination in such courses, nor may auditors register for credit after the last official day to add/drop a class. No changes to or from auditor status are permitted after the last day to add/drop a class. Courses taken by audit are entered on the student's permanent record and indicated with the symbol AD.
8. **Repeating Courses** Only courses in which a grade of C-, D+, D, D-, F, or NP has been received may be repeated at the University of Portland for academic credit. A course may be repeated only once and only the latest grade is included in the computation of the G.P.A. and the total number of credit hours required for graduation. Both courses and grades will remain on the permanent academic record, with the original course denoted by the symbol E. While courses repeated at the University of Portland may change one's grade point average, equivalent courses taken at another institution, even when fulfilling University requirements, cannot be used to replace any course or grade entered on the permanent academic record or to change one's University of Portland G.P.A.

9. **Withdrawal from a Course** To receive a W, students must officially withdraw from a course in which they choose not to continue. The withdrawal is effective the date it is filed in the registrar's office, and in no instance later than the date listed in the University calendar. Students who seek an exception from this regulation for individual courses after the deadline must meet with the appropriate department head and dean or the dean's representatives who will make a recommendation to the associate provost. In no instance will a request be considered for a late withdrawal from an individual course without academic penalty that has not been forwarded with the recommendation of the dean or the dean's representatives.
10. **Leave/Readmission** Students must be continuously enrolled during fall and spring semesters or seek a leave of absence. A leave form may be secured from the associate dean of their college or school. Students must secure the requisite signatures on the form in order to obtain an approved leave. Students who are not enrolled and do not seek a leave must apply for readmission. Readmission is not automatic and requires approval by the associate dean of your college or school.
11. **Medical Leave of Absence** Medical leave of absence is designed to allow an undergraduate or graduate student to pursue treatment for medical conditions, or to accommodate students too ill to complete the semester. A granted medical leave allows a student to leave school for not more than one year without subsequent academic penalty, and with minimal financial implications. The student will have grades of W recorded for the semester of departure. For full details, please review the Medical Withdrawal Policy³⁸ found under Miscellaneous Regulations in this bulletin. Additional information around the Medical Withdrawal Policy may be found in the Financial Aid Handbook. A medical leave of absence is granted by the Office of the Provost with the recommendation of the Health and Counseling Center.
12. **Grading Appeal** A student is responsible for maintaining standards of academic performance established for each course in which the student is enrolled. A student who believes that the student's work has been improperly evaluated or that the student has been treated in a capricious or prejudiced manner, is expected to discuss the matter directly with the faculty member involved. If, after earnest inquiry, the matter remains unreconciled, the student may seek assistance through the following steps:
 - Appeal the question to the head of the department (unless the department head is a party to the grievance).
 - Submit the appeal to the dean of the academic college. The dean together with the department head will take all reasonable and proper actions to resolve the question at their level.
 - Should the aggrieved student believe that the student's rights were abridged at the departmental and college levels, the student may file a request for review with the associate provost, making clear the basis of the appeal. The associate provost will consult with the dean, the department head, and the faculty member and student involved and review all the materials associated with the case. The student will be informed in writing of the decision on the appeal. The decision of the associate provost is final.

VI. Advanced Placement

College credit can be awarded on the basis of satisfactory scores on Advanced Placement (AP) and International Baccalaureate (IB) examinations. Three or more semester hours' credit may be granted for each AP examination passed with a score of 4 or 5 and higher level IB examinations passed with a score of 5 or better. There is no grade attached to Advanced Placement or International Baccalaureate credit and it is not included in the grade point average of the student.

VII. Course Challenge

Students may challenge courses and/or receive advanced placement with credit by permission from their dean or dean's representative and on certification from the head of the department which offers the course. Courses may be challenged only once. Courses may not be challenged in which the student has been previously enrolled at the University of Portland. Forms for requesting approval to challenge courses and for certifying credit are available in the Office of the Registrar, and must be presented to the dean or dean's representative before examination is taken.

VIII. Probation and Dismissal Due to Poor Scholarship

Any student who earns a semester G.P.A. below 2.0 will be placed on academic probation. A student who does not have a 2.0 G.P.A. at the 60 credit hour benchmark may be dismissed. Furthermore, the records of those students who complete fewer than 12 credit hours during a semester will be reviewed by the dean or the dean's representative. When the academic progress of such a student is judged unsatisfactory, that student will be placed on academic probation.

If at the end of the next regular semester the student is not placed on probation, the student returns to regular academic standing. A student who is placed on probation for two semesters in any twelve-month period may be dismissed from the University.

In addition, regardless of the number of semesters on probation, a student may be dismissed if, in the opinion of the dean, the student's academic progress is inadequate to assure successful continuation at the University.

A student who has been dismissed from the University for academic reasons may appeal in writing to the associate provost for a review of the initial decision, making clear the basis of the appeal. The appeal may be based solely on one of the following criteria: 1. The criteria for the initial dismissal were not followed during the student's original review; or 2. New and significant evidence is available which was unknown and could not have been known at the time of the initial review; or 3. The student has been treated in a capricious or prejudiced manner. The associate provost will consult with the dean and the student involved and will review all the materials associated with the case. The student will be informed in writing of the final decision on the appeal. The decision of the associate provost is final.

Appeal for readmission

A student who has been dismissed from the University for academic reasons may appeal for re-admission in writing to the Academic Standing Committee of the University. The letter and any supporting documents should be addressed to the associate provost, who is the chair of the Academic Standing Committee. It is only with the approval of this committee that a student, once dismissed, may be re-admitted to the University.

IX. Transfer of Credits

1. Transfer to the University or from one college or school within the University to another may be made only with the approval of the dean in each area. For students who transfer within the University, courses common in requirements to all schools and divisions of the University will be accepted in transfer and both credit earned and grade received shall be used in computing the G.P.A. of the student. Other courses may be accepted at the discretion of the dean and shall be used in computing the G.P.A.
2. If, after enrolling in a degree program at the University of Portland, a student wishes to take a course at another institution and use it toward the degree, prior approval of the student's dean should be obtained. Official transcripts of credits earned in other institutions (high school, college, or university) must come directly from the school to the University of Portland.
3. Transfer credits from quarter hour institutions are not equivalent to semester hours at the University of Portland. One quarter credit hour equals .67 of a semester credit hour.
4. The University of Portland only accepts transfer credits with a grade of C or above.

X. Student Classification

1. Undergraduate degree-seeking students are classified as freshmen if they have earned less than 30 semester credit hours; as sophomores if they have earned at least 30 semester credit hours; as juniors if they have earned at least 60 semester credit hours; and as seniors if they have earned at least 90 credit semester hours.
2. Special students are those who qualify by maturity and ability to perform satisfactorily at the university level, but who fail to meet the requirements for freshman or advanced standing.
3. Non-degree seeking students (formerly called non-matriculated students) are those who have been admitted in order to register for credit but who have not been accepted into any degree program at the University. See the Office of Admissions 318 section of this *Bulletin* for specific requirements for admission to this student status.
4. Postgraduate students are those who have earned at least an undergraduate degree and are in a program that leads to a certificate or other non-degree credential.
5. Graduate degree-seeking students are those who have earned a baccalaureate degree and who have been accepted into a program leading to an advanced degree.
6. Current enrollment status is based on the number of registered semester credit hours. Undergraduate full-time enrollment is 12 semester credit hours (6 in summer). Graduate full-time enrollment is 9 semester credit hours (5 in summer).

XI. Graduation and Degrees

1. In order to earn a baccalaureate degree, students must successfully complete at least 120 semester credit hours, and more in most programs. The particular requirements in each college or school are listed under each program in this *Bulletin*. A minimum of 30 semester hours in residence at the University of Portland is required for a degree. Normally, these 30 semester hours must be those which immediately precede the completion of degree requirements. It is expected that students will complete all of the upper-division courses in their major at the University of Portland. However, the deans of the schools or colleges may accept up to 25 percent of the upper-division major course requirements in transfer from other accredited institutions. For those students completing more than one major or minor at the University of Portland, the deans or their representatives of the schools or college may apply upper division courses required of a student's major to satisfy up to 25 percent of the requirements of a second major or minor. The same rule applies to sharing upper division courses between minors. Students seeking a second baccalaureate degree from the University concurrent with the first degree are required to complete a minimum of 30 additional semester hours at the University and fulfill the common course requirements of the college or school in which the second degree is sought. Students who are admitted to the University to pursue a second baccalaureate degree after completing a first degree at the University or another accredited institution must complete a minimum of 30 semester hours at the University and must fulfill the requirements for any prerequisites as well as the common course requirements of the college or school in which the second degree is sought. If the first degree is from another accredited institution, some courses from the University Core Curriculum may also be required.
2. In addition to satisfying the above requirements, students must have a cumulative G.P.A. of at least 2.0 in courses taken at the University of Portland, and a 2.0 average in their major field.
3. The undergraduate and graduate degrees listed elsewhere in this *Bulletin* are granted by the University through the College of Arts and Sciences and the various schools. (For master's degree requirements, refer to the Graduate School 249 chapter of this *Bulletin*.)
4. Eligible candidates for graduation should file an application for degree with the registrar the semester prior to the semester in which they expect to graduate but no later than the date specified in the academic calendar.
5. Although a number of administrative and faculty advisors are ready to help students in planning and checking the progress of their degree program, the final responsibility for completing all requirements for a degree rests with the student. If a student has not satisfied all of the requirements, the degree for that student will be withheld pending adequate fulfillment.
6. Once awarded, the diploma will list the student's name, degree, and any applicable Latin honors. University of Portland diplomas do not list the student's major.

XII. Honors at Graduation

Honors for undergraduate degrees at graduation are determined one semester prior to graduation by computing the G.P.A. in all courses (both University of Portland and transfer) applicable toward graduation. Transfer students who have not completed 30 semester hours in residence by one semester prior to graduation will be evaluated at the conclusion of all work. Fall semester graduates are included with the subsequent spring semester and summer semester graduates are included with the previous spring semester in determining honors at graduation. Honors are based on the following formula: within a given college or school, summa cum laude will be awarded to the student receiving the award for high scholastic achievement and to all students receiving a 4.00 G.P.A.; maxima cum laude to the next 3%; magna cum laude to the next 7%; cum laude to the next 10%.

XIII. Miscellaneous Regulations

1. **Applicability.** Students and University personnel are bound by all published University rules and regulations.
2. **Administrative Withdrawal.** The University reserves the right to withhold or terminate the privilege of attending the University when such official action is deemed advisable or necessary in the interest of the student or of the University or both. When such action involves termination of attendance within a semester or session, it shall be termed "Administrative Withdrawal." An appropriate record shall be kept in the confidential files of the vice president for student affairs and a notation of such action shall be kept in the student's file in the Office of the Registrar.
3. **Bulletin Year.** The Bulletin year that governs a student's academic program is the Bulletin in force for the semester the student matriculates at the University of Portland. An exception to this is if the student elects to move to the current Bulletin when the student changes the degree or primary major the student is pursuing or when the student transfers within the University from one professional school or college to another. An additional exception is if a student elects to move to the

current Bulletin if there is significant change to the program of study. The academic program of students readmitted after a five year absence will be governed by the Bulletin in effect at the time the student re-enrolls. All degree requirements will be met under the provisions of a single Bulletin. In the event that a degree program is eliminated or makes significant changes to its curriculum requirements, the University will provide the opportunity for students to complete their original program in a timely fashion.

4. **Course Numbers.** The number assigned to a course indicates in a general way its academic level. Generally, courses numbered in the one hundreds (1xx) are for first-year students; courses numbered in the two hundreds (2xx) are for sophomores. Courses numbered in the three hundreds (3xx) are upper-division courses for undergraduates only. Four hundred courses (4xx) are principally for upper-division undergraduate students, but a limited number of such courses may be applied toward advanced degrees with the permission of the department head and the associate provost. Five hundred courses (5xx) are graduate courses which may be taken for undergraduate credit by advanced students with the permission of the head of the department in which the course is taught and the dean of the college. Courses numbered in the six hundreds (6xx) are graduate courses for doctoral students. Courses numbered in the seven hundreds (7xx) are reserved for continuing education credit courses ordinarily not acceptable as fulfilling requirements in programs leading to academic degrees. Course numbers in the eight hundreds (8xx) are reserved for non-credit continuing education courses. Course numbers in the nine hundreds (9xx) are reserved for continuing education courses taken for continuing education units (CEUs) only.
5. **Dean's List.** The undergraduate dean's list is compiled at the end of each semester by the Office of the Registrar. To qualify for the dean's list, a student must complete at least 12 semester hours of credit which count toward their grade point average; receive a grade of C or above in all classes which count toward their grade point average, receive no F or NP grades; and earn a semester G.P.A. of 3.50 or higher. There is no dean's list during the summer or in the Graduate School.
6. **Exceptions.** Exception to any academic regulation is permitted only for extraordinary reasons, and then only by the provost's office.
7. **Student Address.** Students are required to report in writing or online to the Office of the Registrar their off-campus, local address and any changes of address, both local and permanent, each semester. (Note: Residence hall students' addresses are automatically recorded.)
8. **Transcripts** A transcript of credit is a complete and faithful copy of the student's University academic record. Official transcripts are printed on security paper and bear the signature of the Registrar. Requests for transcripts must be made in writing including the student's signature. We are unable to accept telephone or e-mail requests since the student's signature is required to release their transcript. You must submit a separate request for each recipient and there is a limit of 3 transcripts per recipient. To order a transcript, please send an original, signed letter indicating where you would like your transcripts to be sent, or download and mail the transcript request form from our website at www.up.edu/registrar. Please include in your written request the following information: name(s) under which you may have attended; U.P. ID number; date of birth; and dates you attended the University of Portland. Transcripts are normally mailed within 2 working days of receiving the request. You can order a rushed transcript for an additional fee and it will be processed immediately. Please allow additional days for processing if you attended the University prior to 1983. The University will not issue transcripts for anyone with outstanding account balances or obligations. Note: For transcripts from previous educational institutions attended, students must contact each institution directly.
9. **University Communication** All University of Portland students, faculty, and staff are required to obtain access to the University network, the campus portal (PilotsUP,) and a University of Portland e-mail account (@up.edu) for communication purposes. Communication from University offices is posted on the campus portal or sent to the up.edu address and students, faculty, and staff are responsible for any information that is conveyed.
10. **Withdrawal: Types and Process.**

Withdrawal from all courses during the semester

Students who wish to withdraw from all courses prior to the end of a semester may obtain a request form from the associate dean of their College/School. The withdrawal process requires approval from various offices before it is complete.

Eligibility for any adjustment to tuition charges is based on the date a University Official is notified by the student that they wish to withdraw. You can obtain information regarding tuition adjustments for complete withdrawals in the Student Accounts and Financial Aid Offices. If you fail to complete the withdrawal process you will be responsible for all tuition charges and all grades submitted by your instructors. If there is a medical or emergency situation that prevents you from completing the withdrawal process yourself please contact your associate dean, the associate provost, or the director of the Shepard Academic Resource Center for assistance.

Withdrawing Permanently from the University

Students who do not plan on returning to the University may obtain a request to withdraw form from the associate dean of their College/School. Whether a student is withdrawing at the end of a semester or between semesters, they can file the form at any time in the semester preceding their permanent withdrawal. The withdrawal will be processed at the end of the semester.

Students who leave the University without completing the request form for withdrawal including the required signatures, may be charged for subsequent semesters in which they have registered. Not attending classes does not constitute withdrawal from the University.

Voluntary Medical Leave of Absence Policy

A medical leave of absence (“MLOA”) may become necessary when a student experiences a documented medical or psychological condition that significantly limits his or her ability to function safely or successfully and meet his or her responsibilities as a student at the University of Portland. In such cases, a student can request a voluntary MLOA from the University until the student and his or her medical provider believe the student is able to return to the University and achieve his or her academic goals.

This policy is designed to provide guidance regarding taking a MLOA as well as the process for returning from a MLOA. The University is committed to providing the flexibility and the individualized consideration and support necessary to help students transition back to University life at the conclusion of a leave.

Requesting a Medical Leave of Absence

Students who believe that they are experiencing a medical or psychological condition that limits their ability to function successfully at the University should consider requesting a MLOA. Such request should be made to the associate provost or designee, who may discuss other academic options that may make it possible for a student to complete the semester without taking a leave of absence. If the decision is made to seek a MLOA, the student will meet with the director of the Health and Counseling Center (HCC) or designee, at which time the process for MLOA will be explained and the student will receive the Petition for Medical Leave of Absence. The Petition for Medical Leave of Absence must be completed and returned to the director of the HCC or designee as soon as possible. Generally, the director of the HCC or designee will submit a recommendation regarding the MLOA to the Office of the Associate Provost only after receiving the completed Petition for Medical Leave of Absence and reviewing all relevant information regarding the impact of the student’s health issue upon his or her health, safety, academic, and social functioning, which may include meeting with the student or consulting with the HCC or other relevant professionals, and/or campus administrators as appropriate. If the director of the HCC or designee has recommended that the student be granted the MLOA, he or she may also provide to the student individualized recommendations designed to help the student be successful, both in academics and within the University community generally, if the student chooses to return at the conclusion of the MLOA.

If a student is granted a MLOA, he or she will receive a grade of ‘W’ (withdrawn) for each course the student is currently taking.

The deadline for submitting a request for a MLOA to the HCC is 5 p.m. on the Friday two weeks prior to the end of the semester. Applications submitted after that date will not be considered, except in extraordinary circumstances. In such circumstances, additional documentation and information may be required.

Students who are granted an MLOA may return no earlier than one full semester (fall, spring, or summer) after the leave, unless the student has submitted a case review to the associate provost and been approved to return earlier based on an individualized assessment of the student’s specific situation. A granted MLOA allows a student to leave school for up to one year (the three semesters that follow the grant of a MLOA inclusive of fall, spring, and summer) without subsequent financial or academic impact, unless approved for an extension in writing by the associate provost or designee, or by the Reenrollment Committee, as discussed below. Students should seek to return to the University when they, in consultation with their health care provider, believe that they are prepared to return to the academic and other rigors of university life.

If a MLOA is granted, the student’s financial aid for the current semester may be adjusted based on federal, state, and institutional policies. The student will receive a letter from the Office of Financial Aid with information about any adjustments made. If a credit balance refund was issued prior to the approved medical leave, the student may be required to return some or all of the funds to the University of Portland.

Additionally, the student may be required to pay any nonrefundable fees and/or fines charged to their account upon notification of such amount due. A student’s university housing and work-study employment may also be impacted, according to policies from the Office of Residence Life and the Office of Financial Aid, respectively.

Seeking Return from a Medical Leave of Absence

When a student believes that he or she is prepared to return to the University after a voluntary MLOA, he or she should take the following steps:

- a. Contact the associate provost and indicate his or her interest in returning to the University. Such request must be made far enough in advance of the next semester to allow appropriate University officials sufficient time to adequately review the request. Students must receive approval to return from leave before registering for courses or applying for on-campus residence for the semester. Therefore, students must submit all materials for return by November 1 for consideration for the spring semester, April 1 for the summer sessions, and July 1 for the fall semester. If materials are received shortly after the relevant deadline, the University will make every attempt to be flexible and review the request for return in the following semester, but may be limited in its attempts to do so if there is missing information or more information is needed to make a determination. The University will remain in contact with the student regarding the status of his or her request throughout the process.
- b. Complete the reenrollment questionnaire with the appropriate consent from the student's health care provider, who must send the completed questionnaire directly to the HCC. The information in the reenrollment questionnaire is given individualized and significant consideration in the determination of whether the student is capable of resuming study and functioning safely as a member of the University community.
- c. In addition to the reenrollment questionnaire, the student is encouraged to provide additional information showing that the student is ready to resume studies and be a successful member of the University community, with or without accommodations. Depending on the nature and circumstances of the student's individual MLOA, the director of the HCC or designee may also require additional information to assist in making a recommendation about a student's readiness to return from a MLOA if the information provided by the health care provider is not, in the judgment of the Reenrollment Committee, sufficient to make a recommendation. Such additional information could include a personal statement describing the student's experience away from the University, the student's current understanding of the factors leading to the need for leave and the insights gained during the student's time away, and specific plans the student has to ensure a successful return to the University. Depending on the nature and circumstances of the student's individual MLOA, these specific plans may include information on how the student plans to move forward in managing his or her medical and/or psychological condition (if symptoms are present) as well as how the student plans to attend to the ongoing academic responsibilities within this educational setting.

Review of Student's Request for Return

Upon receipt of all materials requested in the above section, the director of the HCC or designee will inform the student that all information has been received, and will convene the Reenrollment Committee. The committee will be comprised of the director of the HCC or designee, the associate dean from the student's college or school, and the Early Alert coordinator or designee. The director of accessible education services or designee may be consulted as needed. The committee will review the information as soon as possible after receipt. During the review process, if the committee determines that information provided by the treatment provider is incomplete, requires further explanation or clarification (for example, if there is inconsistency between the medical information provided and other information in the student's files), the Reenrollment Committee may contact the treatment provider or student to obtain additional information. Depending on the individual circumstances of the medical leave, the student may be asked to provide additional documentation concerning the nature and duration of treatment, recommendations for ongoing care once the student has returned from leave, or to provide releases to the HCC to allow communication with treatment providers, and relevant campus administrators, regarding the student's safe return to campus. In extraordinary circumstances, the Reenrollment Committee may request that the student undergo an additional assessment to allow the University to make a determination about the student's readiness for return. Such a request would be made to the student in writing, with the rationale for the determination provided.

If the Reenrollment Committee approves the student's request to return from a MLOA, it will inform the associate provost or designee, who will communicate that information to the student. Depending on the individual circumstances of the MLOA, there may be academic or other requirements that must be reviewed and met before the student's return to the University community. Students with disabilities may be eligible for reasonable accommodations in accordance with the Rehabilitation Act of 1973 and the Americans with Disabilities Amendments Act (ADAA) of 2008. Students are responsible for communicating their requests for accommodations to accessible education services.

Review

If the student is not approved for a return, the student will receive a letter from the associate provost indicating the recommendation, as well as suggestions to improve the student's likelihood of a favorable recommendation upon a subsequent request for return. If the non-approval occurs at the end of the one-year (the three semesters that follow the grant of a MLOA

inclusive of fall, spring, and summer) medical leave limit, the committee may indicate an approved extension of medical leave in the letter. A student may request a case review of the recommendation that he or she is not ready to return by submitting a case review letter in writing to the provost within ten (10) business days of receiving notice of the non-approval, along with any information he or she believes is relevant to the case review. The provost or designee will review the information provided and make a final determination regarding the recommendation for return.

Return from Medical Leave

The University is committed to supporting the successful return of a student rejoining the University community after the completion of a voluntary MLOA. Prior to return, the student will receive an email from the associate dean in his or her college or school, suggesting various measures, such as regular meetings with the associate dean, that may be helpful to ensure the student is receiving sufficient University support to assist in his or her successful return to campus life. The Care Team coordinator may also contact the student to offer additional support.

Upon return from a voluntary MLOA, the student may receive the institutional aid they are scheduled to receive for the semester of return (subject to the financial aid satisfactory academic progress policy). This means the full amount of remaining institutional financial aid may be reinstated if the student is otherwise meeting all components of the financial aid satisfactory academic progress policy.

Any personal payments (cash, monthly payment plan payments, and/or loans) less nonrefundable fees and/or refunds processed prior to the approved MLOA and less any federal funds the school was required to return to the Department of Education from the Return to Title IV Funds policy calculation, will be applied to the student account for the semester of return as long as the student returns within one year (the three semesters that follow the grant of a MLOA inclusive of fall, spring, and summer) of the approved leave, unless an extension has been granted. These funds will generally be applied as a one-time medical tuition discount. The total amount of institutional financial aid plus the medical tuition discount cannot exceed institutional charges for the semester of return. Unused funds will not be returned.

Financial aid received from any non-institutional or third party source (e.g. federal/state financial aid funds, outside scholarships, etc.) will not be replaced by the University and will be subject to the stipulations of the agency providing the aid. Additionally, institutional funds that are dependent on receipt of funds from a third party (e.g. Providence Match Grant, ROTC Room and Board Scholarship, etc.) will only be reinstated if the funds from the third party are reinstated.

XIV. Records

Family Educational Rights and Privacy Act (FERPA)

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. These rights include:

1. The right to inspect and review the student's education records within 45 days of the day the University receives a request for access. A student should submit to the registrar, dean, head of the academic department, or other appropriate official, a written request that identifies the record(s) the student wishes to inspect. The University official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the University official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.
2. The right to request the amendment of the student's education records that the student believes are inaccurate, misleading, or otherwise in violation of the student's privacy rights under FERPA. A student who wishes to ask the University to amend a record should write the University official responsible for the record, clearly identify the part of the record the student wants changed, and specify why it should be changed. If the University decides not to amend the record as requested, the University will notify the student in writing of the decision and the student's right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.
3. The right to provide written consent before the University discloses personally identifiable information from the student's education records, except to the extent that FERPA authorizes disclosure without consent. The University discloses education records without a student's prior written consent under the FERPA exception for disclosure to school officials with legitimate educational interests. A school official is a person employed by the University in an administrative, supervisory, academic, research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the University has contracted as its agent to provide a service instead of using University

employees or officials (such as an attorney, auditor, or collection agent); a person serving on the board of regents; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibilities for the University.

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

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

FERPA Annual Notice to Reflect Possible Federal and State Data Collection and Use

As of January 3, 2012, the U. S. Department of Education’s FERPA regulations expand the circumstances under which education records and personally identifiable information (PII) contained in such records – including Social Security Number, grades, or other private information – may be accessed without student consent. First, the U.S. Comptroller General, the U.S. Attorney General, the U.S. Secretary of Education, or state and local education authorities (“federal and state authorities”) may allow access to student records and PII without student consent to any third party designated by a federal or state authority to evaluate a federal or state-supported education program. The evaluation may relate to any program that is “principally engaged in the provision of education,” such as early childhood education and job training, as well as any program that is administered by an education agency or institution. Second, federal and state authorities may allow access to education records and PII without student consent to researchers performing certain types of studies, in certain cases even when they object to or do not request such research. Federal and state authorities must obtain use-restriction and data security promises from the entities that they authorize to receive student PII, but the authorities need not maintain direct control over such entities. In addition, in connection with statewide longitudinal data systems, state authorities may collect, compile, permanently retain, and share, without student consent, PII from education records, and they may track student participation in education and other programs by linking such PII to other personal information that they obtain from other federal or state data sources, including workforce development, unemployment insurance, child welfare, juvenile justice, military service, and migrant student record systems.

Directory Information FERPA allows the University to provide “directory information” to others without a student’s consent. Directory information is information that is generally not considered harmful or an invasion of privacy if released. If you do not want the University to disclose directory information without your prior consent, you must notify the registrar in writing by the end of the first week of classes. In the event that such written notification is not filed, the University assumes that the student does not object to the release of the directory information. Directory information includes: name; address; telephone number; e-mail address; name(s) and address(es) of parent(s); major field of study; enrollment status (full-time, part-time); participation in recognized activities and sports; weight and height of members of athletic teams; photographs; dates of attendance; degrees, honors and awards received; class-year in school; and previous educational institutions attended.

Disciplinary Records All records of disciplinary proceedings are maintained through the Office of the Vice President for Student Affairs. Such records are destroyed seven years after the last entry into the student’s record. (In compliance with the Clery Act (20 USC § 1092 (f).) Information in these records is not made available to persons other than the president of the University, the vice president for student affairs, and student affairs office staff on a need-to-know basis, and as allowed or required in compliance with Federal Law 20 USC §1092, and USC § 1232.

Counseling Records Counseling records are privileged and confidential as required (and except as limited) by law in accordance with state and federal statutes and regulations. Generally, information may not be disclosed to another person or agency outside of the University Health Center (including parents, teachers, or residence life staff) without the written consent of the student.

Medical Records Medical records are privileged and confidential as required (and except as limited) by law in accordance with state and federal statutes and regulations. Generally, information may not be disclosed to another person or agency outside of the University Health Center (including parents, teachers, or residence life staff) without the written consent of the student. Medical records may be released to necessary personnel to appropriately respond to an emergency.

Records Not Available to Students or Third Parties The following items are not available to students or outside parties: alumni giving records; campus safety and security records for law enforcement purposes; parents’ financial information; personal records kept by individual staff members; score reports of standardized tests; student employment records; and transcripts of grades sent by other educational institutions.

Enrollment Certification

The University can certify a student's enrollment status for the current semester or for past enrollment semesters. Requests for the current semester are processed after the end of the first week of classes. Current enrollment status is based on the number of registered semester credit hours. Undergraduate full-time enrollment is 12 semester hours (6 in summer). Graduate full-time enrollment is 9 semester hours (5 in summer). Students should submit requests for enrollment certification in writing to the Office of the Registrar. After the first week of the semester, allow one week for processing, not including time needed for the certification to travel by mail. Students can order a rushed enrollment certification for an additional fee and it will be processed immediately. Most certifications for auto insurance, credit card applications, travel discounts, etc., will be referred to the National Student Clearinghouse. Definitions of full- and part-time status are used for enrollment certification purposes only, not for financial aid purposes. See Financial Aid Handbook for specific information about financial aid at www.up.edu/finaid/handbook.

Additional Academic Regulations for Graduate Students

Please note that additional regulations for graduate students are found in the Graduate School249 section.

CORE CURRICULUM

The University of Portland's Core Curriculum invites students to acquire the knowledge, skills, and values that will prepare them to respond to the needs of the world and its human family. The premise of the Core Curriculum is that while no discipline by itself is sufficient to achieve this purpose, the liberal arts provide a foundation of multiple lenses to address enduring questions of human concern. These include: What is a good life? How does the world work? Who or what is God? What does it mean to be human? How do people maintain enduring values in a world of rapid change and uncertainty? Wrestling with such questions helps in the formation of students who better understand themselves and the world, preparing them to become effective citizens able to understand and appreciate diverse perspectives.

Grounded by Catholic intellectual tradition and Holy Cross values, the University of Portland has strong and diverse core requirements that emphasize cross disciplinary engagement, ethical reflection, and critical thinking. The Core Curriculum enacts these points of emphasis by using different disciplinary lenses to approach truth, preparing graduates to engage in a wide range of vocations by developing habits of heart and mind that include:

- Literacy, Dialogue, and Expression
- Religion, Faith, and Ethics
- Aesthetic Inquiry, Imagination, and the Creative Process
- Commitment to Diversity, Inclusion, and the Common Good
- Scientific and Quantitative Literacy and Problem Solving
- Global and Historical Consciousness

To cultivate these Core Habits, the University Core Curriculum requires course work of all students at three levels: introductory level, foundation level and exploration level.

To ensure that all students have some exposure to a historical disciplinary lens, students must take at least one HST course at either the Foundation or Exploration levels.

The Core Curriculum also applies to transfer students. No substitutions may be made without special permission from the Core Director in consultation with the dean of the student's college or school. Some departments and schools require a specific course to satisfy some of the requirements listed below. Students should consult the bulletin for the degree requirements of their major.

Goals of the Core

Each of the six Core Habits of Heart and Mind include learning goals for courses. Individual courses also identify specific student learning outcomes to assess whether the learning goals are being achieved. The course learning goals include:

Aesthetic Inquiry, Imagination, and the Creative Process

- Engage in creative processes requiring curiosity and imagination
- Recognize ways products of creative and artistic expression inform human experience

Commitment to Diversity, Inclusion, and the Common Good

- Learn to live and contribute in a diverse society and interdependent world
- Recognize how cultures, identities, and inequalities shape human experience
- Engage community and social issues with a sense of civic responsibility and shared commitment to human dignity.

Global and Historical Consciousness

- Apply a comparative perspective to global issues
- Develop competencies for responsible global citizenship and stewardship
- Demonstrate a historical and cultural consciousness

- Demonstrate a historical and cultural consciousness

Literacy, Dialogue, and Expression

- Express critical, analytical, and imaginative thoughts and ideas, particularly in writing
- Employ critical reasoning to explore ideas and evaluate information
- Engage in active consideration of and constructive response to the ideas of others.

Religion, Faith, and Ethics

- Confront ultimate questions with knowledge from a range of intellectual & religious traditions
- Examine faith and religion, their place in one's life, and in the lives of others
- Develop the knowledge and skills for acting ethically in everyday life

Scientific and Quantitative Literacy and Problem Solving

- Use scientific thinking to understand how the world works
- Employ mathematical and statistical skills to explore and make sense of data
- Use empirical analysis to address human, social, or ecological problems

Introductory Level - 1 credit hour

At the Introductory Level, all first year students will take CORE 101 on a pass/fail basis.

CORE 101	Anchor Seminar	1

Foundation Level - 33 credit hours

At the Foundation Level, all students will take courses distributed across the following six habits.

Aesthetic Inquiry, Imagination, and the Creative Process - 3 credit hours

Select one course from following:

FA 107	The Creative Process in Visual Art	3
FA 108	The Creative Process in Performative Art	3
FA 307	The Arts in Portland	3
FA 310	The Fine Arts Through the Film Medium	3

Commitment to Diversity, Inclusion, and the Common Good - 3 credit hours

Select one course from the following:

CST 225	Interpersonal Communication: Relating to Others	3
HST 210	Who is America: The Early U.S.	3
HST 211	Who is America: The Modern U.S.	3
HST 220	The Search for Justice in the Western Tradition	3
SOC 101	Introduction to Sociology	3
SW 101	Social Work and Social Justice	3

Global and Historical Consciousness - 3 credit hours

Select one course from the following:

HST 221	Modern Western Civilization	3
HST 251	Modern East Asia	3
HST 254	Colonial Latin America	3
HST 256	Modern Latin America	3
POL 203	Introduction to Political Theory	3
POL 205	World Politics	3
CHN 103	Beginning Chinese Language and Culture III	3
FRN 202	Intermediate French Language and Culture	3
FRN 205	Accelerated Intermediate French Language and Culture	6
FRN 301	Advanced French Conversation and Culture	3
FRN 302	Advanced French Conversation, Composition and Culture	
GRM 202	Intermediate German Language and Culture	3
GRM 207	Accelerated Intermediate German Language and Culture	6
GRM 301	Advanced German Conversation, Composition, and Culture	3
GRM 302	Advanced German Conversation, Composition, and Culture	
SPN 202	Intermediate Spanish Language and Culture	3
SPN 205	Accelerated Intermediate Spanish Language and Culture	6
SPN 301	Advanced Spanish Composition, Conversation, and Culture I	3
SPN 302	Advanced Spanish Composition, Conversation, and Culture II	3
SPN 308	Advanced Spanish for Heritage Speakers	3

Other HST courses designated HTS 25x or HST 291 may fulfill the Global and Historical Consciousness requirement. Please confirm eligible course offerings with a program counselor.

Literacy, Dialogue, and Expression - 6 credit hours

ENG 112	Thinking Through Literature	3
PHL 150	Introductory Philosophy	3

Religion, Faith, and Ethics - 9 credit hours

PHL 220	Ethics	3

THE 105	Engaging Ultimate Questions: Religion, Faith, and Ethics	3
THE 205	The Bible, Past and Present	3

Scientific and Quantitative Literacy and Problem Solving - 9 credit hours

Select one course from the following - 3 credit hours

ECN 120	Principles of Macroeconomics	3
ECN 121	Principles of Microeconomics	3
POL 200	Introduction to United States Politics	3
PSY 101	Psychological Science	3

Select one course from the following - 3 credit hours

MTH	Any mathematics course above MTH 120	3

Select one course from the following - 3 credit hours

BIO	Any 100-level course or any 200-level course required of a major	3
CHM	Any 100-level course or any 200-level course required of a major	3
ENV	Any 100-level course	3
PHY	Any 100-level course or any 200-level course required of a major	3

Exploration Level - 6 credit hours

At the Exploration Level, all students will take 6 credit hours of courses designated as exploration courses for the University Core Curriculum. These courses will address at least two Core Habits and must be approved by the University Core Curriculum Committee or the Core Director.

The first Exploration Level courses will be offered in the 2022-2023 academic year.

Integration Assignment

Prior to graduation, students will also complete an integration assignment reflecting on educational experiences with the University Core Curriculum and demonstrating an ability to understand the Core Habits.

Core Curriculum and Writing in the Discipline

The Writing in the Discipline program (WID) supports writing objectives already in place in the Core Curriculum Foundation Level Courses. ENG 112 *Thinking Through Literature* and PHL 150 *Introductory Philosophy* in the Core habit of Literacy, Dialogue, and Expression are required of every student. The WID program then incorporates both a prominent contemporary theory of college writing instruction and national best practices: to use a multi-disciplinary model for the teaching of writing. The WID program provides students with writing intensive courses and various kinds of writing assignments to deepen thinking about disciplinary content and to gain a better understanding of the forms of writing in their potential professions.

By offering writing intensive courses in every major, this program:

- Helps students to master learning outcomes related to writing articulated by their department or school.
- Introduces students to the type of writing required in the discipline and to think and write in their respective disciplines.

- Provides all students courses with a significant writing component that will increase the ability of student to write and think critically.
- Offers students writing assignments consistent with the discipline. The type of writing can vary depending upon the major. Some examples are a research paper, an argumentative essay, lab reports, project memos/reports or a critical reflection on a clinical, teaching or field experience.

The Writing in the Discipline courses are as follows:

College of Arts and Sciences

	WID 1	WID 2
Biology	BIO 277	BIO 453
Chemistry	CHM 376	CHM 471/473
Communication	CST300/320/330	CST 475/497
Economics, B.A.	ECN 325	ECN 425
English	ENG 225	ENG 499
Environmental Science	ENV 383	ENV 400
Environmental Ethics & Policy	ENV 324	ENV 400
French Studies	3XX	STAMP Test
Gender, Women, and Sexuality	Foundations Course	Capstone Course
German Studies	3XX	STAMP Test
History	HST 420/430/450	HST 470
Mathematics	MTH 401	MTH 441
Music	MUS 201	MUS 302
Philosophy	PHL 371/372/373/374	PHL 499
Physics	PHY 441	PHY 472
Political Science & Global Affairs	4XX	4XX
Psychology	PSY 214	PSY 498/499
Social Work	SW 313	SW 480
Sociology	SOC 380	SOC 498/499
Spanish	3XX	STAMP Test
Theater	THTR 307	THTR 409/410/411
Theology	THE 492	THE 498

Pamplin School of Business

	WID 1	WID 2
Accounting	BUS 250	BUS 465
Economics, B.B.A.	BUS 250	ECN 425
Finance	BUS 250	BUS 468
Marketing	BUS 250	BUS 443
Operation & Technology Management	BUS 250	BUS 456

School of Education

	WID 1	WID 2
Elementary Education	ED 320	ED 400
Secondary Education	ED 320	ED 450

Shiley School of Engineering

	WID 1	WID 2
Civil Engineering	CE376	CE 371
Computer Science	CS 341	CS 483
Electrical Engineering	EE 373	EE 371
Mechanical Engineering	EGR 270	ME 372

School of Nursing

	WID 1	WID 2
Nursing	NRS 104	NRS 440
Integrative Health & Wellness	IHW 116	IHW 312

CLARK LIBRARY

Xan Arch, M.L.I.S., M.A., dean

Christina Prucha, M.L.I.S., Ed.D., head of collection services

Jane Scott, M.L.S., head of public services

The Clark Library stands at the center of intellectual life at the University of Portland, fostering connections and knowledge creation to help students and faculty excel in research, scholarship, and creative expression. Through extensive collections, investments in tools for innovation and technology, and dedicated faculty and staff, the Library supports students wherever they are located

The library building is a learning commons that offers students a place to gather, share ideas, create, and learn. The main floor Service Desk is a central place to get help and there is a chat service for 24-hour research assistance.

Hours

Visit the Clark Library website to see the current schedule for library building hours during the year.

Contact Information

Service Desk:	(503) 943-7111 or (800) 841-8261
Research Desk:	(503) 943-7788, 24/7 Library Chat, or reference@up.edu
Digital Lab Desk:	(503) 943-7796 or dlab@up.edu
Website:	library.up.edu
Email:	library@up.edu
Fax:	(503) 943-7491

Services and Resources

Online Library Orientation: For students new to UP or to the Clark Library, the orientation is a self-paced introduction to library services and resources.

Study and Learning Spaces: The main and upper floors are collaborative areas with a variety of seating options. The lower floor is a Quiet Floor for focused study. There are twenty group study rooms that can be reserved online; nine are equipped with monitors and computer connections.

Technology: The main floor lab has 50 Windows computers, along with printers and copier/scanners. Wireless printing is available. The main floor Service Desk loans out laptops and chargers. The Digital Lab on the upper floor has 16 Mac computers, scanners, a large format printer, a 3D printer, plus camera and sound recording equipment that can be borrowed.

Collections: The Library provides access to a wealth of information, and the database tools for finding it. Collections include books, eBooks, CDs, DVDs, journals, eJournals, streaming videos, and more. Resources at other libraries can be easily requested using UP Library Search with timely delivery to the Library and/or email accounts.

Course Reserves: Many instructors use the library's course reserves service to make class materials available to students.

Digital Lab: The Digital Lab provides current University of Portland students with the equipment, software, and support to produce audio, video, photography, and design research projects. The Digital Lab coordinator is also available for consultations on multimedia projects.

Research Support: Librarians are available for individual consultations and to meet with classes to provide library instruction. Online subject and course guides and a chat service for 24-hour research assistance are also available.

Archives and Artifacts

Rev. Jeffrey A. Schneibel, C.S.C., Ph.D., university archivist

Carolyn Piatz Connolly, M.A., M.S.L.S. museum coordinator

Archives and Artifacts curates materials that document the University of Portland's history. The Museum has photos and artifacts connected with the University's history and development. Items are also incorporated into displays around campus and the University Museum blog.

Locations

Archives: 012 Shipstad Hall

Museum: 014 Shipstad Hall

Contact Us

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(503) 943-7116

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COLLEGE OF ARTS AND SCIENCES

Norah A. Martin, Ph.D., interim dean

Hannah L. Highlander, Ph.D., associate dean for students

Cara M. Hersh, Ph.D., interim academic associate dean

Lawrence S. Larsen, M.F.A., academic associate dean

Jacqueline D. Van Hoomissen, Ph.D., academic associate dean

Introduction

The College of Arts and Sciences at the University of Portland offers bachelor of arts degrees or bachelor of science degrees in 31 majors and 26 minors through 15 departments. Graduate programs are offered in Communication Studies.

Many students within the College or in one of the professional schools choose to enrich their educations or to prepare for their chosen careers by obtaining a double major or minor. Over 50 percent of students in the College study abroad, and many participate in faculty-sponsored research projects, internships, or service learning.

Faculty in the College are reflective teachers, who continually seek ways to improve their teaching while maintaining an active agenda of research and scholarship. Each faculty member advises students, serving as a mentor and model for the students' progress in study and preparation for a life of service and leadership. Advisors in pre-law and pre-health assist students who are preparing for careers in those professions.

The College supports the Learning Commons with peer tutors for English, mathematics, international languages, public speaking, natural sciences, and group work strategies, and encourages student involvement through clubs sponsored by each department and through the College's Student Leadership and Advisory Council. Faculty in mathematics and natural sciences are active participants in the University of Portland's STEM Center, and faculty members throughout the College lend their expertise to the activities of the Garaventa Center for Catholic Intellectual Life and American Culture, the Franz Center for Leadership, Entrepreneurship, and Innovation, and the Dundon-Berchtold Institute.

Each year the English department participates, as one of the founding members, in the Northwest Undergraduate Conference in Literature (NUCL) and the History department publishes its award winning journal, *Northwest Passages*. All students at the University of Portland are welcome to audition for plays, to sing in the chorale, or to play in musical ensembles. All are invited to join the prize-winning debate team or to compete in Mock Trial.

Three programs in the College are externally evaluated: Music (NASM), Theater (NAST), and Social Work (CSWE). The other programs conduct program reviews every seven years in addition to yearly self-assessment. The College as a whole is assessed by the Northwest Association of Colleges and Universities as part of the University of Portland's periodic assessment.

Mission

The College of Arts and Sciences at the University of Portland follows in the long tradition of the liberal arts. We value integrative education, scholarship, and creative work that transform our world, our communities, and ourselves.

An intrinsic component of a Catholic university, the College fosters personal development of students, faculty, and staff by exploring how knowledge helps shape our world for the better through the integration of faith and reason.

In response to fundamental issues of the twenty-first century, the College promotes interdisciplinary engagement amidst the breadth of disciplines that comprise the humanities and the natural and social sciences. We affirm that the world is our classroom and that the liberal arts provide tools for understanding the complexities of human culture as well as resources and opportunities for encouraging wonder about the universe.

Faculty members in the College of Arts and Sciences engage integrative learning through active teaching, faculty-mentored research, ethical and intellectual formation, and the creative and performing arts. We empower students to become responsible decision-makers, and ethical citizens able to discern, appreciate, and protect the common good. Foundational experiences here prepare graduates of the College to lead productive lives of inquiry, service, and introspection as agents of compassion and change. Furthermore, a college degree grounded in the liberal arts prepares graduates for the ever evolving careers of the twenty-first century.

College Requirements

The undergraduate programs are designed to build on the University's core curriculum to educate students so that they will make contributions to the world guided by concerns for issues of justice and ethical behavior. In addition to the University core, the college requires courses in communication and metaphysics.

Effective Communication

The CAS core communication requirement helps students learn to explain and, in some courses practice aloud, how people use communication to exert influence, acquire knowledge, create identities, and foster relationships through written or oral communication.

Learning Outcomes for Effective Communication

Students taking CST 107, ENG 107, or ENG 311 for the Effective Communication requirement will be able to:

1. Understand the nature of a particular communication mode.
 - a. Comprehend the **elements** of a particular communication mode.
 - b. Comprehend the **rules and norms** associated with skilled practice of a particular communication mode.
 - c. Comprehend that skilled communication in a particular mode involves **multiple stages**.
2. Improve their ability to achieve goals using a particular communication mode.
 - a. Demonstrate ability to adapt communication (i.e., content, organization, language, style) to audiences.
 - b. Demonstrate ability to accomplish goals using a particular communication mode.

Metaphysics

Metaphysics is the study of the most basic and general features of reality and our conceptions of them. In the courses that fulfill the metaphysics requirement, PHL 314 and PHL 330-340, students critically examine the ideas and traditions of western civilization, further preparing students to critically and thoughtfully engage the core questions: Who am I? Who am I becoming? Why am I here? Who or what is God? How can one relate to God? Among the topics studied in the various courses that fulfill the metaphysics requirement are:

- The nature and existence of God
- Free will and determinism
- The nature of Being
- Personal identity over time
- The mind/body problem
- The immortality of the soul

Programs of Study

The College of Arts and Sciences awards both the bachelor of arts (B.A.) and bachelor of science (B.S.) degrees. Degree programs are designed in accordance with the principles of the liberal arts to ensure appropriate breadth and depth. All the programs approximate the following distribution:

- 1/3 of the courses are in the major with at least 24 credit hours of upper division work in a single discipline.
- 1/3 of the courses are in the University core program.
- 1/3 of the courses are college and degree requirements or electives.

A minimum of 120 credits hours is required for a degree with at least a 2.0 grade point average in the major discipline. At least 48 credit hours must be upper-division work with at least 75 percent of these credits earned at the University of Portland. Specific requirements can be found throughout this bulletin.

Across most academic institutions, the scope of the academic program or a course of study determines if a B.A. or B.S. degree is awarded. In general, the majority of B.A. degrees provide breadth in the liberal arts and for a major in one or more areas.

B.S. degrees typically have considerably more depth in a particular field of study and may include courses in closely related fields or with professional or technical emphasis, while also providing for a foundational liberal arts education.

Bachelor of Arts

A bachelor of arts (B.A.) degree generally provides a comprehensive liberal arts education with a major in one or more specific areas. The B.A. degree provides the opportunity to develop breadth in the knowledge of arts, humanities, natural sciences, quantification and social and behavioral sciences with the outcomes of students effectively communicating, engaging with relevant metaphysical issues, exploring enduring questions through multiple disciplinary perspectives, and attaining an intermediate proficiency in language other than English. These outcomes are accomplished through completing the following requirements:

- 15 credit hours of upper-division learning outside the primary major, 9 of which must come from at least three different college disciplines outside the primary major
- At least one language course other than English and successful progression through at least the 202-level in French, German, or Spanish, or the 103/113-level in Chinese. Any exceptions to the language requirement must be approved by the Office of the Dean of the College of Arts and Sciences and the Department of International Languages and Cultures.
- 3 credit hours from CST 107, ENG 107, or ENG 311
- 3 credit hours from any one PHL 314, or PHL 330 - 340

Bachelor of Science

A bachelor of science (B.S.) degree generally provides for in-depth study within a major discipline, or may integrate knowledge from more than one discipline, and includes a foundational liberal arts education. The B.S. degree involves additional supporting technical or professional coursework with the outcomes of students effectively communicating, engaging with relevant metaphysical issues, attaining in-depth knowledge of a chosen discipline and incorporating expertise from related disciplines which typically lead to a specific or professional career path. These outcomes are accomplished through completing the following requirements:

- 6 credit hours in a relevant field outside the major (specific courses that fit this requirement are identified by each B.S. degree program)
- 3 credit hours from CST 107, ENG 107, or ENG 311
- 3 credit hours from any one of PHL 314 or PHL 330 - 340

Major Programs

Biology, B.A.78

Biology, B.S.79

Chemistry, B.S.81

Communication, B.A.87

Organizational Communication, B.S.88

Economics, B.A.92

English, B.A.96

Environmental Ethics and Policy, B.A.99

Environmental Science, B.S.103

General Studies, B.A.114

General Studies, B.S.114

History, B.A.115

French Studies, B.A.118

Gender, Women, and Sexuality Studies, B.A.111.

German Studies, B.A.119

Spanish, B.A.120

Mathematics, B.A.124

Mathematics, B.S.127

Mathematics, Applied, B.S.126

Music, B.A.133

Philosophy, B.A.138

Physics, B.A.142

Physics, B.S.144

Political Science and Global Affairs, B.A.148

Psychology, B.A.150

Social Work, B.A.152

Sociology, B.A.154

Sociology/Criminology Concentration, B.A.155

Theater, B.A.129

Theology, B.A.157

Minor Programs

Minor programs are offered by most departments in the College of Arts and Sciences. Minors consist of no fewer than 12, nor more than 18 credit hours of upper-division courses, excluding prerequisites. Academic regulations governing courses applied to major programs also apply to minors. Transfer credits applied to a minor may not exceed 25% of the total number of hours required for the minor. Students must achieve a minimum average of 2.0 in their minor fields.

Biology

15 upper-division credit hours in biology are required for the minor, in addition to any prerequisites. At least two courses must include a laboratory component.

Prerequisites - 8 credit hours

BIO 207	Introduction to Molecular and Cellular Biology	3
	with	
BIO 277	Introduction to Molecular and Cellular Biology Lab	1
BIO 208	Introduction to Evolution and Ecology	3
	with	
BIO 278	Introduction to Evolution and Ecology Lab	1

Chemistry

Required: 15 upper-division credit hours in chemistry. All prerequisites for these courses must be satisfied.

Communication

Required: 15 upper-division credit hours in Communication Studies. All prerequisites for these courses must be satisfied.

Constitutional Studies

William M. Curtis, J.D., Ph.D., director

The Constitutional Studies minor is an interdisciplinary liberal arts course of study that introduces students to U.S. constitutional law and its historical, political, and philosophical roots. It provides students who are considering going to law school with a foundational experience in thinking and writing about and discussing the law. It further provides something that all University of Portland students should be interested in: knowledge of the U.S. government's founding document that will educate them about their rights and enable them to become more effective and engaged democratic citizens.

Learning Outcomes

1. Students will be able to demonstrate an understanding of how the US Constitution creates, empowers, and structures the relationship between the three primary branches of the federal government and/or the relationship between the federal government and the states.
2. Students will be able demonstrate an understanding of how the Supreme Court exercises its power of judicial review to interpret the Constitution in its judicial opinions.
3. Students will be able to demonstrate an understanding of the historical context of the ongoing US constitutional experiment.
4. Students will be able to demonstrate an understanding of the philosophical background and political context of the concepts of the rule of law, and/or legal reasoning and argumentation, and/or individual/human rights. The Constitutional Studies minor requires 18 credit hours that fall into three categories: (1) American politics and history; (2) constitutional law courses; and (3) political and moral philosophy/theory. POL 423 *Jurisprudence and Constitutional Interpretation* is the required capstone course for the minor in which students will write a research paper on constitutional law.

Minor Requirements - 18 credit hours

Required Courses - 6 credit hours

POL 200	Introduction to United States Politics	3
POL 423	Jurisprudence and Constitutional Interpretation	3

American Politics & History - 6 credit hours

3 credit hours must be in HST

Select two courses from the following:

HST 310	Colonial North America	3
HST 311	The American Revolution	3
HST 313	United States: Civil War Era	3
HST 314	American Expansion	3
HST 316	US in Depression and War, 1920-1945	3
HST 318	Cold War America	3
HST 321	Modern American Women's History	3
HST 322	American Protest and Reform	3
HST 323	African American History	3
HST 325	American Military History	3
HST 352	The United States and the Pacific Rim	3

POL 335	American Public Policy	3
POL 347	The American Court System	3
POL 350	American Foreign Policy	3
POL 351	International Law in Theory and Practice	3
POL 415	Congress and Legislative Process	3
POL 419	The US Presidency	3
POL 465	Democratization and Its Challenges	3

Constitutional Law - 3 credit hours

Select one course from the following:

POL 344	Constitutional Law I: Federalism and Separation of Powers	3
POL 345	Constitutional Law II: Civil Liberties and Rights	3
POL 346	Constitutional Criminal Procedure	3

Political and Moral Philosophy & Theory - 3 credit hours

Select one course from the following:

PHL 313	Socio-Political Philosophy	3
PHL 321	Logic	3
PHL 371	Ancient Philosophy	3
PHL 372	Medieval Philosophy	3
PHL 373	Early Modern Philosophy	3
PHL 374	Hegel and 19th Century Philosophy	3
PHL 412	Philosophy of Law	3
POL 314	American Political Thought	3

English

Prerequisite: ENG 112

Required: 15 upper-division credit hours in English

Environmental Policy

Minor Requirements - 16 credit hours

Select one course from the following - 3 credit hours

ENV 305	Environmental Regulation and Non-Regulatory Responses	3
ENV 314	Resilience and Policy	3
ENV 349	Environmental Policy	3
POL 335	American Public Policy	3

Select three courses from the following - 9 credit hours

Select courses from the following not already used to fulfill the requirements above.

CST 370	Environmental Organizing and Advocacy	3
CST 401/CST 501	The Rhetoric of Politics	3
CST 470	Plants, Nonhuman Animals, Food Systems, and Climate Communication	3
ECN 322	Environmental Economics	3
ECN 326	Climate Change Economics and Policy: A Global Perspective	3
ENG 361	Northwest Literature	3
ENG 363	Environmental Literature	3
ENV 305	Environmental Regulation and Non-Regulatory Responses	3
ENV 314	Resilience and Policy	3
ENV 317	Science of the Two Americas	3
ENV 324	Environmental Ethics	3
ENV 325/ECN 325	Metrics for Sustainability	3
ENV 349	Environmental Policy	3
ENV 365	Climatology	3
ENV 408/BUS 408/EGR 408	Innovation for Sustainability	3
HST 314	American Expansion	3
HST 357	Environmental History of the Americas and the World	3
HST 359	The Modern City	3
PHL 313	Socio-Political Philosophy	3
PHL 422	Philosophy of Science	3
POL 335	American Public Policy	3
SOC 434	Urban Society	3
SW 456	Environmental Social Work	3
THE 302/THE 402	Poets, Prophets, Divas, and Diviners	3
THE 304/THE 404	Sages and Singers, Songwriters and Storytellers	3
THE 322/THE 422	Modern Catholic Ethics	3
THE 323/THE 423	Christian Social Ethics	3

THE 325/THE 425	Catholic Social Teaching: A Living Tradition of Thought and Action	3
THE 351/THE 451	Religions of Africa	3
THE 353/THE 453	Religion and Science	3

Lecture-Lab Requirement - 4 credit hours

Select from the following:

BIO 303	Entomology	3
	with	
BIO 323	Entomology Lab	1
BIO 340	Ecology	3
	with	
BIO 343	Ecology Lab	1
BIO 363	Freshwater Ecology	3
	with	
BIO 373	Freshwater Ecology Lab	1
BIO 338	Marine Biology of the Pacific Northwest	3
	with	
BIO 368	Marine Biology Lab	1
BIO 304	Wetlands Ecology	3
	with	
BIO 374	Wetlands Ecology Lab	1
ENV 333	Geomorphology	3
	with	
ENV 337	Geomorphology Lab	1
ENV 361	Meteorology	3
	with	
ENV 387	Environmental Laboratory	1
ENV 365	Climatology	3
	with	
ENV 387	Environmental Laboratory	1

Environmental Science

Minor Requirements - 16 credit hours

Lecture-Lab Requirement - 4 credit hours

Select from the following:

BIO 303	Entomology	3
	with	
BIO 323	Entomology Lab	1
BIO 304	Wetlands Ecology	3
	with	
BIO 374	Wetlands Ecology Lab	1
BIO 338	Marine Biology of the Pacific Northwest	3
	with	
BIO 368	Marine Biology Lab	1
BIO 340	Ecology	3
	with	
BIO 343	Ecology Lab	1
BIO 363	Freshwater Ecology	3
	with	
BIO 373	Freshwater Ecology Lab	1
ENV 333	Geomorphology	3
	with	
ENV 337	Geomorphology Lab	1
ENV 361	Meteorology	3
	with	
ENV 387	Environmental Laboratory	1
ENV 365	Climatology	3
	with	
ENV 387	Environmental Laboratory	1

Select courses from the following - 12 credit hours

Select courses from the following not already used to fulfill the requirements above.

	Any 300 or 400 level ENV course	3
BIO 304	Wetlands Ecology	3
	with	
BIO 374	Wetlands Ecology Lab	1
BIO 338	Marine Biology of the Pacific Northwest	3
	with	

BIO 368	Marine Biology Lab	1
BIO 341	The Nature of Plants	3
	with	
BIO 371	Field Botany	1
BIO 345	Vertebrate Biology	3
	with	
BIO 375	Vertebrate Biology Lab	1
BIO 347	Animal Behavior	3
BIO 348	Conservation Biology	3
BIO 363	Freshwater Ecology	3
	with	
BIO 373	Freshwater Ecology Lab	1
CE 367	Environmental Engineering	3
CHM 314	Analytical Chemistry	3
	with	
CHM 379	Analytical Chemistry Laboratory	1
CHM 412	Advanced Instrumental Theory	1
	with	
CHM 472	Instrumental Analysis Laboratory	1

Fine Arts

12 upper division credit hours are required for the minor, in addition to any prerequisites.

Prerequisites - 7 credit hours

Select one of the following - 3 credit hours

FA 125	Basic Design	3
FA 325	3-D Design	3

Introductory Studio Art Classes - 4 credit hours

Select two of the following:

FA 226	Painting I	2
FA 228	Ceramics I	2
FA 242	Drawing I	2
FA 244	Sculpture I	2

Required Courses - 12 credit hours

Art History Courses - 3-6 credit hours

Select one or two courses from the following:

FA 350	Art History I	3

FA 351	Art History II	3
FA 304	Development of the Fine Arts In Europe	3

Upper Division Studio Art Courses - 6-9 credit hours

Select six-nine credits of courses from the following:

FA 308/ENG 308	Screenwriting	3
FA 318	Digital Photography	3
FA 320	Digital Video and Moving Media	3
FA 327	Painting II	2
FA 329	Ceramics II	2
FA 330	Mixed Media Experimental Painting	2
FA 343	Drawing II	2
FA 344	Figure Drawing	2
FA 345	Sculpture II: Stone Carving	2
FA 346	Printmaking	2
	Any 400 level FA Studio Art course	Variable

French

Prerequisite: 12 lower-division credit hours in French courses or equivalent.

Required: 12 upper-division credit hours in French courses.

Gender, Women, and Sexuality Studies

Vail Fletcher, Ph.D., communication studies, and Lara-Zuzan Golesorkhi, Ph.D., political science and global affairs, co-directors

The gender, women, and sexuality studies minor is a truly interdisciplinary academic experience designed to foster dialogue between the arts, humanities, social sciences, and all pre-professional areas of study, with the ultimate goal of greater understanding surrounding issues of gender identity and sexuality in their historical, structural, and institutional contexts. The gender, women, and sexuality studies (GWSS) minor offers a program that is critical and intersectional in its approach towards interrogating theories and practices as they pertain to gender identity and sexuality.

The mission of the program at the University of Portland is to introduce students to the study of gender, women, and sexuality, focusing on gender identity and sexuality as categories of analysis in historical, structural, and institutional contexts. The program rests on feminist, anti-racist, and decolonial pedagogies and teaching. It is committed to challenging all forms of oppression and dismantling hegemonic legacies in the production and dissemination of knowledge. Faculty welcome and encourage creative, innovative, and collaborative approaches in the study of gender, women, and sexuality. This program prepares students to be change-makers in all areas of life.

Learning Outcomes for the Gender, Women, and Sexuality Studies Minor

Students completing the gender, women, and sexuality studies minor should be able to:

1. Demonstrate the ability to draw on different disciplines in understanding and studying gender identity and sexuality.
 - a. Articulate orally or in writing the lenses through which at least two disciplines understand gender identity and sexuality.
 - b. Articulate orally or in writing the methods used by at least two disciplines to study gender identity and sexuality.
2. Demonstrate an ability to understand and discuss intersections between gender and variables such as sex, sexuality, race, class, age, ethnicity, religion, language, and nationality.

- a. Identify at least two variables that affect or are affected by gender identity and sexuality.
- b. Articulate orally or in writing how at least two variables affect or are affected by gender identity and sexuality.
3. Demonstrate the ability, using intersectional, feminist scholarship, to critique ideological assumptions underlying institutions and structures.
 - a. Identify and explain gender-related assumptions underlying institutions and structures.
 - b. Critique orally or in writing assumptions underlying gender identity and sexuality from intersectional, feminist perspectives.

Capstone Experience

The capstone course is an opportunity to guide students through the development of their portfolios, which comprise: a minimum of five assignments from at least three different courses in two different disciplines, a self-assessment of the papers in the form of a reflective essay highlighting student learning progress over the course of the program and how they have demonstrated mastery of the program's learning objectives. Both group and individual meetings with the instructor of the capstone course support the students in their articulation of their learning and the ways in which the GWSS program has prepared them to engage more meaningfully with the world after graduation.

Minor Requirements - 16 credit hours

Required Courses - 4 credit hours

	Foundations of Gender, Women, and Sexuality Studies	3
	Gender, Women, and Sexuality Studies Capstone	1

Please consult with the program co-directors to select eligible Foundation and Capstone courses.

Upper Division Electives - 12 credit hours

Select four courses from the following:

CST 411	Communication Across Barriers	3
CST 431	Intercultural Communication and Identity	3
CST 432	Gender and International Development	3
ENG 370	Studies in Women Writers	3
ENG 401	Seminar in British Literature I	3
GRM 401	Multicultural Society in Germany	3
GRM 405	German Women's Writing	3
	Advanced Gender, Women, and Sexuality Studies	3
HST 321	Modern American Women's History	3
PHL 314	Philosophy and Feminism	3
PHL 408	Race, Gender, and Colonialism	3
PHL 410	Education and Politics	3
PHL 412	Philosophy of Law	3
POL 319	Politics and Identity	3
POL 378	Muslims and Islam in Europe and the U.S.	3
PSY 351	Health Psychology	3

PSY 356/SW 356	Perspectives on Human Sexuality	3
SOC 339	Sociology of the Family	3
SOC 357/SW 357	Perspectives on Gender and the Body	3
SOC 432	Gender and Violence	3
SOC 436	Women and Work	3
SPN 331	Golden Age Spanish Literature and Culture	3
SPN 350	Latin American Women's Voices	3
SPN 430	Cervantes: Don Quixote and Beyond	3
SW 356/PSY 356	Perspectives on Human Sexuality	3
THE 317/THE 417	Trickery, Gender, Power, and Politics in the Bible	3
THE 331/THE 431	Sexual Ethics	3
THTR 445	History of Fashion	3

One time course offerings (designated 391/491) may fulfill the elective requirement if the topic is on gender, women, and sexuality studies. Please confirm eligible yearly course offerings with the program co-directors.

German

Prerequisite: 12 lower-division credit hours in German courses or equivalent.

Required: 12 upper-division credit hours in German courses, including at least one 400-level GRM course.

Hellenic Studies

Alejandro Santana, Ph.D., philosophy, director

Greek history and culture is the cornerstone of Western liberal arts education. Perhaps the most fundamental reason for this can be found in the inscription “Γνωθι σαυτόν,” “Know thyself.” This was written in the forecourt of the temple dedicated to Apollo, in perhaps one of the holiest sites in the Greek world – Delphi. This idea, so central to the ancient Greek conception of wisdom, was also crucial in their conception of the good life. Knowing who you are, and especially your cultural and historical roots, provides you with a foundation for meaning and stability in everyday life, and this has become increasingly difficult to attain in a world that has become increasingly unsettled and disconnected. In such a world, understanding one’s roots provides a tether that keeps one grounded and nourished in one’s cultural heritage. And there is no doubt that one important tether of Western civilization reaches back to the Greeks.

The Hellenic studies minor provides the student with a rich a context in which to explore the University of Portland’s core questions, and it fosters a greater understanding of the student’s relationship to the cultural heritage of the Western world.

Learning Outcomes for Hellenic Studies Minors

Hellenic studies graduates of the University of Portland should be able to:

1. Demonstrate an understanding of significant periods of Hellenic history.
 - a. Identify significant facts, periods, or historical narratives of Hellenic history.
 - b. Describe in writing these significant facts, periods, or historical narratives.
2. Demonstrate an understanding of major dimensions of Hellenic culture.

- a. Identify at least one major dimension of Hellenic culture.
 - b. Describe in writing this major dimension.
3. Explain the relevance of Hellenic history and culture in Western civilization.
 - a. Identify at least one significant period of Hellenic history or dimension of Hellenic culture that relates to Western civilization.
 - b. Explain in writing the relevance of this period or dimension to Western civilization.
4. Critically evaluate the role of Hellenic history and culture in western civilization.
 - a. Develop a stance on the role of Hellenic history and culture in Western civilization.
 - b. Support that stance with a well-developed argument.

Capstone Experience

Students pursuing a Hellenic studies minor will participate in either PHL 338 or PHL 371 as the last course in the minor.

Minor Requirements - 15 credit hours

Required Courses - 6 credit hours

HST 330	Ancient Mediterranean World	3
	Or	
THE 360/THE 460	Christianity's First Thousand Years: Emergence and Growth, 100-1200	3
PHL 338	Metaphysics: Ancient Greek Metaphysics in Context	3
	Or	
PHL 371	Ancient Philosophy	3

Upper Division Electives - 9 credit hours

Select from the following:

CST 327	Argumentation and Advocacy	3
CST 490	Directed Study	Variable
FA 350	Art History I	3
HST 330	Ancient Mediterranean World	3
HST 430	Seminar in European History	3
PHL 321	Logic	3
PHL 338	Metaphysics: Ancient Greek Metaphysics in Context	3
PHL 371	Ancient Philosophy	3
PHL 372	Medieval Philosophy	3
POL 305	Ancient and Medieval Political Thought	3
POL 490	Directed Study	Variable
THE 307/THE 407	Theology and Controversy in the Letters of Paul	3
THE 360/THE 460	Christianity's First Thousand Years: Emergence and Growth, 100-1200	3

THE 490	Directed Study	Variable
THTR 307	Survey of Theatre History	3
THTR 410	Studies in Drama: Classical Theatre	3

History

Required: 15 upper-division credit hours in History.

Mathematics

Required: 15 upper-division credit hours in Mathematics.

Music

16 credit hours are required for the music minor. MUS 285 (30-minute private music lessons) does not fulfill the requirements for the music minor.

Requirements for Students who are not Music Minor Scholarship Recipients - 16 credit hours

Required Courses - 4 credit hours

MUS 001	Performance Attendance	0
MUS 101	Music Theory I	3
MUS 103	Aural Skills I	1

Upper-Division MUS Courses – 3 credit hours

Ensembles and Music Lessons do not fulfill this 3-credit hour requirement

Any Upper-Division MUS Courses – 9 credit hours

Any combination of upper-division MUS courses will fulfill this 9-credit hour requirement

Requirements for Recipients of Music Minor Scholarships - 16 credit hours

Required Courses - 4 credit hours

Two semesters of MUS 001 are required for recipients of music minor scholarships

MUS 001	Performance Attendance	0
MUS 101	Music Theory I	3
MUS 103	Aural Skills I	1

Upper-Division MUS Courses – 3 credit hours

Ensembles and Music Lessons do not fulfill this 3-credit hour requirement

At Least Four Semesters of Ensemble Courses – 4 or more credit hours

Select from the following:

MUS 443	Wind Symphony	1
MUS 444	University of Portland Singers	1
MUS 445	University of Portland Orchestra	1
MUS 452	University of Portland Bel Canto	1
MUS 453	University Jazz Ensemble	1

At Least Four Semesters of Private Music Lessons – 4 or more credit hours

MUS 486	Private Lessons	1

Upper-Division MUS Courses

Any additional upper-division MUS courses to complete 16 credit hours for the music minor.

Neuroscience

Mark Pitzer, Ph.D., psychological sciences and Jacqueline Van Hoomissen, Ph.D., biology, co-directors

Neuroscience is an interdisciplinary area of study that brings together courses in psychology, biology, and philosophy in seeking to understand how the brain and nervous system acquire, process, and integrate information from the environment, how this information brings about complex behaviors of the organism, and how this impacts our understanding of the nature of the human person.

Learning Outcomes for Neuroscience Minors

1. The student will be able to describe the basic anatomy and physiology of the nervous system, and application to and limitations in explaining the implications of neuroscience in higher functions such as learning, emotions, sexual behavior, memory, language, mental illness, and conceptions of freedom, consciousness and moral responsibility.
2. The student will be able to describe neuroscience phenomena at the molecular, cellular, systems and behavioral levels. This may include how external influences such as emotional experience, pre- and post-natal environment, and drug abuse alter the function and development of the nervous system.
3. The student will be able to critically evaluate the implications of neuroscience for the nature of the human person.

15 upper-division credit hours are required for the minor, in addition to any prerequisites.

In fulfillment of the minor, students must take at least 12 of the required 15 credit hours of upper-division coursework outside their designated major. Students and advisors should note that only 3 credit hours can overlap between a major and minor. Typically, psychology majors will take 6 credit hours of biology electives and biology majors will take 6 credit hours of psychology electives.

Prerequisites - 6 credit hours

PSY 101	Psychological Science	3
BIO 205	Foundations of Biology	3
	Or	
BIO 207	Introduction to Molecular and Cellular Biology	3

Required Courses - 9 credit hours

BIO 428	Neurobiology	3
PHL 332	Metaphysics: Philosophy of Mind	3
PSY 301	Behavioral Neuroscience	3

Upper Division Electives - 6 credit hours

Select two courses from the following:

BIO 305	Human Anatomy and Physiology 1	3
BIO 306	Human Anatomy and Physiology 2	3
BIO 347	Animal Behavior	3
PSY 311	Sensation and Perception	3
PSY 321	Psychology of Learning	3

PSY 331	Cognition	3
PSY 341	Evolutionary Psychology	3
PSY 351	Health Psychology	3
PSY 410	Drugs and Behavior	3

One time course offerings in BIO or PSY (designated 391/491) may fulfill the elective requirement. Please confirm eligible yearly course offerings with the program co-directors.

Philosophy

Prerequisites: PHL 150 and PHL 220.

Required: 15 upper-division credit hours in Philosophy including at least one 400-level PHL course.

Physics

Prerequisites: PHY 204 and PHY 205.

Required: 15 upper-division credit hours in Physics; up to three credit hours of advanced laboratory credit may be included.

Political Science & Global Affairs

Prerequisite: Any 200-level political science course except POL 292.

Required: 15 upper-division credit hours in Political Science.

Psychology

Prerequisite: PSY 101.

Required: 15 upper-division credit hours in Psychology.

Social Justice

Alexa Dare, Ph.D., communication studies, director

The social justice minor is open to all students from any major or school at the University. The social justice minor instills in students an intellectual foundation and practical experience to live in ways that promote social integrity, economic prosperity and defense of human rights for all.

The service dimension of learning at this university is expressed in a unique and effective way within the social justice minor. It challenges students to place their personal development and career choices into an ethical worldview within an interdisciplinary context.

The program includes courses in its curriculum from disciplines such as business, communication, education, English, history, philosophy, political science, psychology, sociology, social work, and theology

Learning Outcomes for Social Justice Minors

Social justice graduates at the University of Portland should be able to:

1. Demonstrate a broad understanding of the theories and concepts of social justice and social justice traditions.
 - a. Identify and explain central concepts of social justice, including the Catholic social justice tradition.
 - b. Identify and explain historical roots of social justice and injustice.
2. Articulate an understanding of social justice from a variety of perspectives including religious, psychological, sociological, historical, cultural, political, economic, and organizational.
 - a. Identify and explain a variety of different disciplines' perspectives on social justice.

- b. Demonstrate an understanding of the social justice implications of issues in various disciplines.
- 3. Demonstrate leadership.
 - a. Set goals for their contribution in a community learning experience.
 - b. Reflect on praxis, integrating theory and their practice in a community learning experience.
 - c. Reflect on their contribution in a community learning experience in terms of different attributes of leadership.

Capstone Experience

Students pursuing the social justice minor will participate in SW 460, Local and Global Social Justice Practice. This course requires all participants to engage in a community learning experience. Students are also required to write a final paper in which they engage in academic reflection and analysis on the connection between their community learning experience and various conceptions of social justice, including, but not limited to, the Catholic Church's social justice tradition. Students are required to publicly present their papers.

Minor Requirements - 18 credit hours

Required Courses - 6 credit hours

POL 302	Perspectives on Social Justice	3
SW 460	Local and Global Social Justice Practice	3

Upper Division Electives - 12 credit hours

At least 3-credit hours must be from a discipline other than POL or SW.

Select four courses from the following:

BUS 487	Social Entrepreneurship	3
CST 327	Argumentation and Advocacy	3
CST 370	Environmental Organizing and Advocacy	3
CST 411	Communication Across Barriers	3
CST 416	Communication and Conflict	3
CST 431	Intercultural Communication and Identity	3
CST 432	Gender and International Development	3
CST 433	Critical Perspectives on Work, Labor, and Organizing	3
CST 435	Advanced Visual Persuasion	3
ECN 424	Income Inequality	3
ED 320	Sociocultural Foundations of Education	3
ENG 360	Literature and Social Change	3
ENG 371	City Life in American Literature	3
ENG 372	Multi-Ethnic American Literature	3
ENG 373	African-American Literature	3
ENG 404	Seminar in Non-Western Literature I	3
ENV 349	Environmental Policy	3
HST 316	US in Depression and War, 1920-1945	3
HST 321	Modern American Women's History	3

HST 322	American Protest and Reform	3
HST 323	African American History	3
HST 343	Europe in the Age of Dictatorship	3
HST 346	Modern Germany	3
HST 357	Environmental History of the Americas and the World	3
HST 358	Disease and Medicine in World History	3
PHL 313	Socio-Political Philosophy	3
PHL 314	Philosophy and Feminism	3
PHL 324	Environmental Ethics	3
PHL 336	Metaphysics: Native American Philosophy	3
PHL 371	Ancient Philosophy	3
PHL 374	Hegel and 19th Century Philosophy	3
PHL 410	Education and Politics	3
PHL 412	Philosophy of Law	3
POL 319	Politics and Identity	3
POL 321	Politics of Hip Hop	3
POL 335	American Public Policy	3
POL 351	International Law in Theory and Practice	3
POL 371	Politics of Central Europe	3
POL 376	Politics of Africa	3
POL 377	Politics of the Middle East	3
POL 378	Muslims and Islam in Europe and the U.S.	3
POL 462	Globalization and its Discontents	3
POL 470	Global Migration and Displacement	3
POL 471	Global Advocacy and Activism	3
PSY 351	Health Psychology	3
PSY 450	Cross Cultural Psychology	3
PSY 463/SOC 463	Children, Youth, and Society	3
SOC 333	Social Class and Inequality	3
SOC 336	Race and Racism in the United States	3
SOC 339	Sociology of the Family	3
SPN 450	Advanced Latin American Culture and Civilization	3
SW 313	Social Welfare Policy	3

SW 325/SOC 325	Power, Oppression, and Critical Consciousness	3
SW 456	Environmental Social Work	3
SW 468/SOC 468/SPN 468	Comparative Health and Social Issues in Ecuador	3
THE 302/THE 402	Poets, Prophets, Divas, and Diviners	3
THE 323/THE 423	Christian Social Ethics	3
THE 329/THE 429	Theological Bioethics	3

Sociology

Prerequisite: SOC 101.

Required: 15 upper-division credit hours in Sociology.

Spanish

Prerequisite: 12 lower-division credit hours In Spanish courses or equivalent.

Required: 12 upper-division credit hours in Spanish courses.

Theater

16 upper division credit hours are required for the minor, in addition to any prerequisites.

Prerequisite - 3 credit hours

THTR 207	Introduction to the Art of Theater	3

Required Courses - 10 credit hours

THTR 307	Survey of Theatre History	3
THTR 321	Acting Workshop I	3
	Or	
THTR 325	Acting for Non-Majors	3
THTR 350	Theatre Crafts	3
THTR 372	Production Work and Review II	1

Design Elective - 3 credit hours

Select one course from the following:

THTR 351	Beginning Stage Lighting and Sound	3
THTR 353	Beginning Scenic Design	3
THTR 363	Beginning Costume Design	3

Theory Elective - 3 credit hours

Select one course from the following:

THTR 333	Directing I	3

THTR 400	Dramaturgy	3
THTR 427	Playwriting Workshop	3
THTR 450	Production Stage Management	3

Theology

Prerequisites: THE 105 (THE 101 for transfer students only) and THE 205.

Required: 15 upper-division credit hours, five courses in Theology beyond THE 105 and THE 205, selected in consultation with the department advisor. These courses can come from any of theology's six sub-disciplines, with no more than 6 credit hours from any one sub-discipline of theology. Thus, students may enroll in courses in biblical studies, historical theology, systematics, theological ethics, sacramental theology, and spirituality, but may not take more than two courses in any one of these sub-disciplines. At least 9 of these 15 credit hours must be at the 400-level. Students may take two 300-level THE courses or one 300-level THE course and one THEP course. All other courses must be taken at the 400 level. Courses taken at the 300 level may not be retaken at the 400 level or vice versa.

Writing

Rev. Pat Hannon, C.S.C., M.Div., Lars Larson, Ph.D., and John McDonald, M.A., co-coordinators

The writing minor offers students the chance to exercise their creative and communicative powers. Writing is a rigorous pursuit that embeds a life with discovery, empathy, deep reflection, increasing knowledge of oneself & others, and career skills. Intended for students of any major, including those in nursing, business, and engineering, the writing minor develops confidence, strategies, and skills in the craft of communicating with clarity and precision.

Learning Outcomes for the Writing Minor

1. Show adherence to the basic skills, rules, and norms of writing, applying them across multiple stages.
2. Understand and engage in a consistent writing practice and process, including writing in drafts, revising, and giving verbal and written feedback to others through peer review.
3. Demonstrate the ability to write within several different genres, understanding the various elements and strategies that create a cohesive piece of writing in each mode. 15 upper division credit hours, including at least 9 credit hours of writing workshop courses, are required for the minor, in addition to any prerequisites. Beyond the writing workshops, any additional credit hours required to complete a minimum of 15 credit hours are drawn from 300-level English courses.

Minor Requirements – 15 credit hours

Prerequisite

ENG 112	Thinking Through Literature	3

300-level English Electives - 0-6 credit hours

Select up to two courses from the follow:

ENG 301	British Literature I (Medieval through 18th Century)	3
ENG 302	British Literature II (19th Century to Present)	3
ENG 303	American Literature I (Beginnings to 1900)	3
ENG 304	American Literature II (1900 to Present)	3
ENG 317	Writing Theory and Practice	3
ENG 326	Shakespeare: Page, Performance, and Perceptions	3

ENG 329/ PHL 339/ THTR 405	Shakespeare in Ashland	3
ENG 336	Studies in Drama	3
ENG 337	Modern/Contemporary Arabic Literature	3
ENG 338	European Literature in Translation	3
ENG 339	Studies in Fiction	3
ENG 342	Studies in Poetry	3
ENG 343	Studies in Nonfiction	3
ENG 351	Satire	3
ENG 352	Film and Literature	3
ENG 353	Letters and Literature	3
ENG 360	Literature and Social Change	3
ENG 361	Northwest Literature	3
ENG 363	Environmental Literature	3
ENG 370	Studies in Women Writers	3
ENG 371	City Life in American Literature	3
ENG 372	Multi-Ethnic American Literature	3
ENG 373	African-American Literature	3
ENG 375	Studies in Irish Writers	3

Writing Workshops - 9-15 credit hours

Select at least three courses and up to five courses from the following:

CST 352	News Writing and Reporting	3
ENG 306	Writing Workshop: Poetry	3
ENG 308/ENG 308	Writing Workshop: Screenwriting	3
ENG 309	Writing Workshop: Fiction	3
ENG 311	Writing Workshop: Nonfiction	3
THTR 427	Playwriting Workshop	3

Students will maintain a writing portfolio and will upload a final work from each of their workshop courses to their writing portfolio.

Degrees and Programs

College Requirements, B.A. — 24-33 credit hours

Effective Communication – 3 credit hours

Select one course from the following:

CST 107	Public Speaking for Change	3

ENG 107	College Writing	3
ENG 311	Writing Workshop: Nonfiction	3

Metaphysics – 3 credit hours

Select one course from the following:

PHL 314	Philosophy and Feminism	3
PHL 330	Metaphysics - A Survey	3
PHL 331	Metaphysics: Asian Philosophy	3
PHL 332	Metaphysics: Philosophy of Mind	3
PHL 333	Metaphysics: Philosophy of Religion	3
PHL 334	Metaphysics: Problem of Being	3
PHL 335	Metaphysics: Self and Identity	3
PHL 336	Metaphysics: Native American Philosophy	3
PHL 337	Metaphysics: Freedom	3
PHL 338	Metaphysics: Ancient Greek Metaphysics in Context	3
PHL 339/THTR 405	Metaphysics of Shakespeare	3
PHL 340	Metaphysics and the Scientific Revolution	3

Upper division hours outside the primary major – 15 credit hours

Nine of which must come from at least 3 different disciplines in the College of Arts and Sciences. This requirement is not fulfilled by the University Core Curriculum.

Language - 3-12 credit hours

At least one language course other than English and successful progression through at least the 202-level in French, German, or Spanish, or the 103/113-level in Chinese. Any exceptions to the language requirement must be approved by the Office of the Dean of the College of Arts and Sciences and the Department of International Languages and Cultures.

Total Credit Hours: 24-33

College Requirements, B.S. — 6 credit hours**Effective Communication – 3 credit hours**

Select one course from the following:

CST 107	Public Speaking for Change	3
ENG 107	College Writing	3
ENG 311	Writing Workshop: Nonfiction	3

Metaphysics – 3 credit hours

Select one course from the following:

PHL 314	Philosophy and Feminism	3
PHL 330	Metaphysics - A Survey	3

PHL 331	Metaphysics: Asian Philosophy	3
PHL 332	Metaphysics: Philosophy of Mind	3
PHL 333	Metaphysics: Philosophy of Religion	3
PHL 334	Metaphysics: Problem of Being	3
PHL 335	Metaphysics: Self and Identity	3
PHL 336	Metaphysics: Native American Philosophy	3
PHL 337	Metaphysics: Freedom	3
PHL 338	Metaphysics: Ancient Greek Metaphysics in Context	3
PHL 339/THTR 405	Metaphysics of Shakespeare	3
PHL 340	Metaphysics and the Scientific Revolution	3

Total Credit Hours: 6

Biology

Tara Prestholdt Ph.D., chair

Faculty: Ahern-Rindell, Beadles-Bohling, Cesar, Clifton, Dizney, Dyer, Favero, Flann, Greaves, Kenton, Mani, Murray, O'Reilly, Prestholdt, Ruppell, Taylor, Tower, Van Hoomissen, Weilhoefer, White, Wynne

The Department of Biology's mission is to effectively develop students' capacities to apply scientific thinking across a range of biological disciplines while providing a vibrant learning environment for all. As they progress through the major, students investigate three sub-disciplinary content levels within biology including cell and molecular biology/genetics, organismal biology, and population/system biology. Students majoring in biology achieve comprehensive preparation for careers as research scientists and health care practitioners, as well as a wide range of technical positions in academia, industry, and governmental agencies. Biology majors acquire a breadth of knowledge and technical/analytical competencies, while reflecting on the interplay of science and society. Undergraduate research and service opportunities are available, thus developing students' capacity for critical thinking, independent learning, and problem solving.

The department offers curricular options that culminate in a bachelor of science (B.S.) degree, a bachelor of arts (B.A.) degree, or a minor in biology. In addition, the department provides several courses that support students studying chemistry, education, engineering, environmental studies, nursing, and neuroscience. The department also serves a major role advising students from all disciplines who are interested in careers in the health professions.

Because of the breadth within its curriculum and degree options, the Department of Biology oversees a comprehensive undergraduate program that prepares students for a wide range of careers and graduate and professional school programs. Students from this program successfully enter graduate studies in areas as diverse as wildlife conservation, ecology, and biomedical research. Biology majors also are well prepared to pursue a variety of health professional graduate programs such as medicine, veterinary medicine, dentistry, dental hygiene, pharmacy, occupational and physical therapy, optometry, and podiatry. The University offers courses that satisfy the admission requirements for all accredited U.S. medical and dental schools, and for most other health profession programs and graduate programs in the biomedical sciences. The University encourages students to pursue a major of their choice and take a broad spectrum of coursework while completing the specific requirements for a particular graduate program.

Learning Outcomes for Biology Major

Biology graduates of the University of Portland will be able to:

1. Competently demonstrate the ability to apply an understanding of the foundational areas of biology that include: evolution, information flow, exchange and storage, structure and function, pathways and transformations of energy and matter, and living systems across organization levels.

2. Competently engage in the evidence-based process of science by demonstrating the ability to identify, pose problems and questions, generate testable hypotheses, troubleshoot an experimental design, evaluate and interpret data, and draw applicable conclusions.
3. Competently engage in data analysis and interpretation by demonstrating the ability to perform mathematical computations and modeling and applying statistical methods and simulations to analyze and illustrate data (including for large data sets and pertaining to bioinformatics).
4. Competently use concepts from other disciplines individually and collaboratively to generate and interpret biological data in a socially relevant and ethical context.
5. Competently communicate and disseminate biological concepts, data interpretations, and significant conclusions to scientists in other disciplines and non-scientists orally and in written form.

Scholarship Requirements

As part of the biology requirements for the B.A. and B.S. degrees, as well as the biology minor, students are required to complete BIO 207/277 with a grade of C- or better before continuation to BIO 208/278. A grade of C- or better in BIO 207/277 and 208/278 is required of all biology majors and minors for entrance into upper-division (300-400 level) biology courses.

Biology, B.A.

The B.A. major in biology is designed to allow students to combine coursework in biology with classes towards a major or minor in a liberal arts field, business, or education. It is appropriate for students preparing for admission to doctoral or master's degree programs in physical therapy, hospital administration, and genetic counseling; it can also be used to meet admission requirements for programs in occupational therapy, optometry, environmental law, scientific illustration, public health, and science communication, among many other possibilities. The degree program requires 120 credit hours.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

Two of the three core requirements in the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by the mathematics and science requirements within the major.

BIO 277 and BIO 453 are the designated Writing in the Discipline⁴⁸ courses for the B.A. in Biology.

College of Arts and Sciences B.A. Requirements — 24-33 credit hours

See College Requirements, B.A.⁷⁵

Major Requirements – 34-35 credit hours

Required Courses — 22-23 credit hours

BIO 207	Introduction to Molecular and Cellular Biology	3
BIO 277	Introduction to Molecular and Cellular Biology Lab	1
BIO 208	Introduction to Evolution and Ecology	3
BIO 278	Introduction to Evolution and Ecology Lab	1
BIO 453	Evolution	3
CHM 207	General Chemistry I	3
CHM 277	General Chemistry I Lab	1
CHM 208	General Chemistry II	3

CHM 278	General Chemistry II Lab	1
MTH 161	Elementary Statistics	3
	Or	
MTH 201	Calculus I	4

At least three upper-division biology labs with corresponding lectures - 12 credit hours

Select one lab with corresponding 3-credit hour lecture from each content area and organizational level.

Molecule and Cell Labs

Select one course from the following:

BIO 333	Genetics Lab	1
BIO 361	Microbiology Lab	1
BIO 372	Cell and Molecular Biology Lab	1
BIO 470	Immunology Lab	1

Organismal labs

Select one course from the following:

BIO 365	Human Anatomy & Physiology Lab 1	1
BIO 366	Human Anatomy & Physiology Lab 2	1
BIO 368	Marine Biology Lab	1
BIO 376	Developmental Biology Lab	1

Population/System labs

Select one course from the following:

BIO 343	Ecology Lab	1
BIO 362	Ornithology Lab	1
BIO 371	Field Botany	1
BIO 373	Freshwater Ecology Lab	1
BIO 374	Wetlands Ecology Lab	1
BIO 375	Vertebrate Biology Lab	1

Upper-division biology electives - 12 credit hours

A maximum of six non-classroom credit hours (from BIO 397/493/497/499) may be used for completion of the major. A maximum of three upper-division electives in BIO 397 or 497 may be Pass/No Pass for completion of the major.

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120

Biology, B.S.

The B.S. major in biology is designed to give students a rigorous and comprehensive background in biology, with additional supporting coursework in the physical sciences and mathematics. The program is suitable for either a terminal degree or as preparation for medical or dental schools, veterinary professional programs, or graduate study in the biological sciences. The degree program requires 120 credit hours.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

Two of the three core requirements in the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by the mathematics and science requirements within the major.

At least 10 credit hours of electives and/or Exploration Level courses in the University Core Curriculum must be upper-division courses.

BIO 277 and BIO 453 are the designated Writing in the Discipline⁴⁸ courses for the B.S. in Biology.

College of Arts and Sciences B.S. Requirements — 6 credit hours

See College Requirements, B.S.⁷⁶

Major Requirements — 62-63 credit hours

Required Courses — 38-39 credit hours

BIO 207	Introduction to Molecular and Cellular Biology	3
BIO 277	Introduction to Molecular and Cellular Biology Lab	1
BIO 208	Introduction to Evolution and Ecology	3
BIO 278	Introduction to Evolution and Ecology Lab	1
BIO 453	Evolution	3
CHM 207	General Chemistry I	3
CHM 277	General Chemistry I Lab	1
CHM 208	General Chemistry II	3
CHM 278	General Chemistry II Lab	1
CHM 325	Organic Chemistry I	3
CHM 326	Organic Chemistry II	3
CHM 375	Organic Chemistry I Lab	1
CHM 376	Organic Chemistry II Lab	1
PHY 201	College Physics I	3
PHY 202	College Physics II	3
PHY 271	College Physics Lab I	1
PHY 272	College Physics Lab II	1
MTH 161	Elementary Statistics	3
	Or	
MTH 201	Calculus I	4

At least three upper-division biology labs with corresponding lectures - 12 credit hours

Select one lab with corresponding 3-credit hour lecture from each content area and organizational level.

Molecule and Cell labs - select one of the following:

BIO 333	Genetics Lab	1
BIO 361	Microbiology Lab	1
BIO 372	Cell and Molecular Biology Lab	1
BIO 470	Immunology Lab	1

Organismal labs — select one of the following:

BIO 365	Human Anatomy & Physiology Lab 1	1
BIO 366	Human Anatomy & Physiology Lab 2	1
BIO 368	Marine Biology Lab	1
BIO 376	Developmental Biology Lab	1

Population/System labs — select one of the following:

BIO 343	Ecology Lab	1
BIO 362	Ornithology Lab	1
BIO 371	Field Botany	1
BIO 373	Freshwater Ecology Lab	1
BIO 374	Wetlands Ecology Lab	1
BIO 375	Vertebrate Biology Lab	1

Upper-division biology electives - 12 credit hours

A maximum of six non-classroom credit hours (from BIO 397/493/497/499) may be used for completion of the major. A maximum of three upper-division electives in BIO 397 or 497 may be Pass/No Pass for completion of the major.

Any additional credit hours required to complete a minimum of 120 credit hours

At least 10 credit hours of electives and/or Exploration Level courses in the University Core Curriculum must be upper-division courses.

Total Credit Hours: 120

Chemistry

Steven Mayer, Ph.D., chair

Faculty: Cantrell, Daoud-Kinzie, Hall, Hoffman, Hutcheson, Jacob, S.G. Mayer, Morton, Osborne, Taylor, Urnezis, Valente, Walters, Wood

Chemistry majors at the University of Portland have unique opportunities to serve the university and their community and to grow in their pursuit of knowledge and application of experimental techniques. The University of Portland's American Chemical Society-certified chemistry program fosters active learning through hands-on experimentation and cultivates independent and critical thinking skills. The department maintains a large array of state-of-the-art facilities and instrumentation used for teaching and faculty-student research. The chemistry department is currently made up of thirteen full-time faculty members, all of whom are active scholars in their respective subdisciplines. There are four options available to students pursuing a bachelor of science degree in chemistry. Each of the options provides a solid preparation for professional practice in chemistry and a variety of related areas and for entrance to graduate school. Each option requires 120 total credit hours.

Learning Outcomes for Chemistry Majors

Chemistry graduates of the University of Portland should:

1. Demonstrate knowledge of Chemistry in at least four of the five traditional sub-disciplines (analytical, organic, physical, inorganic, and biochemistry).
 - a. Demonstrate an understanding of the fundamental theories of chemistry.
 - b. Demonstrate an understanding of the concepts and applications of chemistry.
 - c. Demonstrate knowledge of important laboratory techniques, methods, and instrumentation.
2. Obtain and use data from the chemical literature.
 - a. be able to perform a literature search.
 - b. be able to critically read the literature and extract useful information.
 - c. be able to find the primary literature for a specific topic.
3. Know how to work safely in the laboratory.
 - a. be able to use modern instruments to elucidate chemical systems.
 - b. be able to properly use personal protection (e.g. goggles, gloves, lab coat).
 - c. be able to safely handle common laboratory equipment.
 - d. be able to design experiments with proper safety features.
 - e. be able to access material safety and disposal information.
4. Ask questions, conduct experiments, and interpret results according to established scientific theory.
 - a. use fundamental knowledge of chemistry to form hypotheses.
 - b. create and use specialized equipment to prepare the appropriate conditions for the chemistry of interest.
 - c. identify meaningful results from a data set.
5. Effectively communicate orally and in writing.
 - a. develop an effective presentation style.
 - b. effectively use figures and data to communicate ideas and results.

Scholarship Requirements

A grade of C- or better in the first semester is required for continuation to the second semester of all sequence science courses (for example: CHM 207-208 or CHM 325-326). A grade of C or higher is required in CHM 208 to continue into CHM 325. An average G.P.A. of 2.0 must be maintained in all science, mathematics, and engineering courses required for the major.

Chemistry, B.S.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

Two of the three core requirements in the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by the mathematics and science requirements within the major.

CHM 376 and CHM 471/473 are the designated Writing in the Discipline⁴⁸ courses for the B.S. in Chemistry.

College of Arts and Sciences B.S. Requirements — 6 credit hours

See College Requirements, B.S.⁷⁶

Major Requirements — 58-61 credit hours**Common Major Requirements — 44 credit hours**

CHM 207	General Chemistry I	3
CHM 208	General Chemistry II	3
CHM 277	General Chemistry I Lab	1
CHM 278	General Chemistry II Lab	1
CHM 314	Analytical Chemistry	3
CHM 379	Analytical Chemistry Laboratory	1
CHM 325	Organic Chemistry I	3
CHM 326	Organic Chemistry II	3
CHM 375	Organic Chemistry I Lab	1
CHM 376	Organic Chemistry II Lab	1
CHM 331	Physical Chemistry I	3
CHM 372	Physical Chemistry I Laboratory	1
CHM 344	Inorganic Chemistry I	3
CHM 374	Inorganic Chemistry I Laboratory	1
MTH 201	Calculus I	4
MTH 202	Calculus II	4
PHY 204	General Physics I	3
PHY 205	General Physics II	3
PHY 274	General Physics Lab I	1
PHY 275	General Physics Lab II	1

Option 1**Requirements for an American Chemical Society (ACS) certified B.S. in Chemistry**

This curriculum, certified for depth and rigor by the American Chemical Society, is designed for the student who plans on pursuing an advanced degree in chemistry. In addition to the core, college, and common major requirements (listed above), the requirements for this option are:

Option 1 Requirements — 16 credit hours

CHM 332	Physical Chemistry II	3
CHM 373	Physical Chemistry II Laboratory	1
CHM 444	Inorganic Chemistry II	3
CHM 453	Biochemistry I	3
CHM 472	Instrumental Analysis Laboratory	1
CHM 473	Inorganic Chemistry II Laboratory	1
CHM 477	Data Analysis Laboratory	1
MTH 321	Ordinary Differential Equations	3
	Or	

MTH 356/PHY 356	Mathematical Methods for Science and Engineering	3

Any additional credit hours required to complete a minimum of 120 credit hours

Option 2

Requirements for a B.S. in Chemistry

This curriculum is designed for the student who plans to complement an interest in chemistry with an interest in a related field such as engineering, business, computer science, education, or any of the liberal arts. In addition to the core, college, and common major requirements (listed above), the requirements for this option are:

Option 2 Requirements — 14 credit hours

CHM 332	Physical Chemistry II	3
CHM 444	Inorganic Chemistry II	3
CHM 473	Inorganic Chemistry II Laboratory	1
	Or	
CHM 373	Physical Chemistry II Laboratory	1
	Upper-division science, engineering, or mathematics electives	7

Any additional credit hours required to complete a minimum of 120 credit hours

Option 3

Requirements for a B.S. in Chemistry with biochemistry emphasis

This curriculum is designed for the student who is interested in the molecular basis of biological problems or a medically related field. In addition to the core, college, and common major requirements (listed above), the requirements for this option are:

Option 3 Requirements — 14 credit hours

BIO 207	Introduction to Molecular and Cellular Biology	3
BIO 277	Introduction to Molecular and Cellular Biology Lab	1
CHM 453	Biochemistry I	3
CHM 454	Biochemistry II	3
CHM 471	Biochemistry I Laboratory	1
	Upper-division science, engineering, or mathematics electives	3

Any additional credit hours required to complete a minimum of 120 credit hours

Option 4

Requirements for an American Chemical Society (ACS) certified B.S. in Chemistry with a biochemistry emphasis

This curriculum, certified for depth and rigor by the American Chemical Society, is designed for the student who is interested in the molecular basis of biological problems and plans on pursuing an advanced degree in biochemistry. In addition to the core, college, and common major requirements (listed above), the requirements for this option are:

Option 4 Requirements – 17 credit hours

BIO 207	Introduction to Molecular and Cellular Biology	3
BIO 277	Introduction to Molecular and Cellular Biology Lab	1
CHM 453	Biochemistry I	3
CHM 471	Biochemistry I Laboratory	1
CHM 454	Biochemistry II	3
CHM 474	Biochemistry II Laboratory	1
CHM 472	Instrumental Analysis Laboratory	1
CHM 477	Data Analysis Laboratory	1
CHM 444	Inorganic Chemistry II	3
	Or	
CHM 332	Physical Chemistry II	3

Any additional credit hours required to complete a minimum of 120 credit hours

Communication Studies

Vail Fletcher, Ph.D., chair

Faculty: Dare, Fletcher, Kerksen-Griep, Lovejoy, Macey, Nelson-Marsh

The communication studies (CST) department at the University of Portland supports undergraduate and graduate degree programs in communication and organizational communication, while also offering coursework that satisfies University and College of Arts and Sciences curricular requirements. (See the Graduate School section for CST graduate degree program details.) The bachelor of arts degree in communication offers a program focused on understanding communication as a central constitutive feature of human society. The bachelor of science degree in organizational communication is crafted collaboratively with the Dr. Robert B. Pamplin, Jr. School of Business Administration.

Graduates with these degrees often find work in professional communications, organizing, public relations, personnel management, social media, advertising, design, sales, development, print and online journalism, broadcasting, reporting, and technical and creative writing, among an increasing host of careers relying on advanced communication abilities. For example, CST graduates from UP currently work in health care, journalism, environmental policy, the law, and political advocacy; mediate collective bargaining agreements, manage employees, coordinate events, write grants, create media products, develop fundraising for nonprofits; provide training, manage and design social media, and are public relations professionals and entrepreneurs. Given the program's global emphasis, CST graduates are also sought for Peace Corps, AmeriCorps, and other teaching positions. CST students also frequently attend graduate school and law school.

The mission of the communication studies (CST) program at the University of Portland is to produce ethically grounded students who apply theory and best practices in oral and written communication. The discipline is rooted in one of the original liberal arts, rhetoric, concerned with how people use symbols to reach agreements that permit coordinated efforts. CST degrees animate the heads, hearts, and hands of students who learn to facilitate meaningful interpersonal, workplace, and journalistic public communication, environmental advocacy, and conflict mediation in contexts ranging from local to international, and advocate for truth and social good. Our undergraduates and masters degree programs rely on up-to-date scholarship to develop communication professionals invested in sustaining just relationships, organizations, climates, and societies. Students prepare through faculty-collaborative and independent research and applied communication coursework; via internships and other community-based learning; and in co-curricular activities such as the Speech and Debate Union. The department's award-winning teaching faculty are active scholars committed to integrating social justice and reason in their work.

Learning Outcomes for Communication Studies Majors

CST B.A. Learning Based Outcomes

CST Communication students must be able to:

1. Demonstrate they can engage in communication inquiry.

- Interpret communication scholarship, including its paradigms.
- Frame and analyze issues and phenomena from a communication perspective.
- Evaluate qualities of communication scholarship, including its methods of inquiry.
- Synthesize communication scholarship in order to design and undertake their own scholarship of discovery, integration, or application.

2. Demonstrate they comprehend organizational communication itself as a multi-modal, transactional, and constitutive process.

- Recognize the constitutive (not only representative) nature and organizational influence of communication.
- Identify content, relational, identity, and cultural components embedded in human messaging and meaning-making.
- Comprehend how organizations' and individuals' cultural perspectives influence and are affected by shared perceptions and communication.
- Articulate ways mediated and non-mediated communication operate organizationally.

3. Demonstrate they know how to apply disciplinary knowledge to craft skilled, ethical communication practices allied with their specialties. Students comprehend how to:

- Utilize responsive communication abilities that skillfully engage with others (e.g., social perspective-taking, listening, empathizing, advocacy)
- Discern compelling communication suited to a situation's purpose, goals, and context, and adapted to address the diverse needs and perspectives of its audience.
- Utilize communication to advocate courses of action that advance human rights, dignity, freedom, and equity.
- Evaluate the ethical elements of a communication situation.
- Select communication technologies and modalities best for effectively and creatively accomplishing multiple goals in context.
- Sustain appropriately critical reflection about their own communication practices.

CST Organizational Communication Learning Based Outcomes

CST Organization Communication students must be able to:

1. Demonstrate they can engage in communication inquiry.

- Interpret communication scholarship, including its paradigms.
- Frame and analyze issues and phenomena from a communication perspective.
- Evaluate qualities of communication scholarship, including its methods of inquiry.
- Synthesize communication scholarship in order to design and undertake their own scholarship of discovery, integration, or application.

2. Demonstrate they comprehend organizational communication itself as a multi-modal, transactional, and constitutive process.

- Recognize the constitutive (not only representative) nature and organizational influence of communication.
- Identify content, relational, identity, and cultural components embedded in human messaging and meaning-making.

- Comprehend how organizations' and individuals' cultural perspectives influence and are affected by shared perceptions and communication.
- Articulate ways mediated and non-mediated communication operate organizationally.

3. Demonstrate they know how to apply disciplinary knowledge to craft skilled, ethical communication practices allied with their specialties. Students comprehend how to:

- Utilize responsive communication abilities that skillfully engage with others (e.g., social perspective-taking, listening, empathizing, advocacy)
- Discern compelling communication suited to a situation's purpose, goals, and context, and adapted to address the diverse needs and perspectives of its audience.
- Utilize communication to advocate courses of action that advance human rights, dignity, freedom, and equity.
- Evaluate the ethical elements of a communication situation.
- Select communication technologies and modalities best for effectively and creatively accomplishing multiple goals in context.
- Sustain appropriately critical reflection about their own communication practices.

Communication studies major curricula are designed to develop the abilities embodied in these learning goals. Senior students' capstone projects form the primary means by which the department assesses how thoroughly students have met these learning goals.

Critical analysis and term project papers from a variety of CST courses are additional means by which the department assesses whether students have achieved these learning targets.

Senior Project or Internship Experience

In their final year, B.A. and B.S. students will choose between the Senior Project Class (CST 475) or the Senior Internship Experience (CST 497). The project demonstrates each graduate's preparation in CST learning outcomes, and gives students their most independent opportunity to explore a phenomenon of genuine interest with faculty mentorship. Several project options may be available to students in CST 475, including a standard research project, a deep case analysis project, a community-based grant-writing project, or applying communication scholarship to explain, evaluate, and/or improve some aspect of a community-based learning situation in which the student gets involved.

Communication, B.A.

The bachelor of arts in communication offers a liberal arts degree program focused on understanding communication as a central constitutive feature of human society. This degree guides students' conceptual and pragmatic learning about how interpersonal, environmental, organizational, cultural, and mediated messages and encounters shape people's personal, group, and societal attitudes, values, beliefs, and actions.

While developing several core communication competencies, each student in this degree program also works with their advisor to obtain the cadre of upper-division coursework that will advance their knowledge and ability in areas that suit the student's particular communication learning goals. Although this academic major does not distinguish *a priori* "tracks" within the degree program, communication studies students commonly have shaped Communication B.A. coursework to develop their pragmatic and conceptual expertise in areas such as leadership, media studies, journalism, organizational communication, environmental communication, and intercultural communication, among a wide range of unique possibilities.

This degree program prepares students for a wide range of professional work and for graduate study in communication and related fields. Communication students are actively guided to explore the professional training available to them through a host of community-based academic internships.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

The core requirement for the Commitment to Diversity, Inclusion & the Common Good Habit is satisfied by CST 225 within the major

CST300/320/330 and CST 475/497 are the designated Writing in the Discipline⁴⁸ courses for the B.A. in Communication.

College of Arts and Sciences B.A. Requirements — 24-33 credit hours

See College Requirements, B.A.75

Major Requirements — 42 credit hours

Required Courses — 12 credit hours

CST 101	Introduction to Communication Studies	3
CST 107	Public Speaking for Change	3
CST 225	Interpersonal Communication: Relating to Others	3
CST 301	Media and Society	3

Research Methods Courses - 6 credit hours

Select two courses from the following:

CST 300	Quantitative Research Methods	3
CST 320	Rhetorical Theory and Criticism	3
CST 330	Qualitative Research Methods	3

Upper-division CST courses - 21 credit hours

Students select seven 3-credit hour upper-division CST courses in consultation with their academic advisors. At least three of these courses must be 400-level.

Senior Project - 3 credit hours

Select one of the following to be completed senior year:

CST 475	Senior Project	3
CST 497	Communication Internship Practicum	3

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120

Organizational Communication, B.S.

The bachelor of science degree program in organizational communication provides specialized, interdisciplinary instruction in professional aptitudes associated with workplace and community roles, guiding students' learning about effective, ethical work in modern organizations. This degree program offers coursework in partnership with the Pamplin School of Business, each explaining key concepts and practices that underlie human and technical organizational communication systems.

Aside from learning communication's constitutive role in organizing, organizational communication students develop understandings and competencies in ethical collaboration and leadership abilities for a variety of contemporary contexts, including ways communication processes sustain and change organizations' relational, community, and cultural environments. Students in this program also develop the applied understanding they need to coordinate and manage the work of a variety of organizations.

This degree prepares students for specialized graduate study in communication and related fields, and for professional work in several organizational roles and contexts. Organizational communication students are actively guided to explore the professional training available to them through a host of community-based academic internships.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

The core requirement for the Commitment to Diversity, Inclusion & the Common Good Habit is satisfied by CST 225 within the major

CST300/320/330 and CST 475/497 are the designated Writing in the Discipline⁴⁸ courses for the B.S. in Organizational Communication.

College of Arts and Sciences B.S. Requirements — 6 credit hours

See College Requirements, B.S.⁷⁶

Major Requirements — 54 credit hours

Required Courses — 18 credit hours

CST 101	Introduction to Communication Studies	3
CST 107	Public Speaking for Change	3
CST 233	From Corporations to Social Movements: Understanding Organization Communication	3
BUS 200	Principles of Marketing	3
CST 225	Interpersonal Communication: Relating to Others	3
CST 332	Transforming Small Group Communication	3

Research Methods Courses - 6 credit hours

Select two of the following courses:

CST 300	Quantitative Research Methods	3
CST 320	Rhetorical Theory and Criticism	3
CST 330	Qualitative Research Methods	3

Upper-division Business Courses - 6 credit hours

Students choose two 3-credit hour upper-division BUS courses in consultation with their academic advisors.

Upper-division CST Courses - 21 credit hours

Students select seven 3-credit hour upper-division CST courses in consultation with their academic advisors. At least three of these courses must be 400-level.

Senior Project - 3 credit hours

Select one of the following to be completed senior year:

CST 475	Senior Project	3
CST 497	Communication Internship Practicum	3

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120

Economics

William Barnes, Ph.D., program director

The B.A. in economics major trains students to have strong technical skills and be well-versed in policy analysis and implementation. Throughout the curriculum, students will learn how to manage and allocate scarce natural, human, and financial resources. Students will also analyze environmental policies and determinants of sustainable economic growth. Students may choose to focus their major with one of the following concentrations: environmental economics and policy, international economics, or public policy and social justice.

Learning Outcomes for Economics Majors

B.A. in economics graduates of the University of Portland will be able to:

1. Demonstrate critical understanding of the key concepts and models of microeconomics and macroeconomics.
 - a. Describe the key advantages of competitive markets and the types of market and government failure that can occur in economic systems.
 - b. Articulate how regulation and policy addresses market failure, in theory and in practice.
2. Appropriately apply economic theory and methods to current issues within particular economic fields.
 - a. Identify and utilize economic analysis to evaluate field specific problems.
 - b. Analyze and propose specific solutions to problems, including policy prescriptions as appropriate.
3. Appropriately use economic theory and statistical methods to analyze and draw conclusions from data.
 - a. Construct and interpret statistical evidence, including estimating economic relationships and hypothesis testing.
 - b. Examine economic analyses for faulty logic, unrealistic assumptions or inappropriate methods.
4. Effectively communicate economic ideas, problems, and findings.
 - a. Present economic analysis clearly to technical and non-technical audiences.
 - b. Write up economic analysis clearly in report and research paper formats, utilizing data a graphs as appropriate.

Students with a concentration in Environmental Economics & Policy will also be able to:

1. Demonstrate a broad understanding of theories and concepts in the field of environmental economics & policy
 - a. Identify the role of households, businesses, governments and other stakeholders in resolving environmental issues.
 - b. Use tools such as cost benefit analysis, non-market valuation, and policy analysis in evaluating environmental decision making.
2. Recognize environmental economics & policy questions as interdisciplinary in nature.
 - a. Identify and incorporate fields relevant for issues at hand.
 - b. Integrate systems thinking into environmental and policy analysis.
3. Effectively communicate on environmental economics & policy questions and topics.
 - a. Use scientific and analytical thinking to develop arguments.
 - b. Write in an accessible manner to the general public and professional peers.
 - c. Present environmental economics and policy issues clearly, tailored to the audience.
4. Produce an academic research paper which integrates the economic theories/concepts learned in the concentration (see Capstone project).

Students with a concentration in International Economics will also be able to:

1. Demonstrate a broad understanding of theories and concepts in the field of international economics
 - a. Evaluate the role of international trade, finance, economic development and globalization in international issues.

- b. Compare and assess alternative theories, including in trade, finance and development.
- 2. Recognize that outcomes in international economics are the result of complex systems with many interacting factors, including those related to history, values, and economic institutions.
 - a. Assess institutional differences and conflicting viewpoints
 - b. Empathize with relevant worldviews on given issues.
- 3. Effectively communicate on international economics questions and topics.
 - a. Use scientific and analytical thinking to develop arguments.
 - b. Write in an accessible manner to the general public and professional peers.
 - c. Present international issues clearly, tailored to the audience.
- 4. Produce an academic research paper which integrates the economic theories/concepts learned in the concentration (see Capstone project).

Students with a concentration in Public Policy & Social Justice will be able to:

- 1. Demonstrate a broad understanding of theories and concepts in the fields of public policy & social justice.
 - a. Evaluate public policy proposals using the analytical tools of economics.
 - b. Identify how economics and other social justice connected disciplines can promote social integrity, sustainability, and universal human rights.
- 2. Recognize differing perspectives of public policy and social justice, how the two reinforce each other, and how economics fits in.
- 3. Effectively communicate on public policy and social justice questions and topics.
 - a. Use scientific and analytical thinking to develop arguments.
 - b. Write in an accessible manner to the general public and professional peers.
 - c. Present public policy and social justice issues clearly, tailored to the audience.
- 4. Produce an academic research paper which integrates the economic theories/concepts learned in the concentration (see Capstone project).

Capstone Project

Students pursuing a concentration in Environmental Economics & Policy will:

- Determine and research a topic of their interest related to environmental economics and policy.
- Apply theories, concepts, and the disciplinary flexibility learned in their concentration to inform their research.
- Integrate and interpret data relevant to their project.
- Write and present a final paper on the chosen topic. The paper will include a literature review, relevant data gathering, empirical analysis or modelling as well as relevant conclusions and recommendations.

Students pursuing a concentration in International Economics will:

- Determine and research a topic of their interest related to International Economics.
- Apply theories, concepts, and the global perspective learned in their concentration to inform their research.
- Integrate and interpret data relevant to their project.
- Write and present a final paper on the chosen topic. The paper will include a literature review, relevant data gathering, empirical analysis or modelling as well as relevant conclusions and recommendations.

Students pursuing a concentration in Public Policy & Social Justice will:

- Determine and research a topic of their interest related to Public Policy and Social Justice
- Apply theories, concepts, and the social welfare perspective learned in their concentration to inform their research.

- Integrate and interpret data relevant to their project.
- Write and present a final paper on the chosen topic. The paper will include a literature review, relevant data gathering, empirical analysis or modelling as well as relevant conclusions and recommendations.

Economics, B.A.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

Two of the three core requirements in the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by ECN 120 and the mathematics requirements within the major.

ECN 325 and ECN 425 are the designated Writing in the Discipline⁴⁸ courses for the B.A. in Economics.

College of Arts and Sciences B.A. Requirements — 24-33 credit hours

See College Requirements, B.A.⁷⁵

Major Requirements - 40 credit hours

Required Courses - 31 credit hours

BUS 101	Software Applications Workshop	1
ECN 120	Principles of Macroeconomics	3
ECN 121	Principles of Microeconomics	3
MTH 121	Calculus for Business and Social Science	3
MTH 141	Finite Mathematics	3
MTH 161	Elementary Statistics	3
ECN 310	Econometrics	3
ECN 319	Intermediate Microeconomics	3
ECN 320	Intermediate Macroeconomics	3
ECN 325/ENV 325	Metrics for Sustainability	3
ECN 425	Applied Economic Research	3

Grades of C- or higher must be earned in all MTH courses before taking upper division ECN courses. The following math substitutions may be made: MTH 361 or EGR 361 for MTH 161, MTH 201 for MTH 121, and MTH 202 for MTH 141.

Students may select one concentration from the following:

No Concentration: Major Electives - 9 credit hours

Select three courses from the following. Two of the three courses must be in ECN.

	Any 300 or 400 level ECN course	3
BUS 312	Cost Accounting	3
BUS 330	Managerial Finance	3
BUS 356	Database Management	3
BUS 408/EGR	Innovation for Sustainability	3

408/ENV 408		
BUS 431	Financial Markets and Institutions	3
BUS 433	Real Estate Finance	3
BUS 461	Introduction to R Programming in Business	3

Environmental Economics and Policy Concentration-9 credit hours

This concentration provides a rigorous foundation for majors interested in the role that societies play in affecting environmental outcomes and how to improve those outcomes. The concentration is excellent for those pursuing careers in the growing environmental sector of the economy, including in business, government, nonprofits, and environmental consulting.

Select two courses from the following electives - 6 credit hours:

ECN 322	Environmental Economics	3
ECN 325/ENV 325	Metrics for Sustainability	3
ECN 326	Climate Change Economics and Policy: A Global Perspective	3

Select one course from the following electives - 3 credit hours:

ECN 322	Environmental Economics	3
ECN 325/ENV 325	Metrics for Sustainability	3
ECN 326	Climate Change Economics and Policy: A Global Perspective	3
ECN 430	Psychology & Economics	3
BUS 408/EGR 408/ENV 408	Innovation for Sustainability	3
ENV 314	Resilience and Policy	3
ENV 349	Environmental Policy	3
HST 357	Environmental History of the Americas and the World	3
PHL 324	Environmental Ethics	3
POL 335	American Public Policy	3

International Economics Concentration - 9 credit hours

This concentration provides a rigorous foundation for majors interested in the economic institutions and practices associated with international trade, finance, and development. The concentration is particularly appropriate for those pursuing careers in global business, as well as for those seeking international work in government or non-governmental organizations.

Select two courses from the following electives - 6 credit hours:

ECN 426	Comparative Economics	3
ECN 429	Development Economics	3
ECN 440	International Economics	3

Select one course from the following electives - 3 credit hours:

ECN 326	Climate Change Economics and Policy: A	3

	Global Perspective	
ECN 426	Comparative Economics	3
ECN 429	Development Economics	3
ECN 440	International Economics	3
POL 371	Politics of Central Europe	3
POL 372	Politics of the EU and Contemporary Europe	3
POL 376	Politics of Africa	3
POL 377	Politics of the Middle East	3
POL 457	The Rise of China	3
POL 462	Globalization and its Discontents	3
POL 470	Global Migration and Displacement	3

Public Policy and Social Justice Concentration - 9 credit hours

For students who choose courses that emphasize public policy, this provides a rigorous foundation for majors interested in positively influencing the laws and regulations that constitute the rules of the game for organizations, cities, states, and the nation. Students are well positioned for excellent analyst positions in government, public policy research firms, public health, and other organizations. For students who choose courses that emphasize social justice, the concentration instills an understanding of how economics in an interdisciplinary context can promote social integrity, sustainability, and universal human rights. It is excellent preparation for careers in the nonprofit, non-governmental, and governmental sectors, particularly careers centering on environmental justice and sustainability, marginalized populations, and labor rights.

Select two courses from the following electives - 6 credit hours:

ECN 327	Market Power: Origins, Structures and Consequences	3
ECN 424	Income Inequality	3
ECN 429	Development Economics	3
ECN 431	Health Economics	3

Select one course from the following electives - 3 credit hours:

ECN 325/ENV 325	Metrics for Sustainability	3
ECN 326	Climate Change Economics and Policy: A Global Perspective	3
ECN 327	Market Power: Origins, Structures and Consequences	3
ECN 424	Income Inequality	3
ECN 426	Comparative Economics	3
ECN 429	Development Economics	3
ECN 430	Psychology & Economics	3
ECN 431	Health Economics	3
CST 432	Gender and International Development	3
HST 316	US in Depression and War, 1920-1945	3

HST 322	American Protest and Reform	3
PHL 313	Socio-Political Philosophy	3
POL 302	Perspectives on Social Justice	3
POL 335	American Public Policy	3
POL 462	Globalization and its Discontents	3
SOC 333	Social Class and Inequality	3
SW 313	Social Welfare Policy	3

Any additional credit hours required to complete a minimum of 120 credit hours

English

Lars Larson, Ph.D., chair

Faculty: Brassard, Buck-Perry, Hannon, Hersh, Hiro, McDonald, Orr, Swidzinski, Weiger

The mission of the English program at the University of Portland is to guide practice in critical reading and competent writing for all levels of University students. In the courses provided for the University's liberal arts core, as well as in those of its own major and minor, the English program increases the breadth and depth of each student's literary experience, the development of appropriate reading and writing skills, the understanding of the humane values at the center of literary study, and the appreciation of the power and pleasure of literature.

English faculty members engage the intellects and imaginations of their students through careful attention to the reading and writing of literature, its context, and its art. In addition to their classroom teaching, faculty strive to model the personal and ethical qualities inherent in the University's mission, including the discipline and commitment necessary for scholarly research and creative expression. They are committed to student-centered instruction, which develops the skills and confidence English majors need to be successful in graduate programs, as well as in a variety of careers, including teaching, law, publishing, and business.

The department offers an English major and minor and a writing minor. The English program offers courses in British, American, and trans-national literatures in English, and in academic and creative writing. Prospective English majors and minors should consult with the department chair about designing their programs of study.

Learning Outcomes for English Majors

English graduates of the University of Portland should be able to:

1. Read a range of literature in English and exhibit a knowledge of genres, and literary history.
 - a. Recognize the formal features that distinguish literary prose, verse, drama, and other media.
 - b. Recognize and distinguish major genres and sub-genres of literature.
 - c. Develop familiarity with major historical periods and movements, and the influence of previous trends and styles on later authors and texts.
2. Read texts closely and think critically, with openness, confidence, and acuity – understanding that literary texts are complex and resist simple interpretation.
 - a. Recognize *what* texts communicate and *how* they do so.
 - b. Identify significant patterns in the way a textual passage is constructed.
 - c. Extrapolate the larger implications (social, philosophical, ethical, argumentative) of these patterns.
 - d. Connect a passage's formal structure and thematic content with the text as a whole.
3. Write with clarity and compose well-argued essays.
 - a. Practice writing as a process.
 - b. Develop focused, compelling, and original arguments about literary texts.

- c. Present these arguments in essays marked by conceptual coherence, correct usage, and a fresh writing style.
- 4. Know how to conduct productive research in literary studies that contributes to a critical conversation.
 - a. Use bibliographic tools to find primary and secondary source material.
 - b. Employ secondary source material in the process of developing an original argument.
 - c. Engage with the critical conversation surrounding a paper's main topic.
- 5. Experience literature as a powerful way of knowing about cultures and the lived life.
 - a. Demonstrate an understanding of imaginative literature as an alternative way of studying the universe and the human condition beyond what is available in the sciences and social sciences.
 - b. Discern how the structures, language, characters, and actions in literary texts speak to fundamental life questions and today's world.

English, B.A.

The English program provides students with courses of study that will develop both academic and creative writing, an understanding of language, and a critical engagement with literature. To achieve these objectives, English majors are expected to develop and refine their writing abilities and critical understanding of language and literature through extensive reading and discussion.

All students who desire to major in English will be required to complete 27 upper-division credit hours of English courses approved by the department chair and demonstrate satisfactorily their possession of the basic skills of literary criticism and research through completion of ENG 225. After being accepted as English majors the students will, in consultation with their advisors, decide upon a program of studies best suited to their needs and interests, whether in preparation for teaching, advanced study, professional writing, or other vocations in which their liberal education may prove an asset. In their senior year, all English majors write a senior paper as a Capstone experience.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

ENG 225 and ENG 499 are the designated Writing in the Discipline⁴⁸ courses for the B.A. in English.

College of Arts and Sciences B.A. Requirements — 24-33 credit hours

See College Requirements, B.A.⁷⁵

Major Requirements — 30 credit hours

Required Course — 3 credit hours

ENG 225	Introduction to Literary Studies	3

Survey Courses - 6 credit hours

Select two courses from the following:

ENG 301	British Literature I (Medieval through 18th Century)	3
ENG 302	British Literature II (19th Century to Present)	3
ENG 303	American Literature I (Beginnings to 1900)	3
ENG 304	American Literature II (1900 to Present)	3

300-level Topic Courses - 12 credit hours

Select four courses from the following:

ENG 306	Writing Workshop: Poetry	3
ENG 309	Writing Workshop: Fiction	3
ENG 311	Writing Workshop: Nonfiction	3
ENG 317	Writing Theory and Practice	3
ENG 326	Shakespeare: Page, Performance, and Perceptions	3
ENG 329/ PHL 339/ THTR 405	Shakespeare in Ashland	3
ENG 336	Studies in Drama	3
ENG 337	Modern/Contemporary Arabic Literature	3
ENG 338	European Literature in Translation	3
ENG 339	Studies in Fiction	3
ENG 342	Studies in Poetry	3
ENG 343	Studies in Nonfiction	3
ENG 351	Satire	3
ENG 352	Film and Literature	3
ENG 353	Letters and Literature	3
ENG 360	Literature and Social Change	3
ENG 361	Northwest Literature	3
ENG 363	Environmental Literature	3
ENG 370	Studies in Women Writers	3
ENG 371	City Life in American Literature	3
ENG 372	Multi-Ethnic American Literature	3
ENG 373	African-American Literature	3
ENG 375	Studies in Irish Writers	3

Seminar Courses - 6 credit hours

Select two courses from the following:

ENG 401	Seminar in British Literature I	3
ENG 402	Seminar in American Literature I	3
ENG 403	Seminar in Topic I	3
ENG 404	Seminar in Non-Western Literature I	3

Senior Capstone Seminar - 3 credit hours

ENG 499	Senior Capstone Seminar	3

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120

Environmental Studies

Steven A. Kolmes, Ph.D., chair

Christine Weihoefer, Ph.D., B.S. track director

Faculty: Abel, Barnes, Carpenter, Hill, Kolmes, Martin, Oculi, Prestholdt, Riverman, Sweeney, Weiger, Weihoefer, Woodard

We live in an era of climate change, concerns about environmental toxins, and diminishing forests and fisheries. We also live in an era of alternate energy innovations, vibrant public discourse, and a new ethos of sustainability. The environmental studies department prepares B.A. majors in environmental ethics and policy and B.S. majors in environmental science to serve as leaders in this 21st century of challenges and opportunities. The department gives all its majors, regardless of the track they pursue, an understanding of the scientific implications of environmental concerns, and the theological, philosophical, economic, and political issues at the heart of this challenge. The department is also dedicated to creative interaction with other schools of the University, such as the environmental engineering track in the civil engineering degree program, and the sustainable entrepreneurship offerings in the Pamplin School of Business Administration. Taken together, this encourages a rich and constructive conversation on our campus that centers on the place of humankind and human activities in an environmentally sustainable future.

The goal of the environmental studies department program is to graduate students who have gained enough insight into the present environmental situation, and the interconnected elements involved in discerning a path towards sustainability, to provide leadership as environmental professionals. As Oregon's Catholic university, the University of Portland is perfectly situated as a place where the discussion of moral and ethical dimensions of environmental decisions is part of normal discourse.

B.A. and B.S. majors are brought together several times in the course of their undergraduate work: first in ENV 200 which introduces students to the major, in various environmental studies courses, laboratories, field trips, and in a senior capstone seminar which involves case studies and team-approach problem-solving in regional environmental issues.

Minors are available in environmental science and in environmental policy.

Learning Outcomes for Environmental Studies Majors

Environmental ethics and policy and environmental science graduates of the University of Portland will be able to:

1. Work effectively in an interdisciplinary setting.
 - a. Demonstrate the ability to work in a group to engage in problems from multiple interdisciplinary perspectives.
 - b. Integrate scientific, ethical, theological, and policy perspectives in work in the environmental arena.
 - c. Produce a research paper and presentation as part of an interdisciplinary team.
 - d. B.S. students will be able to:
 - i. Recognize when ethical issues are at play in environmental research and policy.
 - ii. Recognize the need for ethical thinking.
 - iii. Recognize the implications of their scientific work for both ethics and policy.
 - e. B.A. students will be able to:
 - i. Understand what research is relevant to their projects.
 - ii. Understand and interpret data that is relevant to their projects.
 - iii. Integrate scientific data into their ethical and policy analysis.
2. Demonstrate the capacity of systems thinking.
 - a. Recognize environmental problems as complex systems with many interacting factors.
 - b. Take a holistic rather than a reductionistic approach to engaging in environmental problems.
3. Effectively communicate about environmental issues with both professional audiences and in conversation with the general public.
 - a. Write for both peers in one's professional area and for the general public.

- b. Present relevant environmental information to neighborhood associations and other non-professional audiences.
- c. Engage in the art of dialogue on environmental issues empathically engaging with people of differing perspectives and life experiences.
- d. B.S. students will be able to recognize environmental issues and the stories we tell about them as historically and politically situated.
- e. B.A. students will be able to describe environmental issues and the stories we tell about them as historically and politically situated.

All Environmental Science graduates of the University of Portland will also be able to:

1. Articulate a program of scientific research that is illuminating to ethical and policy problems.
 - a. Recognize the ethical and policy dimensions of the systems on which one is working.
 - b. Engage with scientists and policy makers in a way that non-scientists can understand.
2. Use the scientific method to examine environmental problems.
 - a. Form a testable hypothesis.
 - b. Collect data in light of a hypothesis.
 - c. Interpret data in light of a hypothesis.
 - d. Demonstrate an understanding of what needs to be done next in light of the data.

All Environmental Ethics and Policy graduates of the University of Portland will also be able to:

1. Demonstrate a high level of facility with the tools of ethical discernment.
 - a. Provide an ethical analysis of an environmental situation/problem.
 - b. Provide an ethical analysis of proposed environmental policy.
 - c. Promote the development of ethical responsibility in their communities.
2. Write a scientifically and ethically informed policy analysis or policy proposal.
 - a. Integrate scientific data to support a policy analysis or proposal.
 - b. Integrate ethical considerations into a policy analysis or proposal.
 - c. Demonstrate an understanding of the differences between ethical analysis and policy analysis.

Capstone Experience

It is required that students earning a B.A. or B.S. degree in environmental studies participate in an environmentally-oriented capstone experience during the spring semester of the calendar year in which they graduate. This capstone experience provides students with an opportunity to synthesize their diverse course material into a cohesive and integrated body of knowledge. The capstone experience in environmental studies is achieved through the ENV 400— Integrating Seminar in Environmental Studies course. Students research a current environmental issue in the Pacific Northwest, working on sub-tasks as interdisciplinary teams, each of which includes both ethics/policy and science majors. Their findings, conclusions and recommendations are presented on Founders Day near the end of the spring semester.

Environmental Ethics and Policy, B.A.

The University's bachelor of arts in environmental ethics and policy is designed to provide students with a firm foundation in environmental science and ecology and the influence these sciences have on the development of political policy, environmental ethics, and recent continuing theological reflection on environmental issues. The program culminates in a capstone experience designed to challenge students to apply their area of study to specific issues germane to the Pacific Northwest.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

Two of the three core requirements for the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by economics and science requirements within the major.

ENV 324 and ENV 400 are the designated Writing in the Discipline⁴⁸ courses for the B.A. in Environmental Ethics and Policy.

College of Arts and Sciences B.A. Requirements — 24-33 credit hours

See College Requirements, B.A.⁷⁵

Major Requirements — 52 credit hours

Environmental Ethics & Policy Tracks — 6 credit hours

Select one track from the following:

Track One

BIO 208	Introduction to Evolution and Ecology	3
ENV 200	Perspectives in Environmental Studies	3

Track Two

Select ENV 310 and one other course from the following:

ENV 310	Topics in Environmental Studies	3
	And	
BIO 208	Introduction to Evolution and Ecology	3
	Or	
	Any 100-level ENV course	3

Select Four Courses from the Following — 12 credit hours

ENV 324	Environmental Ethics	3
ENV 314	Resilience and Policy	3
	Or	
ENV 349	Environmental Policy	3
ENV 400	Integrating Seminar in Environmental Studies	3
ECN 120	Principles of Macroeconomics	3
	Or	
ECN 121	Principles of Microeconomics	3

Select One Course from the Following - 3 credit hours

ECN 322	Environmental Economics	3
ECN 325/ENV 325	Metrics for Sustainability	3
ECN 326	Climate Change Economics and Policy: A Global Perspective	3

Select Four Credit Hours from the Following - 4 credit hours

BIO 303	Entomology	3
	with	

BIO 323	Entomology Lab	1
BIO 304	Wetlands Ecology	3
	with	
BIO 374	Wetlands Ecology Lab	1
BIO 318	Mammal Behavior and Conservation	3
	with	
BIO 358	Mammal Behavior and Conservation Lab	1
BIO 338	Marine Biology of the Pacific Northwest	3
	with	
BIO 368	Marine Biology Lab	1
BIO 341	The Nature of Plants	3
	with	
BIO 371	Field Botany	1
BIO 345	Vertebrate Biology	3
	with	
BIO 375	Vertebrate Biology Lab	1
BIO 340	Ecology	3
	with	
BIO 343	Ecology Lab	1
BIO 363	Freshwater Ecology	3
	with	
BIO 373	Freshwater Ecology Lab	1
ENV 333	Geomorphology	3
	with	
ENV 337	Geomorphology Lab	1
ENV 361	Meteorology	3
	with	
ENV 387	Environmental Laboratory	1
ENV 365	Climatology	3
	with	
ENV 387	Environmental Laboratory	1

Select One Course from the Following - 3 credit hours

BIO 302	Ornithology	3
BIO 303	Entomology	3
BIO 304	Wetlands Ecology	3
BIO 338	Marine Biology of the Pacific Northwest	3

BIO 340	Ecology	3
BIO 341	The Nature of Plants	3
BIO 345	Vertebrate Biology	3
BIO 347	Animal Behavior	3
BIO 348	Conservation Biology	3
BIO 363	Freshwater Ecology	3
ENV 317	Science of the Two Americas	3
ENV 333	Geomorphology	3
ENV 358	Physical Oceanography	3
ENV 361	Meteorology	3
ENV 365	Climatology	3
ENV 382	Air Pollution	3
ENV 383	Environmental Geoscience	3
ENV 384/BIO 384/CE 458	Remote Sensing and Geographic Information Systems	3

Ethics and Policy Concentration -- 24 credit hours

Select eight courses from the following:

	Any 300 or 400 level ENV course	3
CST 370	Environmental Organizing and Advocacy	3
CST 401/CST 501	The Rhetoric of Politics	3
CST 470	Plants, Nonhuman Animals, Food Systems, and Climate Communication	3
ECN 322	Environmental Economics	3
ECN 326	Climate Change Economics and Policy: A Global Perspective	3
ENG 361	Northwest Literature	3
ENG 363	Environmental Literature	3
PHL 314	Philosophy and Feminism	3
PHL 422	Philosophy of Science	3
HST 314	American Expansion	3
HST 357	Environmental History of the Americas and the World	3
HST 359	The Modern City	3
POL 302	Perspectives on Social Justice	3
POL 335	American Public Policy	3
POL 351	International Law in Theory and Practice	3
POL 352	Survival	3

SOC 434	Urban Society	3
SW 456	Environmental Social Work	3
THE 304/THE 404	Sages and Singers, Songwriters and Storytellers	3
THE 323/THE 423	Christian Social Ethics	3
THE 325/THE 425	Catholic Social Teaching: A Living Tradition of Thought and Action	3
THE 343/THE 443	Ecological Spirituality	3
THE 351/THE 451	Religions of Africa	3
THE 353/THE 453	Religion and Science	3

One time course offerings (designated 391/491) in THE, THEP or PHL may fulfill the Ethics and Policy Concentration requirements if the topic is appropriate. Please confirm eligible yearly course offerings with your academic advisor.

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120

48 hours of total credits must be upper-division. 120 overall credits or more required.

Environmental Science, B.S.

The B.S. majors with concentrations in biology, chemistry, earth sciences, and quantitative and spatial methods, let students of varying interests develop both breadth and depth in their training as environmental scientists. Students in all of these concentrations will take specific core courses and courses in the sciences in common, along with their varied upper division advanced scientific courses. A total of 48 credit hours must be upper-division.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

Two of the three core requirements for the Scientific and Quantitative Literacy and Problem Solving Habit is satisfied by the mathematics and science requirements within the major.

ENV 383 and ENV 400 are the designated Writing in the Discipline⁴⁸ courses for the B.S. in Environmental Science.

College of Arts and Sciences B.S. Requirements — 6 credit hours

See College Requirements, B.S.⁷⁶

Major Requirements — 50-64 credit hours

Requirements for all B.S. Concentrations - 13 credit hours

ENV 200	Perspectives in Environmental Studies	3
	Or	
ENV 310	Topics in Environmental Studies	3
ENV 383	Environmental Geoscience	3
ENV 400	Integrating Seminar in Environmental	3

	Studies	
MTH 201	Calculus I	4

Concentrations: Students select one concentration

Biology Concentration Requirements — 24 credit hours

Select from the following:

	Any 300 or 400 level ENV course	3
BIO 303	Entomology	3
BIO 323	Entomology Lab	1
BIO 304	Wetlands Ecology	3
BIO 374	Wetlands Ecology Lab	1
BIO 340	Ecology	3
BIO 343	Ecology Lab	1
BIO 341	The Nature of Plants	3
BIO 348	Conservation Biology	3
BIO 371	Field Botany	1
BIO 345	Vertebrate Biology	3
BIO 375	Vertebrate Biology Lab	1
BIO 347	Animal Behavior	3
BIO 338	Marine Biology of the Pacific Northwest	3
BIO 368	Marine Biology Lab	1
BIO 363	Freshwater Ecology	3
BIO 373	Freshwater Ecology Lab	1
CHM 325	Organic Chemistry I	3
CHM 375	Organic Chemistry I Lab	1
CHM 326	Organic Chemistry II	3
CHM 376	Organic Chemistry II Lab	1
CHM 386/ENV 386	Environmental Chemistry	3
PHY 201	College Physics I	3
PHY 271	College Physics Lab I	1
PHY 202	College Physics II	3
PHY 272	College Physics Lab II	1

Chemistry Concentration Requirements — 27 credit hours

CHM 325	Organic Chemistry I	3
	with	
CHM 375	Organic Chemistry I Lab	1
CHM 326	Organic Chemistry II	3

	with	
CHM 376	Organic Chemistry II Lab	1
CHM 386/ENV 386	Environmental Chemistry	3
MTH 202	Calculus II	4
PHY 201	College Physics I	3
	with	
PHY 271	College Physics Lab I	1
PHY 202	College Physics II	3
	with	
PHY 272	College Physics Lab II	1

Select from the following – 4 credit hours

CHM 314	Analytical Chemistry	3
	with	
CHM 379	Analytical Chemistry Laboratory	1
CHM 331	Physical Chemistry I	3
	with	
CHM 372	Physical Chemistry I Laboratory	1
CHM 412	Advanced Instrumental Theory	1
	with	
CHM 472	Instrumental Analysis Laboratory	1
CHM 453	Biochemistry I	3
	with	
CHM 471	Biochemistry I Laboratory	1
CE 367	Environmental Engineering	3
	with	
CE 376	Environmental Engineering Laboratory	1
ENV 300	Techniques in Environmental Research	3
ENV 333	Geomorphology	3
ENV 337	Geomorphology Lab	1
ENV 358	Physical Oceanography	3
ENV 361	Meteorology	3
ENV 365	Climatology	3
ENV 382	Air Pollution	3
ENV 387	Environmental Laboratory	1
ENV 384/BIO 384/CE 458	Remote Sensing and Geographic Information Systems	3

Additional Major Requirements for Biology and Chemistry Concentrations —20 credit hours

BIO 207	Introduction to Molecular and Cellular Biology	3
	with	
BIO 277	Introduction to Molecular and Cellular Biology Lab	1
BIO 208	Introduction to Evolution and Ecology	3
	with	
BIO 278	Introduction to Evolution and Ecology Lab	1
BIO 207	Introduction to Molecular and Cellular Biology	3
	with	
BIO 277	Introduction to Molecular and Cellular Biology Lab	1
CHM 207	General Chemistry I	3
	with	
CHM 277	General Chemistry I Lab	1
CHM 208	General Chemistry II	3
	with	
CHM 278	General Chemistry II Lab	1

Select one lecture with corresponding lab from the following - 4 credit hours

BIO 303	Entomology	3
	with	
BIO 323	Entomology Lab	1
BIO 304	Wetlands Ecology	3
	with	
BIO 374	Wetlands Ecology Lab	1
BIO 338	Marine Biology of the Pacific Northwest	3
	with	
BIO 368	Marine Biology Lab	1
BIO 341	The Nature of Plants	3
	with	
BIO 371	Field Botany	1
BIO 340	Ecology	3
	with	
BIO 343	Ecology Lab	1
BIO 345	Vertebrate Biology	3

	with	
BIO 375	Vertebrate Biology Lab	1
BIO 363	Freshwater Ecology	3
	with	
BIO 373	Freshwater Ecology Lab	1
ENV 333	Geomorphology	3
	with	
ENV 337	Geomorphology Lab	1
ENV 361	Meteorology	3
	with	
ENV 387	Environmental Laboratory	1
ENV 365	Climatology	3
	with	
ENV 387	Environmental Laboratory	1

Quantitative and Spatial Methods Concentration Requirements — 42-43 credit hours

MTH 202	Calculus II	4
MTH 361	Applied Statistics I	3
PHY 201	College Physics I	3
	with	
PHY 271	College Physics Lab I	1
	Or	
PHY 204	General Physics I	3
	with	
PHY 274	General Physics Lab I	1
ENV 384/BIO 384/CE 458	Remote Sensing and Geographic Information Systems	3

Select from the following – 9-10 credit hours

MTH 301	Vector Calculus	4
MTH 303/CHM 303/PHY 303	Computational Methods in Physical Sciences	3
MTH 321	Ordinary Differential Equations	3
MTH 323	Nonlinear Dynamics	3
MTH 356/PHY 356	Mathematical Methods for Science and Engineering	3
MTH 381	Math Modeling	3
MTH 497	Internship	Variable

Select from the following – 4 credit hours

BIO 303	Entomology	3
	with	
BIO 323	Entomology Lab	1
BIO 304	Wetlands Ecology	3
	with	
BIO 374	Wetlands Ecology Lab	1
BIO 338	Marine Biology of the Pacific Northwest	3
	with	
BIO 368	Marine Biology Lab	1
BIO 340	Ecology	3
	with	
BIO 343	Ecology Lab	1
BIO 363	Freshwater Ecology	3
	with	
BIO 373	Freshwater Ecology Lab	1
ENV 317	Science of the Two Americas	3
ENV 333	Geomorphology	3
	with	
ENV 337	Geomorphology Lab	1
BIO 348	Conservation Biology	3
ENV 300	Techniques in Environmental Research	3
ENV 358	Physical Oceanography	3
ENV 361	Meteorology	3
ENV 365	Climatology	3
ENV 387	Environmental Laboratory	1

Select from the following – 15 credit hours

MTH 303/CHM 303/PHY 303	Computational Methods in Physical Sciences	3
MTH 322	Partial Differential Equations	3
MTH 341	Introduction to Linear Algebra	3
MTH 356/PHY 356	Mathematical Methods for Science and Engineering	3
MTH 461	Probability and Statistics I	3
PHY 205	General Physics II	3
PHY 275	General Physics Lab II	1

ENV 300	Techniques in Environmental Research	3
ENV 314	Resilience and Policy	3
ENV 317	Science of the Two Americas	3
ENV 325/ECN 325	Metrics for Sustainability	3
ENV 333	Geomorphology	3
ENV 337	Geomorphology Lab	1
ENV 361	Meteorology	3
ENV 365	Climatology	3
ENV 382	Air Pollution	3
ENV 387	Environmental Laboratory	1
ENV 408/BUS 408/EGR 408	Innovation for Sustainability	3
ENV 493	Environmental Research	1-3
ENV 497	Environmental Internship	Variable
ECN 326	Climate Change Economics and Policy: A Global Perspective	3
CE 367	Environmental Engineering	3
	with	
CE 376	Environmental Engineering Laboratory	1
CE 462	Sustainable Design	3
CE 464	Watershed Systems Modeling	3
CE 468	Environmental Engineering Topics	3
EGR 351	Engineering Economics	3
EGR 361	Analysis of Engineering Data	3
	Upper division computer science courses	6

Earth Science Concentration—37 credit hours

PHY 201	College Physics I	3
	with	
PHY 271	College Physics Lab I	1
	Or	
PHY 204	General Physics I	3
	with	
PHY 274	General Physics Lab I	1

Select from the following – 9 credit hours

ENV 300	Techniques in Environmental Research	3

ENV 333	Geomorphology	3
ENV 358	Physical Oceanography	3
ENV 361	Meteorology	3
ENV 365	Climatology	3
ENV 382	Air Pollution	3
ENV 384/BIO 384/CE 458	Remote Sensing and Geographic Information Systems	3
ENV 493	Environmental Research	1-3

Select from the following – 2 credit hours

Some courses have co-requisite lecture courses.

ENV 300	Techniques in Environmental Research	3
ENV 337	Geomorphology Lab	1
ENV 387	Environmental Laboratory	1
BIO 343	Ecology Lab	1
BIO 368	Marine Biology Lab	1
BIO 371	Field Botany	1
BIO 374	Wetlands Ecology Lab	1
BIO 373	Freshwater Ecology Lab	1
CS 273	Computer Science Laboratory	1
CE 376	Environmental Engineering Laboratory	1

Select from the following – 22 credit hours

ENV 300	Techniques in Environmental Research	3
ENV 314	Resilience and Policy	3
ENV 317	Science of the Two Americas	3
ENV 333	Geomorphology	3
ENV 337	Geomorphology Lab	1
ENV 358	Physical Oceanography	3
ENV 384/BIO 384/CE 458	Remote Sensing and Geographic Information Systems	3
ENV 387	Environmental Laboratory	1
ECN 326	Climate Change Economics and Policy: A Global Perspective	3
PHY 202	College Physics II	3
PHY 272	College Physics Lab II	1
PHY 205	General Physics II	3
PHY 275	General Physics Lab II	1
BIO 303	Entomology	3

BIO 323	Entomology Lab	1
BIO 304	Wetlands Ecology	3
BIO 374	Wetlands Ecology Lab	1
BIO 338	Marine Biology of the Pacific Northwest	3
BIO 340	Ecology	3
BIO 343	Ecology Lab	1
BIO 348	Conservation Biology	3
BIO 368	Marine Biology Lab	1
BIO 341	The Nature of Plants	3
BIO 371	Field Botany	1
BIO 345	Vertebrate Biology	3
BIO 375	Vertebrate Biology Lab	1
BIO 363	Freshwater Ecology	3
BIO 373	Freshwater Ecology Lab	1
ENV 493	Environmental Research	1-3
ENV 497	Environmental Internship	Variable
CE 367	Environmental Engineering	3
CE 462	Sustainable Design	3
CE 464	Watershed Systems Modeling	3
EGR 361	Analysis of Engineering Data	3
CS 273	Computer Science Laboratory	1
	Upper division computer science courses	

Any additional credit hours required to complete a minimum of 120 credit hours

Gender, Women, and Sexuality Studies

Vail Fletcher, Ph.D., communication studies, and Lara-Zuzan Golesorkhi, Ph.D., political science and global affairs, co-directors

Gender, women, and sexuality studies is an interdisciplinary field that fosters dialogue among the arts, humanities, social sciences, and all pre-professional areas of study, with the goal of understanding gender identity and sexuality in historical, structural, and institutional contexts. Gender, women, and sexuality studies encompasses varied areas of inquiry: the liberal arts, the social and natural sciences, engineering, nursing, education, law, business, medicine, and ministry. The bachelor of arts degree in gender, women, and sexuality studies (GWSS) offers a program that is critical and intersectional in its approach towards interrogating theories and practices as they pertain to gender identity and sexuality.

The mission of the program at the University of Portland is introduce students to the study of gender, women, and sexuality, focusing on gender identity and sexuality as categories of analysis in historical, structural, and institutional contexts. The program rests on feminist, anti-racist, and decolonial pedagogies and teaching. The GWSS faculty are committed to challenging all forms of oppression and dismantling hegemonic legacies in the production and dissemination of knowledge. They welcome and encourage creative, innovative, and collaborative approaches in the study of gender, women, and sexuality. The program prepares students to be change-makers in all areas of life.

Learning Outcomes for Gender, Women, and Sexuality Studies Majors

Students completing the gender, women, and sexuality studies major should be able to:

1. Demonstrate the ability to draw on different disciplines in understanding and studying gender identity and sexuality.
 - a. Articulate orally or in writing the lenses through which at least two disciplines understand gender identity and sexuality.
 - b. Articulate orally or in writing the methods used by at least two disciplines to study gender identity and sexuality.
2. Demonstrate an ability to understand and discuss the intersections between gender and variables such as sex, sexuality, race, class, age, ethnicity, religion, language, and nationality.
 - a. Identify at least two variables that affect or are affected by gender identity and sexuality.
 - b. Articulate orally or in writing how at least two variables affect or are affected by gender identity and sexuality.
3. Demonstrate the ability, using intersectional, feminist scholarship, to critique ideological assumptions underlying institutions and structures.
 - a. Identify and explain gender-related assumptions underlying institutions and structures.
 - b. Critique orally or in writing assumptions underlying gender identity and sexuality from intersectional, feminist perspectives.

Capstone Experience

The capstone course is an opportunity to guide students through the development of their portfolios, which comprise: a minimum of five assignments from at least three different courses in two different disciplines, a self-assessment of the papers in the form of a reflective essay highlighting student learning progress over the course of the program and how they have demonstrated mastery of the program's learning objectives. Both group and individual meetings with the instructor of the capstone course support the students in their articulation of their learning and the ways in which the GWSS program has prepared them to engage more meaningfully with the world after graduation.

Gender, Women, and Sexuality Studies, B.A.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

Foundations of Gender, Women, and Sexuality Studies and the *Gender, Women, and Sexuality Studies Capstone* are the designated Writing in the Discipline⁴⁸ courses for the B.A. in Gender, Women, and Sexuality Studies.

College of Arts and Sciences B.A. Requirements — 24-33 credit hours

See College Requirements, B.A.⁷⁵

Major Requirements — 28 credit hours

Required Courses — 16 credit hours

	Foundations of Gender, Women, and Sexuality Studies	3
HST 321	Modern American Women's History	3
PHL 314	Philosophy and Feminism	3
PHL 408	Race, Gender, and Colonialism	3
	Advanced Gender, Women, and Sexuality Studies	3
	Gender, Women, and Sexuality Studies Capstone	1

Please consult with the program co-directors to select the eligible Foundation, Advanced, and Capstone courses.

Gender: Approaches - 6 credit hours

Select two courses from the following:

CST 432	Gender and International Development	3
ENG 370	Studies in Women Writers	3
PHL 410	Education and Politics	3
SOC 339	Sociology of the Family	3
SW 356/PSY 356	Perspectives on Human Sexuality	3
SOC 357/SW 357	Perspectives on Gender and the Body	3
SOC 432	Gender and Violence	3
SPN 350	Latin American Women's Voices	3

Gender: Themes — 6 credit hours

Select two courses from the following:

CST 411	Communication Across Barriers	3
CST 431	Intercultural Communication and Identity	3
ENG 401	Seminar in British Literature I	3
GRM 401	Multicultural Society in Germany	3
GRM 405	German Women's Writing	3
PHL 412	Philosophy of Law	3
POL 319	Politics and Identity	3
POL 378	Muslims and Islam in Europe and the U.S.	3
PSY 351	Health Psychology	3
SOC 436	Women and Work	3
SPN 331	Golden Age Spanish Literature and Culture	3
SPN 430	Cervantes: Don Quixote and Beyond	3
THE 317/THE 417	Trickery, Gender, Power, and Politics in the Bible	3
THE 331/THE 431	Sexual Ethics	3
THTR 445	History of Fashion	3

One time course offerings (designated 391/491) may fulfill the elective requirements if the topic is on gender, women, and sexuality studies. Please confirm eligible yearly course offerings with the program directors.

Any additional credit hours required to complete a minimum of 120 credit hours

General Studies, B.A., B.S.

Lawrence Larsen, M.F.A., director

Though most students will develop a depth of knowledge in their upper-division work through concentrated study in a single area, some students will find a multidisciplinary program of study better serves their educational goals. The General Studies program is designed for students whose educational and professional outlook is multidisciplinary in nature. Because the decision to follow such a program of study requires a certain level of educational maturity, first-year students may not declare this major. *This major may be declared only with the permission of the Associate Dean for Students.*

Learning Outcomes for General Studies Majors

Graduates in General Studies from the University of Portland will be able to:

1. Demonstrate proficiency in two or more disciplines in the College of Arts and Sciences.
 - a. Demonstrate significant content knowledge of the chosen disciplines.
 - b. Demonstrate a good understanding of the methodologies of the chosen disciplines.
2. Demonstrate the ability to communicate effectively in written and other forms customary in the chosen disciplines.
 - a. Produce clear and persuasive written work adapted towards specific audiences.
 - b. Demonstrate the capacity to effectively use the standard communication media of the chosen disciplines.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

College of Arts and Sciences B.A. Requirements — 24-33 credit hours

See College Requirements, B.A.⁷⁵

College of Arts and Sciences B.S. Requirements — 6 credit hours

See College Requirements, B.S.⁷⁶

Major Requirements — 24 credit hours

24 upper-division credit hours from two different disciplines within the College of Arts and Sciences.

Any additional credit hours required to complete a minimum of 120 credit hours

History

Bradley Franco, Ph.D., chair

Faculty: Els, Franco, Hancock, Moentmann, Wheeler, Woodard

The history program offers all the University's undergraduates the opportunity to acquire a working familiarity with the histories of Europe, the United States, Latin America, and other areas of the world, together with the institutions and structures of organized society. Its major curriculum is designed to inculcate a knowledge of particular periods and issues in the past, an understanding of the discipline of history, and the ability to use historical inquiry for analysis of contemporary self and society. History graduates enter such diverse careers as lawyers, professors, teachers, archivists, librarians, foreign service officers, public administrators, and investment bankers.

Beyond the history major, the program meets such goals as are part of both the University core as well as the upper-division electives for bachelor of arts majors. Furthermore, the program includes courses which provide vital knowledge for students in other programs, including secondary education, gender, women, and sexuality studies, political science, international languages and cultures, theology, ROTC, social justice, environmental studies, overseas studies, and the Moreau Center.

Learning Outcomes for History Majors

History graduates of the University of Portland should be able to:

1. Construct historical arguments based on primary sources and the historical method in writing.
2. Analyze primary sources in their historical context in writing.
 - a. Identify and gather appropriate primary sources.
 - b. Demonstrate awareness of connections between sources and their historical context.
3. Analyze secondary sources and identify various approaches to historical interpretation through critical reading and writing.
 - a. Demonstrate the ability to read a secondary source to understand an author's basic argument.
 - b. Demonstrate the ability to explain an author's approach to a topic and its connection to primary sources used.
4. Demonstrate the ability to conduct independent historical research in writing.
 - a. Identify a thesis topic.
 - b. Identify, collect, and analyze historiography on the topic.
 - c. Identify, collect, and analyze primary sources on the topic (using library, archival, and other appropriate material).
 - d. Develop topic into a viable historical argument.
 - e. Based on sources identified, write original interpretation of chosen historical research.
 - f. Present results of research in both oral and written form.
5. Demonstrate the ability to present historical arguments based upon independent research orally in a public presentation.

Capstone Experience

Each history major completes a senior capstone project where they apply the skills they have been developing through the history major. Through this process, students demonstrate their mastery of a specific time period or event in history, independent research skills, the critical reading of both primary and secondary sources, and the ability to construct and present a historical argument based on primary source evidence. The nature of the project will depend on the research interests of the student and whether they choose to complete the senior capstone in a single semester (HST 470, fall semester senior year - Track One) or over the course of the entire senior year (the Honors Capstone, consisting of HST 470 and HST 471, taken during both semesters of the senior year – Track Two). The Honors Capstone is open to all majors who have at least a 3.5 GPA in their major.

History, B.A.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

HST 420/430/450 and HST 470 are the designated Writing in the Discipline⁴⁸ courses for the B.A. in History.

College of Arts and Sciences B.A. Requirements — 24-33 credit hours

See College Requirements, B.A.⁷⁵

Major Requirements — 33 credit hours

All history majors will take HST 470 during the fall semester of their senior year. Students on Track One will complete their 3-credit hour capstone in HST 470. Students on Track Two will begin their 6-credit hour Honors Capstone during HST 470 and complete it in HST 471, offered the spring semester of their senior year.

Track One

Students on Track One will complete their 3-credit hour capstone project in HST 470 and will choose either an additional 400-level seminar or an additional 300-level class to complete the 33 credit hours required of the major.

	Lower-division history courses	6
HST 300	Introduction to Historical Methods	3
	Upper-division history courses	15-18
	400-level seminars (HST 420, 430, 450)	3-6
HST 470	The Practice of History	3

Upper-division history courses: must include at least one 300-level course each in American, European, and non-Western history.

Track Two

Students on Track Two will begin their 6-credit hour Honors capstone project during HST 470 and complete it in HST 471, offered the spring semester of their senior year.

Students must have a 3.5 GPA in the major or receive permission from the department chair to register for HST 471.

	Lower-division history courses	6
HST 300	Introduction to Historical Methods	3
	Upper-division history courses	15
	400-level seminars (HST 420, 430, 450)	3
HST 470	The Practice of History	3
HST 471	Senior Seminar	3

Upper-division history courses: must include at least one 300-level course each in American, European, and non-Western history.

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120

International Languages and Cultures

Alexandra Hill, Ph.D., chair

Faculty: Booth, Castanette, Echenique, Hall, Hill, Looney, Reyes-Giardello, Warshawsky

The mission of the International Languages and Cultures department (Spanish, German, French, and Chinese) is to prepare and motivate students to understand, live, study, and work in international communities at home and abroad. In the international languages courses required of all B.A. students, as well as in those of its majors and minors, the program:

1. Builds proficiency in speaking, listening, reading, and writing the target language.
2. Fosters appreciation for other cultures and the international global community.
3. Develops the critical thinking skills and humane values inherent in the University's liberal arts tradition.

International Languages and Cultures faculty members guide and inspire students to experience other cultures through the study of language and literature, and through periods of total immersion abroad. In their teaching and in their research, faculty are dedicated to the study of language and literature for its own power and pleasure, and as a means of promoting understanding and enjoyment of cultural differences. They are committed to student-centered instruction, which develops the international language proficiency and confidence majors and minors need to be successful in graduate programs, as well as in a wide range of careers, such as business, government, education, social work, and health care.

The Department of International Languages and Cultures offers a German studies major, Spanish major, a French studies major, and minors in French, German, and Spanish. The international languages and cultures program offers courses in Chinese language and in French, German, and Spanish language, literature, and culture. Students interested in an international languages and cultures major or minor should consult with the department chair.

Students beginning their study of French or Spanish at the University of Portland are encouraged to take a free online placement test. After taking the test, the student will receive information indicating which course will provide the best fit for the student's level of proficiency. Students should contact the chair of the International Languages and Cultures department for information on how to access the exam.

Learning Outcomes for Language Majors

Language Proficiency in Speaking, Listening, Reading, and Writing

Students graduating from the University of Portland with a B.A. in French Studies, German Studies, or Spanish are required to take the computerized STAMP 4S language proficiency assessment before graduation. Majors will be contacted to take the exam during the spring semester and will be required to attend two testing sessions, one for the assessment of reading, writing and listening and the other for the assessment of speaking. Administered by Avant Assessment, students' reading and listening proficiencies are scored automatically by the computer; students' writing and speaking are scored by Avant's certified raters. Avant's scoring rubric is closely related to national standards for proficiency set by the American Council for the Teaching of Foreign Languages (ACTFL). Our current assessment data on oral proficiency indicates that by the time they graduate, German Studies majors should demonstrate intermediate-mid speaking proficiency; French Studies and Spanish majors should demonstrate intermediate-high speaking proficiency. Although assessment of listening, reading, and writing skills is new to our programs, we can expect graduating majors to be able to demonstrate the same level: intermediate-mid for German Studies majors and intermediate-high for French Studies and Spanish majors. The 2012 ACTFL Proficiency Guidelines for the intermediate level are described in full on the ACTFL website: <http://actflproficiencyguidelines2012.org/>.

Intercultural Competence

Language proficiency is the key to interacting with and understanding a culture, therefore, students completing a major in French studies, German studies, or Spanish are uniquely prepared to engage with the target cultures. Study abroad and other immersion experiences can result in a transformative process in which one develops greater awareness of cultural differences and how they relate to one self. French studies, German studies, and Spanish graduates of the University of Portland will demonstrate their intercultural competence through the following learning outcomes:

1. Knowledge.
 - a. Demonstrates knowledge of the target cultures, especially cultural practices, and identifies current as well as past major social and political issues.
 - b. Demonstrates in target language knowledge of target cultures.
2. Skills.
 - a. Uses the target language, in written and spoken form, as well as experiential knowledge, to work with a variety of cultural products in order to engage with, reflect on and compare the target cultures.
 - b. Demonstrates engagement with a variety of cultural products and experiences, and the ability to reflect on this engagement.
3. Transformation.
 - a. Realizes that differences exist between behaviors in one's own culture and that of the target cultures. Recognizes the social complexity of culture including differences according to age, gender, ethnicity, socio-economic background, religion, and region in the target cultures. While the understanding of differences may still be developing, accepts challenges to explore ideas and ways of knowing that are outside of one's own paradigm of individual and cultural understanding. Demonstrates a willingness to seek out international and intercultural opportunities.
 - b. Shows curiosity towards and a growing understanding of the social complexity of cultural differences through a demonstrated willingness to challenge one's worldview.

French Studies, B.A.

The French program is designed to offer its majors the opportunity to achieve proficiency in writing, speaking, reading, and orally comprehending the French language, while at the same time broadening and deepening their knowledge, understanding, respect, and appreciation of the cultures of France and the francophone world. The program offers courses which prepare the student culturally and linguistically to communicate effectively and interact appropriately with persons from French speaking countries.

Since the goal of the French studies major is to focus on the acquisition of language proficiency and to incorporate contributions from more than one field of study, it prepares students for careers in international law, teaching, government services, foreign missions, translating, and for positions in business that require a knowledge of the French language and culture.

The French major has two tracks, a French track and a French studies track. Students pursuing the French track of the major must complete 27 upper-division credit hours of French courses.

Students pursuing the French studies track must complete 18 upper-division credit hours of French and 9 upper-division credit hours from at least two of the following disciplines: philosophy, history, or political science and global affairs.

Both tracks of the French major require at least six weeks of study in France. Should a student be unable to study abroad, the department chair, in consultation with the French faculty, may approve a substitute language immersion experience, such as a local internship, if available. Options for study abroad include IES French immersion programs in Paris, Nantes and Arles.

Students graduating from the University of Portland with a B.A. in French or French studies are required to take the computerized STAMP 4S language proficiency assessment for graduation. Majors will be contacted to take the exam during the spring semester in two separate sessions. The testing of the students' four language skills will give the students national certification of their actual skill levels; such certification should provide students and employers with an accurate comparative indicator of a student's competency in the language.

See statement on learning outcomes for language majors for further details on the Avant STAMP 4S.116

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

FRN 3XX and the STAMP test are the designated Writing in the Discipline⁴⁸ courses for the B.A. in French Studies.

College of Arts and Sciences B.A. Requirements — 24-33 credit hours

See College Requirements, B.A.⁷⁵

Major Requirements — 27 credit hours

Includes 6 credit hours study abroad.

French Track

27 upper-division credit hours in French (FRN 301 and above)

French Studies Track

18 upper-division credit hours in French (FRN 301 and above).

Upper-division courses - 9 credit hours

Select three courses from at least two different disciplines outside the French program from the following:

HST 333	Medieval Europe	3
HST 334	The Age of the Crusades	3
HST 335	Europe in the Age of Religious Wars	3

HST 336	Europe in the Age of Enlightenment	3
HST 342	Europe in the Age of Nationalism	3
HST 343	Europe in the Age of Dictatorship	3
HST 347	Modern France	3
HST 365	History of the Second World War	3
POL 372	Politics of the EU and Contemporary Europe	3
PHL 314	Philosophy and Feminism	3
PHL 479	Existentialism	3

Any additional credit hours required to complete a minimum of 120 credit hours

Students may also take courses containing significant content relating to French-speaking countries offered on a one-time basis or subsequently added to permanent course offerings. Students must seek the approval of the French studies advisor before counting such courses toward the French studies major.

Total Credit Hours: 120

German Studies, B.A.

The German studies major provides students with the opportunity to become proficient in the German language while also becoming knowledgeable about social, historical, and political factors that shape and define German-speaking cultures. The German studies major in particular is interdisciplinary, and it creates connections among a number of disciplines that are cornerstones of the liberal arts tradition. The combination of these courses under a cohesive curriculum allows students to gain proficiency in the German language while also learning to think and reason across disciplinary boundaries. Additionally, the current trend toward globalization means that students must become not only informed citizens and leaders within their own community and country but also in the world at large. By becoming knowledgeable in global political and social processes through German, students will learn to understand complex international relationships and gain an appreciation for different cultures. The German studies major supports students in their developing roles as leaders in their communities and the world.

Students pursuing the German track must complete 27 upper-division credit hours of German courses. All students pursuing the German studies track must complete 18 upper-division credit hours of German courses and 9 upper-division credit hours from at least two of the following disciplines: philosophy, history, political science and global affairs, fine arts, and theology. Students pursuing a German major (either track) are also required to spend at least six weeks studying German in a German-speaking country. Should a student be unable to study abroad, the department chair, in consultation with the German faculty, may approve a substitute language immersion experience such as a local internship. Options for study abroad include the University's year-long program in Salzburg, Austria; German-immersion courses in Salzburg during a summer session; an intensive summer language class with the DAAD; and IES German-immersion programs in Freiburg, Vienna, and Berlin.

Students graduating from the University of Portland with a B.A. in German or German studies are required to take the computerized STAMP 4S language proficiency assessment for graduation. Majors will be contacted to take the exam during the spring semester in two separate sessions. The testing of the students' four language skills will give the students national certification of their actual skill levels; such certification should provide students and employers with an accurate comparative indicator of a student's competency in the language.

See statement on learning outcomes for language majors for further details on the Avant STAMP 4S116.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

GRM 3XX and the STAMP test are the designated Writing in the Discipline⁴⁸ courses for the B.A. in German Studies.

College of Arts and Sciences B.A. Requirements — 24-33 credit hours

See College Requirements, B.A.75

Major Requirements — 27 credit hours

Includes 6 credit hours study abroad.

German Track

27 upper-division credit hours in German (GRM 301 and above), including 6 credit hours study abroad. Students are required to take at least 6 of the 27 upper-division German credit hours at the 400-level, excluding GRM 497.

German Studies Track

Includes 6 credit hours study abroad.

18 upper-division credit hours in German (GRM 301 and above). Students are required to take at least 6 of the 18 upper-division German credit hours at the 400-level, excluding GRM 497.

Students must also take three courses (9 credit hours) outside the German program from at least two different disciplines, selected from the following:

FA 304	Development of the Fine Arts In Europe	3
GEO 373	Cultural Geography	3
HST 335	Europe in the Age of Religious Wars	3
HST 342	Europe in the Age of Nationalism	3
HST 343	Europe in the Age of Dictatorship	3
HST 346	Modern Germany	3
HST 358	Disease and Medicine in World History	3
HST 370	Early Modern Europe	3
POL 372	Politics of the EU and Contemporary Europe	3
THE 433/THE 333	Theological Implications of the Holocaust	3

FA 304, GEO 373, HST 358, and THE 333 may be taken only in Salzburg.

Students may also take courses containing significant content relating to German-speaking countries offered on a one-time basis or subsequently added to permanent course offerings. Students must seek the approval of the German studies advisor before counting such courses toward the German studies major.

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120

Spanish, B.A.

The Spanish program seeks to prepare students for living and working with individuals from Spanish-speaking countries either overseas or within the borders of the United States. The program includes courses that develop language proficiency in listening comprehension, speaking, writing, and reading. Courses focus on pertinent cultural issues, literary analysis and history, and professional terminology. This major will prepare students for careers in education, social services, business, and medicine.

The Spanish major requires that the student complete 27 credit hours which must include SPN 301 and SPN 302 or SPN 308, one survey of Spanish literature or culture class, and one Latin American literature or culture course. The Spanish major requires at least six weeks of study abroad in a Spanish-speaking country or participation in the University's programs in Granada, Spain, Oviedo, Spain, or Quito, Ecuador.

Should a student be unable to study abroad, the department chair, in consultation with Spanish faculty, may approve a substitute language immersion experience such as a local, Spanish-speaking internship for three credit hours. The following steps should be taken by the student seeking the study abroad replacement: 1. Use the Career Center's website to learn the requirements for doing an internship including the site hours required for three credit hours. 2. Use the Career Center's website to identify a local internship where Spanish is used. 3. Seek a faculty adviser in Spanish for the internship. 4. Make an appointment with the department chair of International Languages and Cultures to discuss this specific internship opportunity as a study abroad replacement option. 5. If the internship is approved by the department chair for study abroad replacement, follow the requirements of the Internship Learning Agreement on the Career Center website in concert with the faculty adviser of your internship.

Students studying abroad in Granada will take the *D.E.L.E. (Diplomas of Spanish as a Foreign Language)*, an internationally recognized standardized language test at no cost to the student. In addition, students graduating from the University of Portland with a B.A. in Spanish are required to take the STAMP 4S language proficiency assessment for graduation. Majors will be contacted to take the exam during the spring semester in two separate sessions. The testing of the students' four language skills will give the students national certification of their actual skill levels; such certification should provide students and employers with an accurate comparative indicator of a student's competency in the language.

See statement on learning outcomes for language majors for further details on the Avant STAMP 4S116.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

SPN 3XX and the STAMP test are the designated Writing in the Discipline⁴⁸ courses for the B.A. in Spanish Studies.

College of Arts and Sciences B.A. Requirements — 24-33 credit hours

See College Requirements, B.A.⁷⁵

Major Requirements — 27 credit hours

Includes 6 credit hours study abroad.

SPN 301	Advanced Spanish Composition, Conversation, and Culture I	3
SPN 302	Advanced Spanish Composition, Conversation, and Culture II	3
	Major electives	15

300-level electives are intended to expand students' knowledge of the cultures of Hispanic countries and regions while still focusing on strengthening the four linguistic skills: reading, writing, speaking, and listening. Students are advised but not required to take these courses before enrolling in 400-level seminars, where the focus shifts more towards cultural content and the development of research skills.

The Spanish program currently allows for one course with content in Latin America or Spain taken outside the program, i.e. in English, to count towards the Spanish Studies track.

Culture/Literature of Spain - 3 credit hours

Select one course from the following:

SPN 330	The Three Cultures of Medieval Spain	3
SPN 331	Golden Age Spanish Literature and Culture	3
SPN 340	Nation and Identity in Spanish Theater: 1788-1931	3
SPN 440	Spain's Civil War in Fiction and Film	3

Students may also select any SPN 389/489 (Granada) course with a focus on Spanish culture or literature.

Culture/Literature of Latin America - 3 credit hours

Select one course from the following:

SPN 350	Latin American Women's Voices	3
SPN 351	Latin American Cinema	3
SPN 361	Latin American Short Story	3
SPN 450	Advanced Latin American Culture and Civilization	3
SPN 451	Survey of Latin American Literature and Civilization	3

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120

Spanish Latin American Studies Track

Prerequisite: HST 254 or HST 256

Major Requirements—27 credit hours

Includes 6 credit hours study abroad in Latin America.

SPN 301	Advanced Spanish Composition, Conversation, and Culture I	3
SPN 302	Advanced Spanish Composition, Conversation, and Culture II	3
	Two additional Spanish electives with content on Latin America	6
	One additional Spanish elective	3

Culture/Literature of Spain - 3 credit hours

Select one course from the following:

SPN 330	The Three Cultures of Medieval Spain	3
SPN 331	Golden Age Spanish Literature and Culture	3
SPN 340	Nation and Identity in Spanish Theater: 1788-1931	3
SPN 440	Spain's Civil War in Fiction and Film	3

Culture/Literature of Latin America - 3 credit hours

Select one course from the following:

SPN 350	Latin American Women's Voices	3
SPN 351	Latin American Cinema	3
SPN 361	Latin American Short Story	3
SPN 450	Advanced Latin American Culture and Civilization	3
SPN 451	Survey of Latin American Literature and	3

	Civilization	

Two non-Spanish-language courses (6 credit hours) from the following list may be counted towards the 27 upper-division credit hours needed to complete the Latin American studies track of the Spanish major.

CST 431	Intercultural Communication and Identity	3
HST 357	Environmental History of the Americas and the World	3
HST 354	History of Modern Cuba	3
HST 355	History of Mexico	3
HST 356	Latin American History Through Popular Culture	3
HST 450	Seminar in Non-Western History	3
PHL 336	Metaphysics: Native American Philosophy	3
PHL 408	Race, Gender, and Colonialism	3
SW 343	Human Behavior in the Social Environment	3

Students are allowed to count no more than one intercultural course such as CST 431 and SW 343 towards this track.

Students can replace study abroad with an immersive experience in a Latin American country and/or a significant immersive experience within a Latino community in the U.S. Steps for requesting a study abroad replacement are listed in the description of the Spanish B.A.

Any additional credit hours required to complete a minimum of 120 credit hours

Mathematics

Stephanie Salomone, Ph.D., chair

Faculty: Basil, Goldwyn, Hallstrom, Highlander, Hill, James, Kotas, Lee, McCoy, McQuesten, Medina, Nordstrom, Peterson, Ramadan, Salomone, Sterner, Wootton

Mathematics is a gateway to virtually every human endeavor. It lays the foundation for the study and practice of physics, chemistry, engineering, and computer science and has proven to be an essential tool not only in biology, ecology, medicine, and economics, but also in management, marketing, and politics. Our professors conduct research in pure and applied mathematics, as well as STEM and mathematics education, and apply mathematics and statistics to research in biology, physics, robotics, ecology and business. Every math major can work one-on-one with professors, often on independent study or undergraduate research projects. Mathematics majors learn problem-solving and analytical skills preparing them for leadership in a wide variety of disciplines.

Since students study mathematics for a variety of reasons, the mathematics department offers three degree programs: Bachelor of Arts in mathematics, Bachelor of Science in mathematics, and Bachelor of Science in applied mathematics. Students with an interest in developing a foundation in mathematics who wish to keep their options open for a variety of opportunities after college might choose the B.A. in mathematics, which allows for more flexibility to engage in a wide array of courses in other disciplines. Students who seek careers with a strong mathematical emphasis or students who are interested in furthering their education in graduate school will be best served by one of the two B.S. degrees. If they wish to pursue pure mathematics, they will be better served by the B.S. in mathematics, whereas the B.S. in applied mathematics will be more appropriate if they intend to pursue a career or graduate school in applied mathematics or a related applied field. As well, a large number of University of Portland engineering, physics, and chemistry students choose to obtain at least a minor in mathematics.

Learning Outcomes for Mathematics Majors

Mathematics graduates of the University of Portland should be able to:

1. Demonstrate depth of knowledge in the core content areas of the discipline.
 - a. Demonstrate knowledge of important definitions and results.
 - b. Adequately construct elementary proofs using relevant definitions and foundational results.
2. Apply content knowledge to solve complex mathematical problems.
 - a. Identify the nature of the problem, organize relevant information and mathematical tools.
 - b. Devise a strategy to develop a solution to the problem.
 - c. Implement the strategy, performing relevant actions and computations, keeping an accurate record of work.
 - d. Reflect on whether a strategy was successful, checking for correctness and plausibility of the solution.
3. Demonstrate ability to construct rigorous logical arguments.
 - a. Write complete, coherent, concise proofs demonstrating mathematical rigor.
 - b. Employ a variety of proof techniques including direct proof, proof by contradiction and proof by induction.
 - c. Write proofs involving quantified statements.
4. Effectively communicate mathematics.
 - a. Demonstrate the ability to understand professional mathematical writing.
 - b. Adequately communicate mathematical ideas orally and/or in writing.

Mathematics, B.A.

This degree is appropriate for students who wish to major in mathematics as part of a broader inter-disciplinary program. In particular, this course of study would be suitable for students who wish to couple a mathematics major with a second major in a liberal arts field, business, or education.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

One of the three core requirements for the Scientific and Quantitative Literacy and Problem Solving Habit is satisfied by the science requirements within the major.

MTH 401 and MTH 441 are the designated Writing in the Discipline⁴⁸ courses for the B.A. in Mathematics.

College of Arts and Sciences B.A. Requirements — 24-33 credit hours

See College Requirements, B.A.⁷⁵

Major Requirements — 36-37 credit hours

Required Courses — 33 credit hours

MTH 201	Calculus I	4
MTH 202	Calculus II	4
MTH 301	Vector Calculus	4
MTH 311	Discrete Structures	3
MTH 341	Introduction to Linear Algebra	3

MTH 401	Real Analysis I	3
MTH 441	Group Theory	3
	Or	
MTH 442	Rings and Fields	3
	At least 9 credits of additional upper-division mathematics courses	9

Computing Requirements — 3-4 credit hours

Select from the following:

CS 203	Introduction to Computer Science	3
	with	
CS 273	Computer Science Laboratory	1
PHY 303/ CHM 303/ MTH 303	Computational Methods in Physical Sciences	3
MTH 451/ EGR 551	Numerical Methods in Computing I	3
	Equivalent to fulfill the computing requirement	

It is recommended but not required, that mathematics B.A. students enroll in one of the following to fulfill the core science requirement in the *Scientific and Quantitative Literacy and Problem Solving Habit*.

BIO 207	Introduction to Molecular and Cellular Biology	3
	with	
BIO 277	Introduction to Molecular and Cellular Biology Lab	1
BIO 208	Introduction to Evolution and Ecology	3
	with	
BIO 278	Introduction to Evolution and Ecology Lab	1
CHM 207	General Chemistry I	3
	with	
CHM 277	General Chemistry I Lab	1
CHM 208	General Chemistry II	3
	with	
CHM 278	General Chemistry II Lab	1
PHY 204	General Physics I	3
	with	
PHY 274	General Physics Lab I	1
PHY 205	General Physics II	3

	with	
PHY 275	General Physics Lab II	1

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120

Applied Mathematics, B.S.

The B.S. applied mathematics degree is intended for students who want an in-depth mathematical training in preparation for a professional career in mathematics or a closely related field. In particular, students planning to attend graduate school in applied mathematics or a mathematically intensive scientific field should strongly consider the B.S. applied mathematics degree.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

Two of the three core requirements in the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by the mathematics and science requirements within the major.

MTH 401 and MTH 441 are the designated Writing in the Discipline⁴⁸ courses for the B.S. in Applied Mathematics.

College of Arts and Sciences B.S. Requirements — 6 credit hours

See College Requirements, B.S.⁷⁶

Major Requirements — 62 credit hours

Required Courses — 44 credit hours

MTH 201	Calculus I	4
MTH 202	Calculus II	4
PHY 204	General Physics I	3
	with	
PHY 274	General Physics Lab I	1
PHY 205	General Physics II	3
	with	
PHY 275	General Physics Lab II	1
MTH 301	Vector Calculus	4
MTH 304	Complex Variables	3
MTH 311	Discrete Structures	3
MTH 321	Ordinary Differential Equations	3
MTH 341	Introduction to Linear Algebra	3
MTH 361	Applied Statistics I	3
MTH 401	Real Analysis I	3
	Or	
MTH 441	Group Theory	3

	Or	
MTH 442	Rings and Fields	3
	At least 6 credits of additional upper-division mathematics courses	6

Modeling Requirements — 3 credit hours

Select from the following:

MTH 381	Math Modeling	3
MTH 497I	Industrial Mathematics Internship	3
	Equivalent to fulfill the modeling requirement	

Computing Requirements — 3 credit hours

Select from the following:

CS 305	Data Structures	3
PHY 303/CHM 303/MTH 303	Computational Methods in Physical Sciences	3
MTH 451/EGR 551	Numerical Methods in Computing I	3
	Equivalent to fulfill the computing requirement	

Major Electives — 12 credit hours

12 upper division credit hours in MTH or related STEM departments (prefixes among the following: MTH, PHY, CHM, BIO, CE, EE, ME, CS, EGR, ECN, ENV, BUS). Electives from outside MTH should be chosen in consultation with advisor to constitute a coherent and focused program of study.

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120

Mathematics, B.S.

The B.S. degree is intended for students who want an in-depth mathematical training in preparation for a professional career in mathematics or a closely related field. In particular, students planning to attend graduate school in mathematics or a mathematically intensive scientific field should strongly consider the B.S. degree.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

Two of the three core requirements in the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by the mathematics and science requirements within the major.

MTH 401 and MTH 441 are the designated Writing in the Discipline⁴⁸ courses for the B.S. in Mathematics.

College of Arts and Sciences B.S. Requirements — 6 credit hours

See College Requirements, B.S.⁷⁶

Major Requirements — 59-60 credit hours**Required Courses — 47 credit hours**

MTH 201	Calculus I	4
MTH 202	Calculus II	4
PHY 204	General Physics I	3
	with	
PHY 274	General Physics Lab I	1
PHY 205	General Physics II	3
	with	
PHY 275	General Physics Lab II	1
MTH 301	Vector Calculus	4
MTH 304	Complex Variables	3
MTH 311	Discrete Structures	3
MTH 321	Ordinary Differential Equations	3
MTH 341	Introduction to Linear Algebra	3
MTH 361	Applied Statistics I	3
MTH 401	Real Analysis I	3
MTH 441	Group Theory	3
	Or	
MTH 442	Rings and Fields	3
	At least 6 credits of additional upper-division mathematics courses	6

Computing Requirements — 3-4 credit hours

Select from the following:

CS 203	Introduction to Computer Science	3
	with	
CS 273	Computer Science Laboratory	1
PHY 303/CHM 303/MTH 303	Computational Methods in Physical Sciences	3
MTH 451/EGR 551	Numerical Methods in Computing I	3
	Equivalent to fulfill the computing requirement	

Major Electives — 9 credit hours

At least 9 upper division credit hours in MTH or related STEM departments (prefixes among the following: MTH, PHY, CHM, BIO, CE, EE, ME, CS, EGR, ECN, ENV, BUS.)

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120

Performing and Fine Arts

David De Lyser, D.A., chair

Faculty: Cross, De Lyser, Ghyselinck, Golla, Hanig, Hanson, Larsen, M. Logan, McDaniel, Murphy, Norton, Pulver

In the Department of Performing and Fine Arts, we teach communication, interpretation, inquiry and self-expression to a broad spectrum of students through the lens of the arts. We welcome those who wish to develop an appreciation for the arts as culturally literate members of our society, as well as career-driven artists seeking mentors in pursuit of excellence. Our major programs in Music and Theater, in conjunction with our minor program in Fine Arts and our many enrichment offerings including Dance and Studio Art courses, are integral to the University's commitment to the Humanities. We support the University of Portland's acknowledgment of the arts as an important part of its mission through our concerts, productions, organizations and partnerships both within the University and in the Portland community, as well as through our Introduction to the Fine Arts course, which is part of UP's Core Curriculum. All productions, organizations and courses within the PFA department value diversity and welcome the participation of the entire student body.

Within the Department of Performing and Fine Arts, majors and minors are offered in theater and music. . The University of Portland is an accredited institutional member of the National Association of Schools of Theatre (NAST) and the National Association of Schools of Music (NASM). Although the degree programs are separate, there is considerable flexibility between them, allowing the possibility for students in one degree program to take courses in the other. There is a minor program in Fine Arts and elective offerings in dance.

Theater, B.A.

In accord with the University of Portland's deeply held belief that education develops and enhances the whole person, the Theater Program prepares students for productive participation in local, national and global society. Toward this goal, we provide a comprehensive foundation of theater coursework, with the ability to focus training in performance, design, management, directing and dramaturgy. This comprehensive learning system of classwork and production experience provides students with direct access to performing arts careers, while also preparing students interested in other professions to acquire life skills such as problem solving, teamwork and collaboration. The University of Portland has been an accredited member of the National Association of Schools of Theatre (NAST) since 2000.

The theater program is committed to its role within the University's mission (especially the development of the whole person), its connection, through its theatrical productions, to many of the disciplines within the College of Arts and Sciences, and its broader outreach to the University community.

The program produces four main stage productions a year in the 280-flexible-seat Mago Hunt Center Theater and two to four student directed productions in the black box Blair Studio Theater. For further information on curriculum, degrees, and images of past productions, please visit the Theater Program's website.

The program also participates strongly in the Kennedy Center's American College Theatre Festival. All theatrical productions are entered to compete and be evaluated by peers within the region. Student actors, designers, directors and production managers are selected to compete in the regional KCACTF competitions where winners are chosen to compete at the Kennedy Center in Washington, DC. The theater program has been fortunate to have winners on both the regional and national level, highlighting the strength and training of its students.

Program scholarships are available to new and transfer students through audition and interview. Scholarships are awarded only to declared majors and maintained through ongoing participation on theater program productions. Please contact the Theater Program Director to set up an audition.

Learning Outcomes for Theater Majors

Theater graduates of the University of Portland should be able to:

1. Know the individuals who have influenced contemporary world theater and understand and articulate the fundamental theories and conventions that helped shape it.
 - a. Identify the names and time periods of specific theater artists, playwrights and their work from the ancient Greeks to modern day.
 - b. Describe the various theories and stylistic conventions that have shaped theater production from the time of the ancient Greeks to modern day.

2. Demonstrate the fundamental skills and techniques required of a modern theater practitioner: performer, designer, director, dramaturg, or manager.
 - a. Performer
 - i. Be able to score a script for circumstances, acting relationships, objectives and actions.
 - ii. Use and produce effective vocal characteristics necessary for a theatrical production with correct pronunciations.
 - iii. Develop a personal approach to embody the emotional life and physical characteristics of a character in a theatrical production.
 - b. Designer
 - i. Be able to create visual sketches, models, drawings, diagrams to communicate their visual ideas and designs for theatrical production.
 - ii. Apply construction skills and technology to the process of turnings sketches, models, drawings and diagrams into 3-dimensional forms.
 - iii. Develop an aesthetic process that allows for personal artist vision and approach for theatrical design.
 - c. Manager
 - i. Be able to document and use effective communication as it applies to the model of creative theatrical process and production management.
 - ii. Apply the variety of skills and management theories necessary to work as a stage manager, a general manager, a development manager, a production manager and artistic manager in a professional theatrical organization.
 - iii. Develop an individual approach to managing an artistic process from conception to actual theatrical production.
3. Work in an environment of collaboration in a variety of production experiences.
 - a. Demonstrate skills necessary to act effectively in production assignments within the creation of several theatrical productions in positions both on and off stage.
 - b. Document and evaluate the experience as it applies to the holistic process of theater production and its necessary collaboration.
4. Apply critical thinking and analytical skills to dramatic literature as it applies to production; performance, design, direction, dramaturgy, and management.
 - a. Performer
 - i. Be able to research and analyze a script for character and period style as it applies to performance.
 - ii. Be able to score a script for understanding and approaching the plot, theme and the arc of action and apply it to production.
 - b. Designer
 - i. Be able to research and analyze a script for an aesthetic mood, character, period style, and required necessary elements to support the action of a production and its conceptual approach.
 - ii. Be able to create a visual form that supports the ideas presented by the playwright in terms of plot, theme and the arc of action and apply it to production.
 - c. Manager
 - i. Be able to research and analyze a script for management issues and challenges as they apply to the process and creation of a theatrical production.
 - ii. Be able to create a prompt book that incorporates the ideas of the playwright, director, designers and performers and apply this tool to production.

Capstone Experience

The senior capstone in theater is fulfilled with one of five types of projects: acting, directing, design, dramaturgy, and management. Students register for THTR 498. All projects allow students to demonstrate the development of their skills and a

synthesis of their training in their chosen area of specialty. Students produce a written proposal for faculty approval, work with a faculty mentor to develop the project, and assess the strengths and weaknesses of the outcome of their projects through both a written evaluation and an oral presentation to the theater faculty and their peers. Details about capstones in each of the five areas are specified under THTR 498.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

THTR 307 and THTR 409/410/411 are the designated Writing in the Discipline⁴⁸ courses for the B.A. in Theater.

College of Arts and Sciences B.A. Requirements — 24-33 credit hours

See College Requirements, B.A.⁷⁵

Theater Major Common Requirements — 27 credit hours

THTR 207	Introduction to the Art of Theater	3
THTR 272	Production Work and Review I	1
THTR 307	Survey of Theatre History	3
THTR 321	Acting Workshop I	3
THTR 333	Directing I	3
THTR 350	Theatre Crafts	3
THTR 370	Performance Practicum	1
	and/or	
THTR 371	Design/ Integrated Theater Practicum	1
THTR 372	Production Work and Review II	1
THTR 409	Studies in Drama: Renaissance Theatre	3
	Or	
THTR 410	Studies in Drama: Classical Theatre	3
	Or	
THTR 411	Studies in Drama: American Theater	3
THTR 498	Theater Capstone	3

Students complete two credits of THTR 370 or THTR 371 or complete THTR 370 and THTR 371 for one credit each.

Select one of the following four emphases:

Performance Emphasis — 15 credit hours

THTR 322	Acting Workshop II	3
THTR 335	Voice for Stage	3
THTR 337	Stage Movement	3
THTR 422/THTR 522	Advanced Acting	3

Select one design elective from the following:

THTR 351	Beginning Stage Lighting and Sound	3
THTR 353	Beginning Scenic Design	3
THTR 363	Beginning Costume Design	3
THTR 365	Stage Make Up	3

Design/Technical Emphasis - 15 credit hours

Select three courses from the following:

THTR 351	Beginning Stage Lighting and Sound	3
THTR 353	Beginning Scenic Design	3
THTR 363	Beginning Costume Design	3
THTR 365	Stage Make Up	3

Select one production elective from the following:

THTR 445	History of Fashion	3
THTR 450	Production Stage Management	3
THTR 456	Scenic Painting and Decorative Arts	3
THTR 467	Costume Craft and Technology	3
THTR 471	Theater Management	3

Select one advanced design elective from the following

THTR 451	Advanced Stage Lighting and Sound	3
THTR 453	Advanced Scenic Design	3
THTR 463	Advanced Costume Design	3

Integrated Theater Emphasis — 15 credit hours

THTR 351	Beginning Stage Lighting and Sound	3
THTR 471	Theater Management	3
THTR 497M	Integrated Theater Internship	3

Select two electives from the following:

THTR 400	Dramaturgy	3
THTR 433	Advanced Directing for the Stage	3
THTR 450	Production Stage Management	3

Basic Theater Endorsement for Education Certificate — 19 credit hours

The Basic Teaching Endorsement aligns with the UP School of Education curriculum for education majors as a secondary course of study. It is available only to students in the School of Education.

THTR 207	Introduction to the Art of Theater	3
THTR 307	Survey of Theatre History	3
THTR 321	Acting Workshop I	3
THTR 333	Directing I	3
THTR 350	Theatre Crafts	3

THTR 372	Production Work and Review II	1

Select one design elective from the following:

THTR 351	Beginning Stage Lighting and Sound	3
THTR 353	Beginning Scenic Design	3
THTR 363	Beginning Costume Design	3

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120

Music, B.A.

The music program strives to advance the comprehensive formation of musicians who can perform music, organize music (composition), and analyze music (theory, history). The program accomplishes this aim through a wide range of teaching and performance situations, including private lessons, traditional classroom environments, and large group rehearsals. These opportunities are offered to the entire University.

The music program is committed to its role within the University mission (especially the development of the whole person), compliance with the standards of the National Association of Schools of Music (of which the University is an accredited institutional member), and ongoing evaluation of the program in all its aspects.

The bachelor of arts degree in music provides students a broad education in the sciences and the humanities as they give particular emphasis to the comprehensive study of music. Four tracks are offered: instrumental, vocal, pre-music education, and general. The degree prepares students for careers in the music industry, church music, and education (teaching privately or seeking certification through programs such as the master of arts in teaching), as well as graduate study.

New students, including transfer students, will be accepted as music majors on a probationary status until they present a satisfactory audition at one of the following: 1) scholarship audition; 2) the performance final examination at the end of the first semester; or 3) by special arrangement with the faculty.

A variety of large and chamber ensembles are open to all University students with prior musical experience. These ensembles, which perform music of all types and styles, include the University Singers, Wind Symphony, Bel Canto, University Orchestra, Jazz Ensemble, Chamber Ensembles, and Chapel Music Ensemble. Each presents a series of performances throughout the academic year.

The *Music Study Handbook* contains details about the requirements for MUS 001 (Performance Attendance); and MUS 486 (Private Lessons), and necessary information about the senior capstone. The handbook is made available online to all music majors at the beginning of each year. It is considered an addendum to the University Bulletin. See the handbook at: college.up.edu/pfa/music.

Opportunities for individual performance are available through regularly scheduled student recitals. They are included as a part of Music at Midweek, a weekly series of professional and non-professional performances. Attendance at these and other designated campus performances is required of all music students (See MUS 001). Unsatisfactory attention to this requirement can result in delay or denial of graduation. Students choosing to work toward the bachelor of arts in music will complete their studies with a senior capstone supervised by a faculty member. The selection of a topic and work toward that completion will begin during the junior year.

Practice room use limited to students enrolled in music courses or by permission of the director of the music program.

Learning Outcomes for Music Majors

Music graduates of the University of Portland should be able to:

1. Perform capably as a soloist.
 - a. Work independently and collaborate with an accompanist and music faculty to prepare high quality expressive performances;
 - b. Achieve proper intonation, balance, and blend with an accompanist;
 - c. Perform with stylistically appropriate tone, articulation, and rhythmic feel

- d. Extemporaneously create music, including ornamentation and other forms of improvisation, when required by repertoire;
 - e. Demonstrate familiarity with literature applicable to the major performance medium;
 - f. Demonstrate correct usage and understanding of foreign language and diction (as applicable);
 - g. Present a senior capstone recital that demonstrates the scope of skills, musical styles, expressive qualities, and repertoire studied while at UP.
2. Perform capably within an ensemble
 - a. Work independently and collaborate with ensemble members and music faculty to prepare high quality expressive performances;
 - b. Achieve proper intonation, balance, and blend within a section and within the larger ensemble;
 - c. Perform with stylistically appropriate tone, articulation, and rhythmic feel;
 - d. Extemporaneously create music, including ornamentation and other forms of improvisation, when required by repertoire;
 - e. Understand the roles and capabilities of instruments and sections in relevant performance ensembles;
 - f. Demonstrate familiarity with literature applicable to the major performance medium;
 - g. Demonstrate the correct use of foreign language and diction (as applicable).
 3. Organize the sounds of music through basic composition
 - a. Achieve a basic skill level in using rhythm, melody, harmony, and simple formal structures to develop a composition from concept to finished product;
 - b. Compose music that displays creativity and idiomatic awareness of period and style.
 4. Understand the structure and style of compositions.
 - a. Demonstrate the ability to hear, identify, and work conceptually with the elements of music;
 - b. Demonstrate an understanding of compositional processes; aesthetic properties; and artistic, social, and historical context.
 5. Explain theoretical and historical elements of music through prose.
 - a. Demonstrate the ability to understand and share theoretical principles through written explication;
 - b. Demonstrate the application of knowledge related to the history of music, including various time periods, historical figures, and styles and genres in Western and non-Western musical traditions;
 - c. Use appropriate examples and/or anecdotes to prove and demonstrate significant points;
 - d. Demonstrate effective writing skills for use in program notes, abstracts, essays, capstone projects (General and Pre-Music Education tracks), and research papers;
 - e. Select and cite appropriate and reliable sources, with proper style formatting.

Capstone Experience

Music students demonstrate their development as musicians and scholars through the senior capstone. This project can take a variety of forms: a performance recital, lecture recital, performance of original compositions, a research presentation, or other plan approved by the music faculty that includes a public presentation of at least 25 minutes. Proposals for capstone projects will be submitted to the director of the music program before spring break of the student's junior year. Faculty approval is required to move forward. Students register for MUS 498, Senior Capstone (or Honors Senior Thesis) during the fall or spring semester of their senior year. In this course they work with a faculty mentor in preparing the presentation and research. A preview of the capstone presentation will take place approximately one month in advance, after which the faculty will approve going ahead with the presentation or require more preparation. At the preview the student will submit complete program notes (500 words minimum) and perform the music/present the lecture presentation with the faculty in attendance. Senior capstones are generally scheduled during Music at Midweek or a weekend date in March and April of the senior year.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

MUS 201 and MUS 302 are the designated Writing in the Discipline⁴⁸ courses for the B.A. in Music.

College of Arts and Sciences B.A. Requirements — 24-33 credit hours

See College Requirements, B.A.⁷⁵

Major Requirements - 44-51 credit hours

Required Courses - 28 credit hours

MUS 101	Music Theory I	3
MUS 102	Music Theory II	3
MUS 103	Aural Skills I	1
MUS 104	Aural Skills II	1
MUS 201	Music Theory III	3
MUS 202	Music Theory IV	3
MUS 301	Music History I	3
MUS 302	Music History II	3
MUS 309	World Music	3
MUS 331	Conducting	3
MUS 131	Piano Proficiency I	1
MUS 231	Piano Proficiency II	1

MUS 131/231: May be waived by the instructor

MUS 231: Must be completed by the sophomore year

6 semesters minimum, required every semester in residence

MUS 486	Private Lessons	1

6 semesters minimum, required every semester in residence:

Select from the following:

MUS 443	Wind Symphony	1
MUS 444	University of Portland Singers	1
MUS 445	University of Portland Orchestra	1
MUS 452	University of Portland Bel Canto	1
MUS 453	University Jazz Ensemble	1

6 semesters minimum, enrolled every semester in residence:

MUS 001	Performance Attendance	0

Select one of the following four emphases:***Instrumental Performance Emphasis Requirements - 11 credit hours***

Students require faculty permission to enter this track. A decision will be made at the end of the sophomore year.

MUS 498	Senior Capstone	1
	Music Electives	6

Music elective credit hours must be upper division, including at least one 3-credit hour classroom course.

Instrumental Ensembles - 4 credit hours

Select any combination of ensembles from the following, beyond the 6 semesters minimum ensemble required for all music majors.

MUS 443	Wind Symphony	1
MUS 444	University of Portland Singers	1
MUS 445	University of Portland Orchestra	1
MUS 447	Chamber Ensembles	1
MUS 452	University of Portland Bel Canto	1
MUS 453	University Jazz Ensemble	1

Any additional credit hours required to complete a minimum of 120 credit hours

Pre-Music Education Track - 11 credit hours

MUS 332	Brass and Percussion Instrument Pedagogy	1
MUS 333	Woodwind Instrument Pedagogy	1
MUS 334	String Instrument Pedagogy	1
MUS 235	Group Voice Workshop	1
MUS 341	Fundamentals of Music Education	3
	Music Electives	4

Voice students may substitute MUS 486 for MUS 235.

Any additional credit hours required to complete a minimum of 120 credit hours

Vocal Performance Emphasis Requirements: 11 credit hours

Students require faculty permission to enter this track. A decision will be made at the end of the sophomore year.

MUS 336	Lyric Diction	3
MUS 455/THTR 355/THTR 555	Lyric Theater Workshop	3
MUS 498	Senior Capstone	1
	Music Electives	4

Music electives must be upper division, including at least one 3-credit hour classroom course.

Any additional credit hours required to complete a minimum of 120 credit hours

General Emphasis Requirements: 4 credit hours

MUS 3/4XX	Music Elective Classroom Course	3
MUS 498	Senior Capstone	1

Special Music Fees: \$400 per semester hour of private lessons (MUS 486). \$280 for ½-hour lessons (MUS 285) and private coaching (MUS 485).

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120-123

Philosophy

Alejandro Santana, Ph.D., chair

Faculty: Askay, Baillie, Eshleman, Evangelist, Gauthier, Logue, Martin, McShane, Rothenfluch, Trout

The Department of Philosophy at the University of Portland offers a comprehensive program of study leading to a bachelor of arts degree in philosophy, while also offering a range of courses that meet University and College of Arts and Sciences curricular requirements. Important departmental characteristics and aims are as follows:

1. The department endeavors to build a community of students and faculty who are dedicated to excellence in teaching and scholarship. In keeping with the integrating nature of its discipline, the philosophy department aims to provide students with the tools for achieving a sophisticated and reflective understanding of the assumptions and implications of their other studies at the University, as well as of their pursuits more generally, which we do in particular in our courses in the area of metaphysics. The department is committed in particular to the development of students' capacity for critical thinking in the area of ethics and values, as this ability is indispensable in fostering a concern with issues of social justice and ethical behavior. The department also encourages students, especially its majors, to critically explore some of the most important questions of human existence and human nature. It aims to provide students with the philosophical background and scholarly skills that are necessary for such an exploration.
2. The department embraces a pluralistic approach to the field. It embraces a stance of openness to diverse philosophical approaches, methods, sub-fields, and perspectives. It does this by aiming to cover all significant historical periods of philosophy, most major philosophical approaches and methods, and most major sub-fields in philosophy.
3. The department holds that development of the habits of scholarship necessary for such endeavors begins with faculty members who are active and committed in their own academic work. Accordingly, the department seeks to nurture and support the scholarly inquiry that befits an accomplished faculty.
4. The department plays an essential role in promoting the University's aim to provide service and leadership to the community. Philosophy provides tools to develop a critically reflective vision of the world, the human person, and ethical behavior. These are all necessary for leadership. The department is committed to furthering this aim by making its pedagogies and scholarship a resource to the University, the community, and the region. The University has the potential to be a premier Catholic institution for undergraduate philosophical instruction as well as a recognized center for inquiry and dialogue. It is the aim of the department to realize that potential and thereby to enhance the visibility and reputation of the University of Portland.

The major in philosophy is intended to meet the needs of various types of students, including those who plan to do graduate work in philosophy; those who plan to do graduate work in other fields such as law, medicine, business, journalism, ministry, or any of the liberal arts; those who wish to pursue a double major in philosophy and some other discipline of the humanities, sciences, or professional areas; and those who wish to get a solid liberal education. Philosophy may also be taken as a minor, as part of an interdisciplinary major, or within other programs such as the social justice program.

Learning Outcomes for Philosophy Majors

Philosophy graduates of the University of Portland should be able to:

1. Engage with significant philosophical problems.
 - a. Explain why a philosophical problem is significant.
 - b. Critically evaluate attempts to solve a problem.

- c. Engage and use primary philosophical texts in the context of addressing a philosophical problem.
- 2. Engage in the art of dialogue.
 - a. Know how to identify and critically evaluate the presuppositions underlying their own questions and those of others.
 - b. Demonstrate an ability to recognize views that oppose the ones for which they are arguing and to evaluate them in light of the positions they are holding.
- 3. Write technically competent philosophical essays.
 - a. Give sustained and well-focused arguments for their positions.
 - b. Write papers demonstrating conceptual coherence.
- 4. Integrate diverse views in developing their positions on an issue.
 - a. Demonstrate an understanding of a diversity of philosophical positions/issues.
 - b. Take a position with respect to some philosophical positions/issues.
 - c. Place their positions in the context of various philosophical positions/issues in the history of philosophy.
- 5. Demonstrate proficiency in the basic concepts of logic.
 - a. Distinguish between arguments and non-arguments.
 - b. Distinguish between deductive and inductive arguments.
 - c. Evaluate arguments in terms of their soundness or cogency.
 - d. Identify common formal and informal fallacies.
 - e. Translate ordinary language statements into various systems of logic (e.g. propositional logic and/or categorical logic).
 - f. Use various systems of logic to check arguments for validity (e.g. the square of opposition, rules for categorical syllogisms, truth tables, natural deductions).

Capstone Experience

The capstone experience is intended to be the final stage in a developmental process that students undertake as they move through the philosophy curriculum. It serves as the final demonstration of a student's preparation in the study of philosophy, and it provides students with an opportunity for extended exploration of a topic of interest under the guidance of a faculty member. For most students, the capstone experience will take the form of a one-credit hour student thesis completed in the senior year that grows out of a course taken in the junior or senior year. For students planning on graduate study in philosophy and for honors students, the capstone is a three-credit hour senior thesis written under the direction of a faculty mentor separate from any particular class.

Philosophy, B.A.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

In Philosophy Major Option 3, one of the three core requirements in the Scientific and Quantitative Literacy and Problem Solving Habit is satisfied by ECN 120 or POL 200 within the major.

PHL 371/372/373/374 and PHL 499 are the designated Writing in the Discipline⁴⁸ courses for the B.A. in Philosophy.

College of Arts and Sciences B.A. Requirements — 24-33 credit hours

See College Requirements, B.A.⁷⁵

Philosophy Major Option 1 — 25 credit hours

This curriculum features a strong emphasis on the history of philosophy and is designed for students planning to go on to graduate work in philosophy, or whose primary interest is in the history of philosophy.

Option 1 Required Courses - 16 credit hours

PHL 321	Logic	3
PHL 371	Ancient Philosophy	3
PHL 372	Medieval Philosophy	3
PHL 373	Early Modern Philosophy	3
PHL 374	Hegel and 19th Century Philosophy	3
PHL 499	Senior Capstone	Variable

Option 1 Major Electives - 9 credit hours

Any 300- or 400-level PHL course, two of which must be at the 400-level.

Any additional credit hours required to complete a minimum of 120 credit hours

Philosophy Major Option 2 — 25 credit hours

Designed for students who desire to complement an interest in philosophy with an interest in a related field such as business, education, or any of the liberal arts. Students choosing this option should consult with their advisor for specific course recommendations to complement their interests in related fields of study.

Logic – 3 credit hours

PHL 321	Logic	3

History – 6 credit hours

Select two courses from the following:

PHL 371	Ancient Philosophy	3
PHL 372	Medieval Philosophy	3
PHL 373	Early Modern Philosophy	3
PHL 374	Hegel and 19th Century Philosophy	3

Metaphysics or Epistemology - 3 credit hours

Select one course from the following:

PHL 330	Metaphysics - A Survey	3
PHL 331	Metaphysics: Asian Philosophy	3
PHL 332	Metaphysics: Philosophy of Mind	3
PHL 333	Metaphysics: Philosophy of Religion	3
PHL 334	Metaphysics: Problem of Being	3
PHL 335	Metaphysics: Self and Identity	3
PHL 336	Metaphysics: Native American Philosophy	3
PHL 337	Metaphysics: Freedom	3
PHL 338	Metaphysics: Ancient Greek Metaphysics in Context	3

PHL 339/THTR 405	Metaphysics of Shakespeare	3
PHL 371	Ancient Philosophy	3
PHL 372	Medieval Philosophy	3
PHL 373	Early Modern Philosophy	3
PHL 374	Hegel and 19th Century Philosophy	3
PHL 422	Philosophy of Science	3
PHL 479	Existentialism	3

Ethics or Politics – 3 credit hours

Select one course from the following:

PHL 313	Socio-Political Philosophy	3
PHL 314	Philosophy and Feminism	3
PHL 324	Environmental Ethics	3
PHL 325	Bioethics	3
PHL 410	Education and Politics	3
PHL 412	Philosophy of Law	3
PHL 430	Advanced Ethics	3

Option 2 Major Electives - 9 credit hours

Any 300 or 400 level philosophy class, two of which must be 400-level.

Capstone - 1-3 credit hours

PHL 499	Senior Capstone	Variable

Any additional credit hours required to complete a minimum of 120 credit hours

Philosophy Major Option 3 Philosophy Politics and Policy — 63 credit hours

This curriculum is designed for students with an interest in philosophy and political science with an emphasis on public policy. Students choosing this option will have a double major in philosophy and political science. A decision to follow this curriculum should be made before the end of the junior year.

Option 3 Required Courses - 39 credit hours

PHL 313	Socio-Political Philosophy	3
PHL 321	Logic	3
PHL 371	Ancient Philosophy	3
PHL 373	Early Modern Philosophy	3
ECN 120	Principles of Macroeconomics	3
ECN 121	Principles of Microeconomics	3
POL 200	Introduction to United States Politics	3
POL 203	Introduction to Political Theory	3
POL 205	World Politics	3
POL 250	Political Inquiry and Analysis	3

POL 335	American Public Policy	3
PHL 490	Directed Study	Variable
	Or	
POL 490	Directed Study	Variable
PHL 499	Senior Capstone	Variable
	Or	
POL 499	Senior Thesis	Variable

PHL 490/POL 490 and PHL 499/POL 499 must be taken for 3 credit hours each.

PHL 490/POL 490 should be completed during the junior year. PHL 499/POL 499 should be completed during the senior year and in the discipline not chosen for the directed study during the junior year.

Select one course from the following - 3 credit hours

POL 305	Ancient and Medieval Political Thought	3
POL 306	Modern Political Thought	3
POL 307	Contemporary Political Theory	3

Option 3 Major Electives — 21 credit hours

12 upper-division credit hours must be from political science, with 6 credit hours being 400-level. These must include one comparative politics course, one U.S. politics course, and one international relations course.

9 upper-division credit hours must be in philosophy, chosen from those courses not already required.

Physics

Oz Bonfim, Ph.D., Chair (Fall 2021)

Shannon Mayer, Ph.D., chair (Spring 2022)

Faculty: Bonfim, Coates, Ghimire, S. K. Mayer, More, Mylott, Schlosshauer

The mission of the physics department is to provide students with the knowledge of the fundamental laws of physics and the skills to use these laws in physics, other fields of science, technological applications, and everyday life. Our program will also provide a solid background in both physics and mathematics to those students who wish to pursue physics or related fields at the graduate level. In broader terms, we wish to foster in our students the ability to question and discuss issues in all aspects of life with an unbiased scientific attitude.

Physics is the science that seeks to understand natural phenomena as simply as possible and so provide the foundation for the other sciences and engineering. Whatever questions they ask, physicists have discovered that the answers ultimately involve the same elegant general principles, such as symmetry, energy and momentum, mass and charge.

Rather than simply describe one observation, a physicist seeks to connect that observation with many others and apply or extend comprehensive theories. Physicists look for and study patterns among natural phenomena, including those that are readily apparent (like the orbits of planets) and those that are apparent only to deep analysis and careful observation (like the quantum transitions of atoms).

A physics major provides a rigorous grounding in the scientific process and a firm scientific understanding of the world. It fosters critical thinking and quantitative problem solving skills and provides broad practical training in science and technology. It can lead to graduate study and basic research (in a variety of disciplines), to stimulating jobs in industry, or to challenging and rewarding careers in teaching.

Our faculty members are engaged in original research, and physics majors are drawn early into collaborative research projects with the faculty. Students learn to think as physicists, not just work physics problems, and faculty welcome students' curiosity, questioning, and new perspectives.

A physics major is essential for students planning to pursue a graduate degree in physics. A physics major provides a solid foundation for students who anticipate careers in secondary education, engineering, or medical research. Students looking for a broad scientific grounding as part of a liberal arts education are also well served by the physics major.

Learning Outcomes for Physics Majors

Physics graduates of the University of Portland should be able to:

1. Demonstrate critical thinking in the context of science.
 - a. Be able to model and solve real-world problems.
 - b. Test solutions for limiting cases.
2. Demonstrate understanding of scientific literature, such as journal articles and textbooks.
 - a. Communicate effectively in a scientific setting.
 - b. Reproduce results published in a paper.
 - c. Explain assumptions and justify approximations used in the readings.
3. Demonstrate quantitative problem solving skills.
 - a. Use mathematical concepts, strategies, and procedures to derive and manipulate formal relationships between physical quantities.
 - b. Incorporate the use of calculator and computer-based technology in problem-solving.
 - c. Make appropriate approximations in problem-solving.
4. Demonstrate understanding of the general principles in physics and patterns in nature.
 - a. Apply general principles to solving problems.
 - b. Apply physics principles across disciplinary boundaries.
 - c. Write and publicly present research, explaining experimental results to other students at a similar level.
5. Integrate the scientific method into problem-solving and experimentation.
 - a. Set up an appropriate laboratory investigation addressing the principles and applications of an area of physics.
 - b. Safely employ experimental apparatuses, make accurate physical measurements, and understand experimental uncertainty.
 - c. Incorporate the use of calculator and computer-based technology in the collection, analysis and interpretation of data.

Physics, B.A.

The Department of Physics offers a program leading to the bachelor of arts degree in physics. The program is suited especially for students who are interested in combining a degree in physics with the study of another discipline (such as biology, life sciences, environmental science, or a major in the humanities).

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

Two of the three core requirements in the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by the mathematics and science requirements within the major.

PHY 441 and PHY 472 are the designated Writing in the Discipline⁴⁸ courses for the B.A. in Physics.

College of Arts and Sciences B.A. Requirements — 24-33 credit hours

See College Requirements, B.A.⁷⁵

Major Requirements — 42 credit hours**Required Courses — 31 credit hours**

MTH 201	Calculus I	4
MTH 202	Calculus II	4
MTH 301	Vector Calculus	4
CHM 207	General Chemistry I	3
	with	
CHM 277	General Chemistry I Lab	1
PHY 201	College Physics I	3
	with	
PHY 271	College Physics Lab I	1
	And	
PHY 202	College Physics II	3
	with	
PHY 272	College Physics Lab II	1
	Or	
PHY 204	General Physics I	3
	with	
PHY 274	General Physics Lab I	1
	And	
PHY 205	General Physics II	3
	with	
PHY 275	General Physics Lab II	1
PHY 306	Modern Physics	3
	with	
PHY 376	Modern Physics Lab	1
PHY 356/MTH 356	Mathematical Methods for Science and Engineering	3

Major Electives – 17 credit hours

Select from the following:

PHY 303/CHM 303/MTH 303	Computational Methods in Physical Sciences	3
PHY 322	Optics	3
PHY 323/MTH 323	Nonlinear Dynamics	3
PHY 370	Special Physics Laboratory and Research	Variable
PHY 371	Analog and Digital Electronics	3

PHY 372	Optics Laboratory	1
PHY 391	Seminar	Variable
PHY 404	Advanced Mechanics	3
PHY 405	Advanced Electrodynamics	3
PHY 411	Introduction to Quantum Mechanics	3
PHY 412	Introduction to Quantum Mechanics II	3
PHY 422	Solid State Physics	3
PHY 441	Thermal and Statistical Physics	3
PHY 470	Special Physics Laboratory and Research	Variable
PHY 471	Advanced Laboratory	2
PHY 472	Advanced Optics Laboratory	2

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120

Physics, B.S.

The Department of Physics offers a program leading to the bachelor of science degree in physics.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

Two of the three core requirements in the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by the mathematics and science requirements within the major.

PHY 441 and PHY 472 are the designated Writing in the Discipline⁴⁸ courses for the B.S. in Physics.

College of Arts and Sciences B.S. Requirements — 6 credit hours

See College Requirements, B.S.⁷⁶

Major Requirements — 75-76 credit hours

Required Courses — 47-48 credit hours

MTH 201	Calculus I	4
MTH 202	Calculus II	4
CS 203	Introduction to Computer Science	3
	with	
CS 273	Computer Science Laboratory	1
	Or	
PHY 303/CHM 303/MTH 303	Computational Methods in Physical Sciences	3
PHY 204	General Physics I	3
	with	

PHY 274	General Physics Lab I	1
PHY 205	General Physics II	3
	with	
PHY 275	General Physics Lab II	1
CHM 207	General Chemistry I	3
	with	
CHM 277	General Chemistry I Lab	1
CHM 208	General Chemistry II	3
	with	
CHM 278	General Chemistry II Lab	1
PHY 306	Modern Physics	3
PHY 376	Modern Physics Lab	1
PHY 356/MTH 356	Mathematical Methods for Science and Engineering	3
PHY 371	Analog and Digital Electronics	3
MTH 301	Vector Calculus	4
MTH 321	Ordinary Differential Equations	3
MTH 341	Introduction to Linear Algebra	3

Advanced labs - 4 credit hours

Select two courses from the following:

PHY 470	Special Physics Laboratory and Research	Variable
PHY 471	Advanced Laboratory	2
PHY 472	Advanced Optics Laboratory	2

Additional upper-division courses in science, math or engineering – 24 credit hours

15 of these 24 credit hours must be in physics.

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120-121

Physics and Mathematics Education Preparation Track

The physics department offers a physics and mathematics education preparation track leading to a bachelor of science degree in physics. This track combines a focus on physics with additional concentrations in mathematics and education and prepares students for a one-year MAT program.

Major Requirements — 75 credit hours

Required Courses - 27 credit hours

MTH 201	Calculus I	4
MTH 202	Calculus II	4
PHY 163	Astronomy	3
PHY 204	General Physics I	3

PHY 274	General Physics Lab I	1
PHY 205	General Physics II	3
PHY 275	General Physics Lab II	1
CHM 207	General Chemistry I	3
CHM 277	General Chemistry I Lab	1
CHM 208	General Chemistry II	3
CHM 278	General Chemistry II Lab	1

Upper-division science, math, engineering, and education courses — 48 credit hours

A minimum of 24 credit hours must be in physics.

PHY 306	Modern Physics	3
PHY 322	Optics	3
PHY 356/MTH 356	Mathematical Methods for Science and Engineering	3
PHY 376	Modern Physics Lab	1
PHY 441	Thermal and Statistical Physics	3
	Or	
CHM 332	Physical Chemistry II	3
	Or	
ME 331	Fundamental Thermodynamics	3
PHY 371	Analog and Digital Electronics	3
	Or	
PHY 470	Special Physics Laboratory and Research	Variable
	Or	
PHY 471	Advanced Laboratory	2
	Or	
PHY 472	Advanced Optics Laboratory	2
MTH 301	Vector Calculus	4
MTH 311	Discrete Structures	3
MTH 341	Introduction to Linear Algebra	3
MTH 361	Applied Statistics I	3
ED 301	Adolescent Psychology of Learning	3
ED 320	Sociocultural Foundations of Education	3
ED 481	Language, Literacy & Culture	3

Additional Physics Courses 9-12 credit hours

12 additional credit hours in physics are required if PHY 441 is not taken.

Additional Mathematics Courses— 2 credit hours**General Electives — 9 credit hours**

Political Science & Global Affairs

Anne Santiago, Ph.D., chair

Faculty: Curtis, Golesorkhi, Meiser, Santiago

The mission of the political science and global affairs program is to provide majors a solid foundation in the study of domestic and global politics and prepare students to become engaged citizens and leaders. It equips students with the knowledge and intellectual skills necessary to understand a complex, interdependent, and dynamic world and to navigate and positively shape its important political, legal, and economic institutions. The department offers introductory courses to all students and prepares its majors for careers in business, education, journalism, law, government, non-governmental, religious organizations, and for local, national, and international service. Our majors also have opportunities to extend their learning through internships.

The political science and global affairs major offers students a broad and analytically rigorous liberal arts curriculum and prepares them for graduate studies in political science, law, and other professional disciplines. The major, which covers the fields of American politics, comparative politics, international relations, and political theory, is designed to provide an understanding of politics centered around a set of specific strategies for gathering and analyzing information about political life. These strategies — conceptual, historical, structural, institutional, behavioral and normative — are explored in the light of their respective theoretical materials.

Learning Outcomes for Political Science & Global Affairs Majors

Political science and global affairs graduates of the University of Portland will be able to:

1. Demonstrate elementary knowledge within three areas of the discipline of political science--American Politics, world politics, and political theory--that will serve as the building blocks for mastery of the discipline over time.
 - a. Demonstrate foundational knowledge of key concepts, theories and discourses within American politics, world politics, and political theory.
2. Understand and demonstrate a foundational knowledge of methodological approaches in political science.
 - a. Understand the role that theory plays in guiding methodological decisions within research.
 - b. Demonstrate knowledge of the fundamentals of conducting research in political science for a variety of methodological approaches.
3. Demonstrate advanced knowledge/mastery of political science subfields, including international relations, comparative politics, American politics, and political theory by critically assessing their key concepts, theories, and discourses.
 - a. Identify and explain the key concepts, theories, and discourses of the scholarly research within the subfields of the discipline.
 - b. Critically evaluate the key concepts, theories, and discourses of scholarly research within the subfields of the discipline.
4. Analyze and apply key concepts, theories, and discourses in at least one of the four subfields of political science.
 - a. Articulate a critical analysis of a problem within political science through a research paper (18-25 pages) that establishes a novel research question, clear thesis, cogent argumentation and conclusions, and that properly engages the relevant scholarly literature in the given field.
 - b. Within this research paper, apply the fundamentals of a research design as mastered in POL 250 *Political Inquiry and Analysis*.

Capstone Experience

The political science and global affairs capstone experience provides students an opportunity to demonstrate proficiency in scholarly inquiry and analysis. This is carried out in 400-level courses where students explore the scholarly literature and conduct analytically focused research projects. Students who are interested in graduate school or who are in the honors program also have the option of completing a senior thesis under the direction of a member of the faculty.

Philosophy, Politics, and Policy

Students interested in integrating an emphasis on policy with a double major in political science and global affairs and philosophy should consult the chairs of the philosophy and political science and global affairs programs.

Political Science and Global Affairs, B.A.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

The core requirement for the Global & Historical Consciousness Habit is satisfied by requirements within the major.

One of the three core requirements in the Scientific and Quantitative Literacy and Problem Solving Habit is satisfied by POL 200 in the major.

POL 4XX and POL 4XX are the designated Writing in the Discipline⁴⁸ courses for the B.A. in Political Science and Global Affairs.

College of Arts and Sciences B.A. Requirements — 24-33 credit hours

See College Requirements, B.A.⁷⁵

Students must take either ENG 107 or ENG 311 for their College Effective Communication requirement.

Major Requirements — 36 credit hours

Required Courses — 15 credit hours

POL 200	Introduction to United States Politics	3
POL 203	Introduction to Political Theory	3
POL 205	World Politics	3
POL 250	Political Inquiry and Analysis	3
POL 305	Ancient and Medieval Political Thought	3
	Or	
POL 306	Modern Political Thought	3
	Or	
POL 307	Contemporary Political Theory	3
	Or	
POL 314	American Political Thought	3

Major Electives - 21 credit hours

Must include at least one course in American Politics and two courses in International Relations/Comparative Politics. Two courses (6 credit hours) must be at the 400-level. POL 497 does not count for this 400-level requirement

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120

Psychological Sciences

Deana Julka, Ph.D., chair

Faculty: Berger, Brad, Crowgey, Currie, Downs, Guest, Julka, Monto, Pitzer, Saturn, Simmons

The psychological sciences department serves the mission of the College of Arts and Sciences and the University of Portland through excellence in teaching, scholarship, and service. The department offers an undergraduate major and minor that prepare students for graduate work, occupations in the helping professions, and many other career paths. The psychological sciences department's goal is to promote good scholarship and citizenship within a community of learners. To do this, we develop collaborative academic endeavors between students and faculty, and foster intellectual engagement with the field of psychology and the world at large.

Learning Objectives and Performance Indicators of the Psychology Major

Psychology graduates of the University of Portland should be able to:

1. Demonstrate a sophisticated understanding of behavior, thought, and emotion.
 - a. Identify and explain key psychological terms, constructs, and theoretical approaches.
 - b. Draw on research and theory to inform understandings of behavior, thought, and emotion.
 - c. Describe and apply psychological principles as related to personal, social, and/or organizational issues.
2. Think critically about psychological issues, including the ability to question assumptions and consider alternatives.
 - a. Identify relevant questions and critically evaluate psychological problems and controversies.
 - b. Distinguish empirical and theoretical claims and the strength and weaknesses of types of research.
 - c. Design and implement research relevant to psychological phenomena.
3. Engage with ethical and social responsibility in a diverse world.
 - a. Identify relevant ethical and cultural issues related to psychological research.
 - b. Articulate the importance and value of diversity in empirical research.
 - c. Seek opportunities to contribute to more inclusive communities through volunteer service, work, extracurricular activities (clubs, etc.), internships, action research, or other applied experiences related to psychology.
4. Cultivate skills relevant for professional development.
 - a. Effectively communicate the results of psychological research in both written and oral presentations.
 - b. Demonstrate the ability to process psychological research and describe it in ways that are audience-appropriate.
 - c. Evaluate career goals and reflect on how undergraduate experiences might serve to further these goals.

Breadth of Study

The psychology major is designed to expose its students to the breadth of approaches deployed by psychologists in their study of human nature with a focus in three areas: the brain, the mind and behavior. Upper division courses listed in Group 1 address the human condition primarily on the level of the brain and will explore the neurobiological mechanisms responsible for human thought and behavior. Courses listed in Group 2 address the human condition primarily on the level of the mind and will explore the design and function of the systems that shape thoughts, feelings and behavior. Courses listed in Group 3 address the human condition primarily on the level of behavior with an emphasis placed on cataloging and explaining the tremendous variability both within and between individuals.

Capstone Experience

All psychology majors must take a three-credit hour capstone course as an independent class to employ and integrate concepts and skills from contemporary psychological sciences. The most common capstone experience is the senior seminar course, which is designed to help students integrate major contemporary psychological methods, theories, and research findings. Through intensive research, participation and discussion, students also learn skills of professional presentation. Students with a particular interest in independent research and honors students may instead elect to complete a three-credit hour senior thesis

involving an intensive research project. Students interested in exploring psychology in community-based settings may also undertake an applied project broadly related to work in contemporary psychological sciences.

Psychology, B.A.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

One of the three core requirements in the Scientific and Quantitative Literacy and Problem Solving Habit is satisfied by PSY 101 within the major.

PSY 214 and PSY 498/499 are the designated Writing in the Discipline⁴⁸ courses for the B.A. in Psychology.

College of Arts and Sciences B.A. Requirements — 24-33 credit hours

See College Requirements, B.A.⁷⁵

Major Requirements — 33 credit hours

Required Courses — 9 credit hours

PSY 101	Psychological Science	3
PSY 214/SOC 214/SW 214	Research Methods: Design	3
PSY 215/SOC 215	Research Methods: Analysis	3

Capstone - 3 credit hours

Select one course from the following:

PSY 498S	Senior Capstone: Seminar	3
PSY 498A	Senior Capstone: Applied Projects	3
PSY 499	Senior Capstone: Thesis	3

Upper-division psychology electives - 21 credit hours

Select 21 upper-division PSY credit hours, including at least one course from each of the following three groups:

Group 1 courses (the brain level) - 3 credit hours or more

Select from the following:

PSY 301	Behavioral Neuroscience	3
PSY 311	Sensation and Perception	3
PSY 321	Psychology of Learning	3

Group 2 courses (the mind level) - 3 credit hours or more

Select from the following:

PSY 331	Cognition	3
PSY 341	Evolutionary Psychology	3
PSY 351	Health Psychology	3

Group 3 courses (the behavior level) - 3 credit hours or more

Select from the following:

PSY 361	Life Span Development	3
PSY 371	Social Psychology	3
PSY 381	Abnormal Psychology	3

Select at least one additional 3 credit hour course from one of these Groups as a specialized area of study.

Any additional credit hours required to complete a minimum of 120 credit hours

A maximum of six non-classroom credit hours may be used for completion of the major.

Total Credit Hours: 120

Social Work

Alice Gates, Ph.D., chair

Faculty: Gates, Gooding, Jones, Schallert

In keeping with the missions of the University of Portland and of the College of Arts and Sciences, the social work major offers an academically rigorous program enriched by intensive, educationally directed field experiences which prepare students to “respond to the needs of the world and its human family.” As an academic discipline and practice-based profession, social work integrates social science knowledge with values and skills to promote social change, human development, and the liberation of people and communities. Social work at UP introduces students to the social justice foundations of the profession and prepares them for effective engagement with individuals, families, groups, and communities, with an emphasis on vulnerable and marginalized populations. Our program affirms the core values of equity, self-determination, antiracism, and solidarity.

Social work majors take courses across the curriculum to enhance their understanding of the biopsychosocial and person-in-environment frameworks. Theories of human development are complemented by critical theory and models for anti-oppressive practice. Students in this program receive training in how to address social problems through systematic and empirically grounded approaches to planned change. Our program is accredited by the Council on Social Work Education; as such, our graduates are eligible to apply for advanced standing in many Master of Social Work programs across the United States.

The social work program contributes to a multidisciplinary department that includes the discipline of sociology. Faculty of the entire department are committed to offering rigorous core and major courses, regularly assessing the quality of our programs, and working to support the education of students across disciplines.

Dorothy Day Social Work Program Goals

The Dorothy Day Social Work Program will:

1. Provide a generalist social work curriculum based on a foundation of social, economic, and environmental justice.
2. Promote educational and experiential contexts that emphasize ethical, value-based, and culturally responsive social work practice.
3. Offer curricular and field opportunities that facilitate and support advanced graduate study and service leadership roles in diverse settings and communities.

Learning Outcomes for Social Work Majors

Social work graduates of the University of Portland should be able to:

1. Articulate social work values that form the foundation of practice such as advocacy for human rights and social and economic justice.
 - a. Demonstrate professional behaviors congruent with social work's mission and values.
 - b. Advance human rights and social, economic, and environmental justice.
2. Utilize critical thinking and ethical conceptualization skills when addressing social problems and approaches to working with those problems.

- a. Apply ethical principles in practice.
- b. Apply critical thinking in practice.
3. Competently apply social work skills that are informed by theory, research, and best practices and that consider the cultural and other contexts in which practice occurs.
 - a. Incorporate knowledge of how diversity, oppression, and power affect social work practice.
 - b. Engage in policy practice to advance social and economic well-being.
 - c. Engage, assess, intervene, and evaluate with individuals, families, groups, organizations, and communities utilizing evidence-based methods and knowledge of human behavior in the social environment.

Student Handbook and Program Standards

The *Social Work Program Student Handbook* is available on the social work website at this link. Students have the responsibility to acquaint themselves with its contents and are held accountable for all statements therein. To remain in good standing with the program and to enter the senior year practicum, students must maintain a minimum G.P.A. of 2.5 in all courses required for the major, among other standards outlined in the handbook.

Capstone Experience

During the senior year, students complete a year-long practicum placement in a community agency. Students also take two corequisite Theory and Methods of Social Work Practice courses, which focus on helping students learn to apply skills and knowledge to their work with individuals, families, groups, communities, and organizations.

Social Work, B.A.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

The core requirement for the Commitment to Diversity, Inclusion & the Common Good Habit is satisfied by SOC 101 within the major. One of the three core requirements in the Scientific and Quantitative Literacy and Problem Solving Habit is satisfied by PSY 101 within the major.

SW 313 and SW 480 are the designated Writing in the Discipline⁴⁸ courses for the B.A. in Social Work.

College of Arts and Sciences B.A. Requirements — 24-33 credit hours

See College Requirements, B.A.⁷⁵

Major Requirements — 48 credit hours

PSY 101	Psychological Science	3
SOC 101	Introduction to Sociology	3
SW 101	Social Work and Social Justice	3
SW 214/PSY 214/SOC 214	Research Methods: Design	3
SW 313	Social Welfare Policy	3
SW 325/SOC 325	Power, Oppression, and Critical Consciousness	3
SW 343	Human Behavior in the Social Environment	3
SW 386	Interviewing and Counseling	3

SW 480	Theory and Methods of Social Work Practice I	3
SW 481	Theory and Methods of Social Work Practice II	3
SW 482	Social Work Practicum I	6
SW 483	Social Work Practicum II	6
	Upper division electives in social work, psychology, or sociology	6

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120

Sociology

Alice Gates, Ph.D., chair

Faculty: Alfrey, Gates, Guest, McRee, Monto, Rookey

The sociology program serves the academic mission of the University of Portland by offering a strong undergraduate major program in sociology, a specialized track of that major in criminology, and an essential university core offering: SOC 101, Introduction to Sociology. Consistent with the principles of a Catholic and Holy Cross education, the faculty is committed to the development of students as socially responsible, informed citizens with an awareness of social problems, and an appreciation for individuals of diverse backgrounds, the ability to look critically and analytically at social life, and a commitment to contribute to positive change in the world.

Sociology contributes to a multidisciplinary department that includes the discipline of social work. Faculty of the entire department are committed to offering rigorous core and major courses, regularly assessing the quality of our programs, and working to support the education of students across disciplines.

Majors in sociology complete coursework and receive personalized advising that prepares them for graduate studies, leadership, and service in areas such as criminal justice, law, education, business and industry, data analysis, human services, government, journalism, and non-profit organizations. The curriculum imparts to students an understanding of society and culture as it is organized in various social institutions and provides training in the methods and theories of social research. Topics of study include sociology of the family, criminology, urban society, gerontology, race and racism, social psychology, gender, social inequality, and the study of culture.

Learning Outcomes for Sociology Majors

Graduates from the University of Portland with a sociology major should be able to:

1. Demonstrate an understanding of the major theories and concepts in sociology.
 - a. Describe and apply central theoretical concepts and ideas through analysis papers.
 - b. Identify fundamental insights of the field of sociology.
2. Understand, interpret, and design social research.
 - a. Distinguish the strengths and weaknesses of types of research.
 - b. Identify relevant ethical and cultural issues related to sociological research.
 - c. Successfully conduct sociological research projects.
3. Express themselves through the written and spoken word.
 - a. Justify conclusions, hypotheses, research questions, and need for further study.
 - b. Write with clarity, economy, and precision.
 - c. Clearly convey ideas and information in public settings.

4. Think critically about social life, question assumptions, and consider alternatives.
 - a. Describe social factors shaping human behavior and social change.
 - b. Identify relevant questions and make predictions about sociological phenomena.
 - c. Critically analyze and evaluate contemporary social institutions, organizations, and policies, recognizing their strengths and weaknesses.
5. Demonstrate an understanding of the ways that social class, race, ethnicity, and gender affect individuals and shape their perceptions of the world.
 - a. Identify the fundamental insights of sociology into issues of race, ethnicity, and gender.
 - b. Articulate the fundamental concepts of sociology regarding minority-majority interaction and the basic characteristics of the genders, and racial and ethnic groups in the United States.

Graduates of the criminology track of the sociology major should also be able to:

6. Demonstrate an understanding of the operation of the criminal justice system and the social and psychological causes of criminal activity.
 - a. Articulate social and individual causes of crime, recognizing the importance of social environment and socialization.
 - b. Critically analyze and evaluate the criminal justice system and other social control mechanisms in society.

Internship

The department provides opportunities for students to secure internships with local, regional, national, and international agencies and community partners. These opportunities (typically pursued during a student's junior or senior year) are individually arranged and may occur in a variety of settings. Students interested in the criminology track of the major can receive in-service experience in some aspect of the criminal justice system, or with a community agency that works to improve oversight and performance of criminal justice activity.

Capstone Experience

The capstone experience for the sociology program is provided by the course SOC 498, Senior Project Seminar. This course is taken in fall of the senior year and provides a structured opportunity to demonstrate and learn more about the complexity of sociological knowledge. While upper division courses in sociology normally focus on a particular issue, problem, institution, etc, the content of the senior seminar examines the discipline of sociology as a whole, what it offers graduates, what it offers society, and what debates and conflicts it contains. The course also serves as a professionalization seminar, with the goal of assisting students to prepare for successful entry into the work environment, community service, or graduate-level training. Over the course of the semester, each student is expected to complete a significant research project utilizing the knowledge and skills gained in their earlier coursework.

Sociology, B.A.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

The core requirement for the Commitment to Diversity, Inclusion & the Common Good Habit is satisfied by SOC 101

One of the three core requirements in the Scientific and Quantitative Literacy and Problem Solving Habit is satisfied by PSY 101 within the criminology track.

SOC 380 and SW 498/499 are the designated Writing in the Discipline⁴⁸ courses for the B.A. in Sociology.

College of Arts and Sciences B.A. Requirements — 24-33 credit hours

See College Requirements, B.A.⁷⁵

Major Requirements — 36 credit hours

Required Courses — 18 credit hours

SOC 101	Introduction to Sociology	3
SOC 214/PSY 214/SW 214	Research Methods: Design	3
SOC 215/PSY 215	Research Methods: Analysis	3
SOC 336	Race and Racism in the United States	3
SOC 380	Sociological Theory	3
SOC 498	Senior Project	3

Students may substitute SOC 499 (*Thesis*) for SOC 498, *Senior Project Seminar*. This option requires the student to secure faculty approval of the thesis proposal before the student begins their final year of study.

Upper-division Sociology Electives - 18 credit hours

At least 6 of the 18 upper-division elective credit hours must be taken from SOC 430-439, or 491-492. A maximum of 6 non-classroom credit hours (e.g., internships or independent study) may be applied toward the completion of the major.

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120

Criminology Track of Sociology Major

The criminology track of the sociology major encourages a critical exploration of criminal behavior and the criminal justice system. The program is appropriate for students interested in research or public policy issues related to crime and criminal justice. The track is also suitable for students who may seek employment opportunities in law enforcement, criminal law, the corrections system, and other government and nonprofit agencies that provide services or resources for offenders and their families.

Criminology Track Requirements — 36 credit hours

Required Courses — 24 credit hours

SOC 101	Introduction to Sociology	3
SOC 214/PSY 214/SW 214	Research Methods: Design	3
SOC 215/PSY 215	Research Methods: Analysis	3
SOC 305	Sociology of Crime and Justice	3
SOC 336	Race and Racism in the United States	3
SOC 360	Criminology	3
SOC 380	Sociological Theory	3
SOC 498	Senior Project	3

Students may substitute SOC 499 (*Thesis*) for SOC 498, *Senior Project Seminar*. This option requires the student to secure faculty approval of the thesis proposal before the student begins their final year of study. Students are encouraged to complete a criminology internship (SOC 497C) during the junior or senior year.

Additional upper-division hours in sociology (or relevant out-of-department courses) - 12 credit hours

In recognition of the interdisciplinary character of the study of criminology, students in the criminology track may take any two of the following out-of-department courses in partial fulfillment of the 12 additional upper-division sociology credit hours requirement:

POL 346	Constitutional Criminal Procedure	3
PSY 381	Abnormal Psychology	3
PSY 391	Seminar	Variable
PSY 470	Psychology of Aggression	3

PSY 391: Seminar may be taken only when the topic is Forensic Psychology.

At least 6 of the 12 upper-division elective credit hours must be taken from SOC 430-439 or SOC 491-492.

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120

Theology

Michael Cameron, Ph.D., chair

Faculty: Ahiokhai, Astorga, Cameron, Daniels, Dempsey, Gaudino, Gordon, Henrichs, King, Stanfill, Turnbloom, Wheeler

The mission of the Department of Theology is to offer students a faith-driven world view and way of life as an alternative to the multiple competing thought systems and ideologies that are embraced by our secular society and culture. Grounded in the University of Portland's vision as a Catholic university, the Department provides students with a solid foundation in critical theological thinking that enables them to question and challenge systems of injustice and suffering. By engaging in complex contemporary issues, Theology students become persons of faith, justice, and compassion in a torn and divided world, and who lead by the witness of their lives. In this way, the Department contributes to the fulfillment of the University's mission of teaching and learning, faith and formation, and service and leadership.

In theological studies, ethics grows from the practice of seeing all reality in God. It does not stand alone. Motivated by this broader understanding of faith and ethics, the Department has pioneered integrative learning and pursues a critical dialogue of reason, faith, and ethics with multiple disciplines and departments across the curriculum.

Learning Outcomes for Theology Majors

Theology graduates of the University of Portland should be able to:

1. Demonstrate an understanding of the content and methodologies of the major sub-disciplines of Catholic theology by examining issues through the lenses of each of the sub-disciplines.
2. Demonstrate an understanding of how these sub-disciplines inform and support one another by approaching a particular issue through the combined lenses of two or more of these sub-disciplines.
3. Demonstrate a theological understanding of the ethical aspects of both individual and social actions by writing essays that examine the ethical side of human actions in a manner that is coherent, analytical, and theologically reflective.
4. Demonstrate an understanding of religious faith.
 - a. Discern the place of faith in one's own life.
 - b. Discern the place of faith in the lives of others.

Capstone Experience

In the fall of his or her senior year, a theology major will write a formal paper of substantive length, usually 12-18 pages, whose thesis and thesis development integrate the methodologies and perspectives of at least two sub-disciplines of theology, e.g., ethics and spirituality, or biblical studies and systematics. At the end of the fall semester this paper will be submitted to the theology faculty for evaluation. In the spring semester of his or her senior year, the student will enroll in the one-credit capstone course (THE 499).

300 vs. 400-Level Courses

Most theology (THE) courses are offered on a 300 and a 400 level. 400-level courses are intended for theology majors, minors, and other students with a special interest in theology. Courses at the 400-level do not entail more work, but provide assignments more suited to students interested in theology beyond just the core requirements.

Theological perspectives (THEP) courses carry either a 300 or a 400 level designation, depending on the needs of the cross-listed discipline. The number does not indicate the relative difficulty of the course. Both are considered upper-division courses.

Theology, B.A.

The Department of Theology offers two tracks within its B.A. degree program.

Track one of the theology B.A. is designed for students who want to engage in the full range and diversity of theological inquiry. It also prepares students for most graduate programs in theology. In addition to THE 105 (or THE 101 for transfer students only) and THE 205, majors in this track take 28 credit hours of upper-division courses, six credit hours of which may be fulfilled with 300-level courses, or a 300-level course and a THEP course. All other courses must be taken at the 400-level, and courses taken at the 300-level may not be retaken at the 400-level, or vice versa. Students will fulfill 18 of the required 28 credit hours by taking one course from each of the six sub-disciplines of theology: biblical studies, historical theology, systematic theology, theological ethics, liturgical and sacramental theology, and spirituality. The remaining 10 credit hours are fulfilled by taking the capstone thesis (THE 498), the one-credit hour senior presentation (THE 499), and 6 credit hours of electives.

Track two of the theology B.A. is designed for students with a particular, focused interest in theology and for students wanting to double-major in theology. In addition to THE 105 (or THE 101 for transfer students only) and THE 205, majors in track two take 28 credit hours of upper-division courses, six credit hours of which may be fulfilled with 300-level courses, or a 300-level course and a THEP course. All other courses must be taken at the 400-level and courses taken at the 300-level may not be retaken at the 400-level, or vice versa. Students will fulfill 18 of the required 28 credit hours by taking 9 credit hours in each of two broad groups of offerings: a historical-theoretical group (comprising biblical studies, historical theology, and systematic theology), and a practical-applied group (comprising sacramental and liturgical theology, spirituality, and theological ethics). The remaining 10 credit hours are fulfilled by taking the one-credit hour senior presentation (THE 499) and 9 credit hours of electives.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

THE 492 and THE 498 are the designated Writing in the Discipline⁴⁸ courses for the B.A. in Theology.

College of Arts and Sciences B.A. Requirements — 24-33 credit hours

See College Requirements, B.A.⁷⁵

Major Requirements — 28 credit hours

Track One:

Biblical Studies - 3 credit hours

Select one course from the following:

THE 400/THE 300	God Our Mother	3
THE 402/THE 302	Poets, Prophets, Divas, and Diviners	3
THE 404/THE 304	Sages and Singers, Songwriters and Storytellers	3
THE	The Bible in a Global Village	3

406/THE 306		
THE 407/THE 307	Theology and Controversy in the Letters of Paul	3
THE 412/THE 312	Jesus' Ministry in the Gospels	3
THE 417/THE 317	Trickery, Gender, Power, and Politics in the Bible	3
THE 419/THE 319	Biblical Spirituality: Saints and Sinners on a Journey with God	3

Historical Theology - 3 credit hours

Select one course from the following:

THE 433/THE 333	Theological Implications of the Holocaust	3
THE 460/THE 360	Christianity's First Thousand Years: Emergence and Growth, 100-1200	3
THE 461/THE 361	Christianity's Second Thousand Years: Challenge and Renewal, 1200-2000	3
THE 463/THE 363	Saint Augustine, Teacher of Christianity	3
THE 465/THE 365	A Concise History of Christianity Through Twenty Centuries	3

Systemic Theology - 3 credit hours

Select one course from the following:

THE 405/THE 305	Comparing Religions of the World	3
THE 450/THE 350	Grace, Sin, and the Human Condition	3
THE 451/THE 351	Religions of Africa	3
THE 452/THE 352	God and the Human Person	3
THE 453/THE 353	Religion and Science	3
THE 455/THE 355	Christology	3
THE 456/THE 356	Literary Catholicism	3
THE 457/THE 357	Foundations of Catholic Theology	3
THE 459/THE 359	Theological Themes in Catholic Literature	3
THE 471/THE 371	Heaven, Hell and Hope	3

THE 472/THE 372	Theologies of Encounter	3

Theological Ethics - 3 credit hours

Select one course from the following:

THE 420/THE 320	Christian Personal Values	3
THE 422/THE 322	Modern Catholic Ethics	3
THE 423/THE 323	Christian Social Ethics	3
THE 424/THE 324	The Character Project	3
THE 425/THE 325	Catholic Social Teaching: A Living Tradition of Thought and Action	3
THE 426/THE 326	Christian Marriage: Tradition and the Modern Context	3
THE 429/THE 329	Theological Bioethics	3
THE 431/THE 331	Sexual Ethics	3
THE 432/THE 332	Intercultural Feminist Theology	3

Sacramental and Liturgical Theology - 3 credit hours

Select one course from the following:

THE 434/THE 334	Sacramental Imagination	3
THE 435/THE 335	Theology of Christian Worship	3
THE 436/THE 336	Liturgy and Ethics	3

Spirituality - 3 credit hours

Select one course from the following:

THE 441/THE 341	Responding to God: An Introduction to Spiritual Practice	3
THE 442/THE 342	Introduction to Christian Spirituality	3
THE 443/THE 343	Ecological Spirituality	3

Upper-Division Theology Electives - 6 credit hours

Capstone Thesis - 3 credit hours

THE 498	Capstone Thesis	3

Senior Presentation - 1 credit hour

THE 499	Senior Presentation	1

Track Two:***Historical-Theoretical - 9 credit hours***

Select three courses from the following:

THE 400/THE 300	God Our Mother	3
THE 402/THE 302	Poets, Prophets, Divas, and Diviners	3
THE 404/THE 304	Sages and Singers, Songwriters and Storytellers	3
THE 405/THE 305	Comparing Religions of the World	3
THE 406/THE 306	The Bible in a Global Village	3
THE 407/THE 307	Theology and Controversy in the Letters of Paul	3
THE 412/THE 312	Jesus' Ministry in the Gospels	3
THE 417/THE 317	Trickery, Gender, Power, and Politics in the Bible	3
THE 419/THE 319	Biblical Spirituality: Saints and Sinners on a Journey with God	3
THE 433/THE 333	Theological Implications of the Holocaust	3
THE 450/THE 350	Grace, Sin, and the Human Condition	3
THE 451/THE 351	Religions of Africa	3
THE 452/THE 352	God and the Human Person	3
THE 453/THE 353	Religion and Science	3
THE 455/THE 355	Christology	3
THE 456/THE 356	Literary Catholicism	3
THE 457/THE 357	Foundations of Catholic Theology	3
THE 459/THE 359	Theological Themes in Catholic Literature	3
THE 460/THE 360	Christianity's First Thousand Years: Emergence and Growth, 100-1200	3

THE 461/THE 361	Christianity's Second Thousand Years: Challenge and Renewal, 1200-2000	3
THE 463/THE 363	Saint Augustine, Teacher of Christianity	3
THE 465/THE 365	A Concise History of Christianity Through Twenty Centuries	3
THE 471/THE 371	Heaven, Hell and Hope	3
THE 472/THE 372	Theologies of Encounter	3

Applied Practical - 9 credit hours

Select three courses from the following:

THE 420/THE 320	Christian Personal Values	3
THE 422/THE 322	Modern Catholic Ethics	3
THE 423/THE 323	Christian Social Ethics	3
THE 424/THE 324	The Character Project	3
THE 425/THE 325	Catholic Social Teaching: A Living Tradition of Thought and Action	3
THE 426/THE 326	Christian Marriage: Tradition and the Modern Context	3
THE 429/THE 329	Theological Bioethics	3
THE 431/THE 331	Sexual Ethics	3
THE 432/THE 332	Intercultural Feminist Theology	3
THE 434/THE 334	Sacramental Imagination	3
THE 435/THE 335	Theology of Christian Worship	3
THE 436/THE 336	Liturgy and Ethics	3
THE 441/THE 341	Responding to God: An Introduction to Spiritual Practice	3
THE 442/THE 342	Introduction to Christian Spirituality	3
THE 443/THE 343	Ecological Spirituality	3

Upper-Division Theology Electives - 9 credit hours

Senior Presentation - 1 credit hour

THE 499	Senior Presentation	1

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120

DR. ROBERT B. PAMPLIN, JR. SCHOOL OF BUSINESS

Michael L. DeVaughn, Ph.D., dean

Lisa J. Reed, J.D., associate dean

Brian J. Adams, Ph.D., associate dean

Faculty: Adams, Adrangi, Arbabian, Barnes, Bloom-Groshong, Chatrath, Costin, Cruz Megchun, DeVaughn, Dittrich, Down, Dunnaville, Eom, Grimmer, Gudigantala, Hanig, Hao, Hisel-Cochran, Holloway, Jurinski, Kolay, Laird-Magee, Lin, Lippman, Meckler, Mitchell, Molkentin, Parkman, Parrish, Reed, Stephens, Vemprala, Yu

Introduction

The Dr. Robert B. Pamplin, Jr. School of Business was founded in 1939, and is one of the few schools of business in Oregon accredited by the Association for the Advancement of Collegiate Schools of Business (AACSB). The school offers the bachelor of business administration (B.B.A.) degree at the undergraduate level and the master of business administration (M.B.A.), the master of science in finance (M.S.F.), the master of science in operations and technology management (M.S.O.T.M.) and the M.B.A./M.S.F. dual degree at the graduate level.

Mission

The Pamplin School of Business' innovative curriculum is an outgrowth of its mission statement. This mission is to create a collaborative learning environment that develops our students' knowledge of effective business practices, enhances their analytic and interpersonal skills, and enables them to be successful and ethical leaders in their communities and the changing world. This mission challenges the Pamplin School of Business to provide students with:

- The opportunity to obtain a comprehensive understanding of business and sustainable business practices;
- The leadership skills needed to manage organizations — communication, problem-solving, teamwork, and the utilization of technology;
- A series of professional development activities to provide self-insight and assessment of career expectations and opportunities;
- State-of-the-art curricula taught by highly motivated and concerned faculty on the leading edge of their disciplines; and
- An entrepreneurial mindset to recognize and seize opportunities.

Programs of Study

The School of Business and the Graduate School offer the following degrees and programs:

Bachelor of Business Administration in Accounting

Bachelor of Business Administration in Economics

Bachelor of Business Administration in Finance

Bachelor of Business Administration in Marketing

Bachelor of Business Administration in Operations and Technology Management

Master of Business Administration in Nonprofit Management (see Graduate School269)

Master of Business Administration (see Graduate School253)

Master of Science in Finance (see Graduate School)263

Master of Science in Operations and Technology Management (see Graduate School260)

Additional and Specialized Programs

Minor in Business Administration

Minor in Economics

Minor in Entrepreneurship

Minor in Global Business

Minor in Sustainability

Entrepreneur Scholars Program

Dual B.B.A./M.B.A. Program for Accounting

Post Graduate Business Certificate Program (see Graduate School275)

Post-Baccalaureate Business Certificate Program (see Graduate School271)

School of Business Undergraduate Degree Requirements

The undergraduate program in the Pamplin School of Business includes five majors leading to a B.B.A. degree. The B.B.A. majors include accounting, economics, finance, marketing, and operations and technology management. It includes a general education component based on the University Core Curriculum. This is followed by other foundation and major courses depending upon the specific major. Minors are offered in business administration, economics, entrepreneurship, global business and sustainability.

Double Majors

Students who want to major in two areas of business must complete the majority of these programs through separate electives. Only two upper-division electives may be cross counted for double majors.

School of Business Undergraduate Learning Goals and Outcomes

Graduates of the Pamplin School of Business should be able to:

1. **Business Knowledge Competencies:** Obtain and integrate knowledge about business in a changing world.
 - a. Demonstrate a broad core of business knowledge.
 - b. Understand the effects of globalization on organizations.
 - c. Integrate cross-functional knowledge to solve concrete business problems.
2. **Communication Competencies:** Become an effective and professional communicator.
 - a. Demonstrate effective written communication.
 - b. Demonstrate effective oral communication.
 - c. Build a well-supported argument and communicate it effectively.
3. **Problem Recognition, Prioritization, and Decision-Making Competencies:** Recognize, evaluate, and prioritize business issues and problems at the operations and functional levels, and suggest appropriate solutions and evaluation strategies.
 - a. Use appropriate data, analysis tools, and methods to organize and analyze business problems.
 - b. Recognize opportunities, problems and risks, and make and defend decisions in structured and unstructured contexts.
4. **Leadership, Team, and Personal Competencies:** Develop personal competencies needed in organizational settings.
 - a. Collaborate with others to solve problems.
 - b. Demonstrate leadership in dynamic environments.
5. **Ethics and Social Responsibility Competencies:** Make ethical and socially responsible choices in business and community settings.
 - a. Obtain knowledge of ethical, legal and social implications of business decisions.
 - b. Recognize and analyze ethical dilemmas in making business decisions.

- c. Be able to explain personal ethical views.
- 6. **Global Acumen Competencies:** Identify, appreciate, and understand the cultural, economic and linguistic components of other cultures while reflecting the values and principles of our unifying global communities.
 - a. Recognize how components of culture inform/influence one's worldviews, values and beliefs.
 - b. Demonstrate an understanding of the complexity of elements important to members of another culture, such as history, values, politics, communication styles, economy, beliefs and practices.
 - c. Demonstrate the ability to interact meaningfully with people from other cultures.

Pamplin Professional Preparation Program (P4)

Students in the Pamplin School of Business are required to engage in a series of professional development activities. This includes vocational assessment, leader development, and professional-experiential activities. Students will complete resume-building sessions, job shadows, mock and informational interviews, service projects, an internship, a portfolio, and attend an etiquette dinner and other related career-development activities.

Global Acumen Requirement

Students in the Pamplin School of Business will participate in coursework and experiential activities to foster the development of their global acumen to enable them to contribute to inter-culturally complex communities and succeed in international and multicultural work environments. The components of the Global Acumen requirements will include (1) BUS 360: Cross Cultural Organizational Behavior and Ethics; (2) a meaningful international experience ("MIE"); and (3) an upper division (300 or 400 level) course with an international focus. An MIE may include a study abroad experience, an international internship, a non-traditional international academic experience, or other opportunities that include a robust international academic component. All MIEs must be approved by the PSOB dean's office.

Honors Pledge

The faculty of the Pamplin School of Business encourage students to acknowledge the ethical component of teaching and learning that is an essential factor in fulfilling the University's mission in the classroom. Students are asked to reflect upon the core value of academic integrity and make this an integral part of their work at the University. Students are also asked to sign an honors pledge and attach it to submitted course work to affirm the integrity of their scholarship to all concerned.

Business Requirements for B.B.A. degrees — 53-59 credit hours

In addition to the University core curriculum requirements, students in the five B.B.A. majors take similar non-business and business courses. The non-business courses taken in the College of Arts and Sciences assist in developing essential skills in speaking, writing, and mathematics.

The business foundation is composed of lower and upper division courses taken by all B.B.A. majors. Lower division courses are sequenced to provide students foundational skills in leadership, software, economics, accounting, finance, marketing, operations and technology management, as well as broader perspectives on the legal and social responsibilities of business. Upper-division foundation courses further develop business skills in decision modeling, cross-cultural organizational behavior and ethics, and innovation.

Degree Requirements

Before declaring a major in business and taking upper-division major courses, students must complete the following:

1. Mathematics requirements for all majors: Statistics (MTH 161) and Finite Mathematics (MTH 141) with a minimum grade of C- in each class.
 - a. Some approved higher level mathematics courses can be substituted for these courses.
 - b. All students must enroll in a mathematics course every semester until the mathematics requirements are completed.
2. Additional mathematics requirement for economics, finance, and operations and technology management majors: Calculus (MTH 121) with a minimum grade of C-.
3. All of the lower-division business foundation courses (BUS 100, BUS 101, ECN 120, ECN 121, BUS 200, BUS 205, BUS 209, BUS 210, BUS 250 & BUS 255) with a minimum combined GPA of 2.0.

4. BUS 100 — Introduction to Leadership Skills must be completed in the student's first two semesters in the program. Students who transfer into the program after their first year in college are also required to complete this course unless they have completed 60 or more college semester credit hours at the time of their admission into the program.

To qualify for the degree, students must complete the following:

1. A minimum of 120 semester credit hours.
2. All coursework with a minimum cumulative G.P.A. of 2.0.
3. All required major coursework with a minimum cumulative G.P.A. of 2.0.
4. All components of the Pamplin Professional Preparation Program (P4).
5. All components of the Global Acumen program.

Degrees and Programs

Bachelor of Business Administration in Accounting

The University offers both a four-year B.B.A. and a five-year B.B.A./M.B.A. option for students considering a degree in accounting. The four-year, 120 credit hour B.B.A. degree is appropriate for students who wish to pursue:

1. Professional certification, such as a certified management accountant (CMA), certified internal auditor (CIA), and certified financial planner (CFP), for which an undergraduate degree is sufficient, or
2. A career in accounting or related field for which no certification is required.

Students who wish to pursue the certified public accountant (CPA) certification, which necessitates 150 semester credit hours among other state-specific requirements, can meet the Oregon requirements by:

1. Completing the five-year B.B.A./M.B.A. degree,
2. Completing the M.S.O.T.M.degree (see Graduate School249).

Students also can obtain the additional credit hours while at the University through summer school or additional coursework during the regular academic year. Since requirements for CPA exams are governed by individual states, students who choose this option should elect courses that meet the requirements of the state where they plan to become licensed.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements45

Two of the three core requirements in the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by ECN 120 and the mathematics requirements within the major.

BUS 250 and BUS 465 are the designated Writing in the Discipline48 courses for the B.B.A. in Accounting.

Business Requirements — 56 credit hours

Non-Business Courses - 12 credit hours

CST 107	Public Speaking for Change	3
ENG 107	College Writing	3
MTH 141	Finite Mathematics	3
MTH 161	Elementary Statistics	3

P4 Professional Development Requirements - 3 credit hours

BUS 202	Professional Development	1

BUS 302	Internship Preparation	1
BUS 397	Professional Development Internship	1

Global Acumen Requirements - 7 credit hours

BUS 360	Cross Cultural Organizational Behavior and Ethics	3
BUS 496	Meaningful International Experience	1
	Any 300-400 level course with international focus	3

Business Foundation Lower Division - 28 credit hours

BUS 100	Introduction to Leadership Skills	3
BUS 101	Software Applications Workshop	1
ECN 120	Principles of Macroeconomics	3
ECN 121	Principles of Microeconomics	3
BUS 200	Principles of Marketing	3
BUS 205	Foundations of Finance	3
BUS 209	Financial Accounting	3
BUS 210	Managerial Accounting	3
BUS 250	Legal and Social Responsibility in Business	3
BUS 255	Introduction to Operations & Technology Management	3

Business Foundation Upper Division - 6 credit hours

BUS 355	Decision Modeling and Analytics	3
BUS 364	Innovation	3

Major Requirements — 30 credit hours**Required Courses — 21 credit hours**

BUS 310	Intermediate Accounting I	3
BUS 311	Intermediate Accounting II	3
BUS 312	Cost Accounting	3
BUS 365	Accounting Information Systems	3
BUS 411/BUS 566	Advanced Accounting	3
BUS 464	Business Taxation	3
BUS 465	Auditing	3

Major Electives - 9 credit hours

Select three courses from the following:

BUS 412	Accounting Ethics	3
BUS 413	Accounting Analytics for Decision	3

	Managers	
BUS 450	Advanced Business Law	3
BUS 467	Income Tax Strategies for Individuals	3
	Any approved accounting elective	3

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120

Bachelor of Business Administration in Economics

The B.B.A. in economics links a broad grasp of business knowledge and skills with a deep understanding of the economic environment of business. The major trains students to have strong technical skills and be well-versed in policy analysis and implementation. Throughout the curriculum, students will learn how to manage and allocate scarce natural, human, and financial resources. Students will also analyze environmental policies and determinants of sustainable economic growth. Students may choose to focus their major with one of the following concentrations: environmental economics and policy, international economics, or public policy and social justice.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

Two of the three core requirements in the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by ECN 120 and the mathematics requirements within the major.

BUS 250 and BUS 425 are the designated Writing in the Discipline⁴⁸ courses for the B.B.A. in Economics.

Business Requirements — 59 credit hours

Non-Business Courses - 15 credit hours

CST 107	Public Speaking for Change	3
ENG 107	College Writing	3
MTH 121	Calculus for Business and Social Science	3
MTH 141	Finite Mathematics	3
MTH 161	Elementary Statistics	3

P4 Professional Development Requirements - 3 credit hours

BUS 202	Professional Development	1
BUS 302	Internship Preparation	1
BUS 397	Professional Development Internship	1

Global Acumen Requirements - 7 credit hours

BUS 360	Cross Cultural Organizational Behavior and Ethics	3
BUS 496	Meaningful International Experience	1
	Any 300-400 level course with international focus	3

Business Foundation Lower Division - 28 credit hours

BUS 100	Introduction to Leadership Skills	3

BUS 101	Software Applications Workshop	1
ECN 120	Principles of Macroeconomics	3
ECN 121	Principles of Microeconomics	3
BUS 200	Principles of Marketing	3
BUS 205	Foundations of Finance	3
BUS 209	Financial Accounting	3
BUS 210	Managerial Accounting	3
BUS 250	Legal and Social Responsibility in Business	3
BUS 255	Introduction to Operations & Technology Management	3

Business Foundation Upper Division - 6 credit hours

BUS 355	Decision Modeling and Analytics	3
BUS 364	Innovation	3

Major Requirements — 24 credit hours**Required Courses — 12 credit hours**

ECN 310	Econometrics	3
ECN 319	Intermediate Microeconomics	3
ECN 320	Intermediate Macroeconomics	3
ECN 425	Applied Economic Research	3

Major Electives (with no concentration) - 12 credit hours

Select four courses from the following. Three of the four must be in Economics.

	Any 300 or 400 level ECN course	3
BUS 312	Cost Accounting	3
BUS 330	Managerial Finance	3
BUS 356	Database Management	3
BUS 408/EGR 408/ENV 408	Innovation for Sustainability	3
BUS 431	Financial Markets and Institutions	3
BUS 433	Real Estate Finance	3
BUS 461	Introduction to R Programming in Business	3

Major Electives (with a concentration)

Select one of the following electives and three concentration electives as listed in the concentrations below.

	Any 300 or 400 level ECN course	3
BUS 312	Cost Accounting	3
BUS 330	Managerial Finance	3

BUS 356	Database Management	3
BUS 408/EGR 408/ENV 408	Innovation for Sustainability	3
BUS 431	Financial Markets and Institutions	3
BUS 433	Real Estate Finance	3
BUS 461	Introduction to R Programming in Business	3

Students may choose one concentration from the following

Environmental Economics and Policy Concentration

This concentration provides a rigorous foundation for majors interested in the role that societies play in affecting environmental outcomes and how to improve those outcomes. The concentration is excellent for those pursuing careers in the growing environmental sector of the economy, including in business, government, nonprofits, and environmental consulting.

Select two courses from the following:

ECN 322	Environmental Economics	3
ECN 325/ENV 325	Metrics for Sustainability	3
ECN 326	Climate Change Economics and Policy: A Global Perspective	3

Select one course from the following:

ECN 322	Environmental Economics	3
ECN 325/ENV 325	Metrics for Sustainability	3
ECN 326	Climate Change Economics and Policy: A Global Perspective	3
ECN 430	Psychology & Economics	3
BUS 408/EGR 408/ENV 408	Innovation for Sustainability	3
ENV 314	Resilience and Policy	3
ENV 349	Environmental Policy	3
HST 357	Environmental History of the Americas and the World	3
PHL 324	Environmental Ethics	3
POL 335	American Public Policy	3

International Economics Concentration

This concentration provides a rigorous foundation for majors interested in the economic institutions and practices associated with international trade, finance, and development. The concentration is particularly appropriate for those pursuing careers in global business, as well as for those seeking international work in government or non-governmental organizations.

Select two courses from the following:

ECN 426	Comparative Economics	3

ECN 429	Development Economics	3
ECN 440	International Economics	3

Select one course from the following:

ECN 326	Climate Change Economics and Policy: A Global Perspective	3
ECN 426	Comparative Economics	3
ECN 429	Development Economics	3
ECN 440	International Economics	3
POL 371	Politics of Central Europe	3
POL 372	Politics of the EU and Contemporary Europe	3
POL 376	Politics of Africa	3
POL 377	Politics of the Middle East	3
POL 457	The Rise of China	3
POL 462	Globalization and its Discontents	3
POL 470	Global Migration and Displacement	3

Public Policy and Social Justice Concentration

For students who choose courses that emphasize public policy, this provides a rigorous foundation for majors interested in positively influencing the laws and regulations that constitute the rules of the game for organizations, cities, states, and the nation. Students are well positioned for excellent analyst positions in government, public policy research firms, public health, and other organizations. For students who choose courses that emphasize social justice, the concentration instills an understanding of how economics in an interdisciplinary context can promote social integrity, sustainability, and universal human rights. It is excellent preparation for careers in the nonprofit, non-governmental, and governmental sectors, particularly careers centering on environmental justice and sustainability, marginalized populations, and labor rights.

Select two courses from the following:

ECN 327	Market Power: Origins, Structures and Consequences	3
ECN 424	Income Inequality	3
ECN 429	Development Economics	3
ECN 431	Health Economics	3

Select one course from the following:

ECN 325/ENV 325	Metrics for Sustainability	3
ECN 326	Climate Change Economics and Policy: A Global Perspective	3
ECN 327	Market Power: Origins, Structures and Consequences	3
ECN 424	Income Inequality	3
ECN 426	Comparative Economics	3
ECN 429	Development Economics	3

ECN 430	Psychology & Economics	3
ECN 431	Health Economics	3
CST 432	Gender and International Development	3
HST 316	US in Depression and War, 1920-1945	3
HST 322	American Protest and Reform	3
PHL 313	Socio-Political Philosophy	3
POL 302	Perspectives on Social Justice	3
POL 335	American Public Policy	3
POL 462	Globalization and its Discontents	3
SOC 333	Social Class and Inequality	3
SW 313	Social Welfare Policy	3

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120

Bachelor of Business Administration in Finance

The finance major prepares students for careers in banking, corporate finance, financial analysis, real estate, and wealth management.

Through the finance major requirements students develop an understanding of a broad range of topics including: global financial markets and institutions, investments and portfolio management, security valuation, and personal finance.

Students select their finance electives based upon their desire to pursue a more qualitative path of financial planning and advising or a quantitative path of financial analysis.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

Two of the three core requirements in the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by ECN 120 and the mathematics requirements within the major.

BUS 250 and BUS 468 are the designated Writing in the Discipline⁴⁸ courses for the B.B.A. in Finance.

Business Requirements — 56 credit hours

Non-Business Courses - 15 credit hours

CST 107	Public Speaking for Change	3
ENG 107	College Writing	3
MTH 121	Calculus for Business and Social Science	3
MTH 141	Finite Mathematics	3
MTH 161	Elementary Statistics	3

P4 Professional Development Requirements - 3 credit hours

BUS 202	Professional Development	1
BUS 302	Internship Preparation	1

BUS 397	Professional Development Internship	1

Global Acumen Requirements - 4 credit hours

BUS 360	Cross Cultural Organizational Behavior and Ethics	3
BUS 496	Meaningful International Experience	1

Business Foundation Lower Division - 28 credit hours

BUS 100	Introduction to Leadership Skills	3
BUS 101	Software Applications Workshop	1
ECN 120	Principles of Macroeconomics	3
ECN 121	Principles of Microeconomics	3
BUS 200	Principles of Marketing	3
BUS 205	Foundations of Finance	3
BUS 209	Financial Accounting	3
BUS 210	Managerial Accounting	3
BUS 250	Legal and Social Responsibility in Business	3
BUS 255	Introduction to Operations & Technology Management	3

Business Foundation Upper Division - 6 credit hours

BUS 355	Decision Modeling and Analytics	3
BUS 364	Innovation	3

Major Requirements — 27 credit hours**Required Courses — 15 credit hours**

BUS 330	Managerial Finance	3
BUS 431	Financial Markets and Institutions	3
BUS 432	Personal Financial Planning	3
BUS 441	International Finance	3
BUS 468	Applied Portfolio Management	3

Major Electives - 12 credit hours

Select four courses from the following:

BUS 310	Intermediate Accounting I	3
BUS 311	Intermediate Accounting II	3
BUS 312	Cost Accounting	3
BUS 365	Accounting Information Systems	3
BUS 371	Consumer Behavior	3
BUS 385	Entrepreneurship Opportunity Assessment	3
BUS 400	Strategic Management	3

BUS 409	Real Estate Law	3
BUS 411/BUS 566	Advanced Accounting	3
BUS 430	Investments	3
BUS 433	Real Estate Finance	3
BUS 434	Derivatives and Risk Management	3
BUS 435	Sports Finance & Sponsorship	3
BUS 437	Advanced Real Estate Finance	3
BUS 450	Advanced Business Law	3
BUS 452	Project Management	3
BUS 453	Supply Chain Analytics	3
BUS 464	Business Taxation	3
BUS 467	Income Tax Strategies for Individuals	3
BUS 472	Personal Selling	3
BUS 484	New Venture Finance and Accounting	3
	One 300 or 400 level ECN course	3

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120

Bachelor of Business Administration in Marketing

The marketing major provides students with insights into customer behavior, frameworks for brand promotion and product development, and marketing analytics tools needed to strengthen competitive advantage and drive sustainable growth. As the marketing discipline is eclectic in nature, drawing from both quantitative and qualitative perspectives, a degree in marketing prepares students for a broad range of careers across professional sales, digital marketing, corporate retail, marketing research, advertising and promotions, and brand management, among many others.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

Two of the three core requirements in the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by ECN 120 and the mathematics requirements within the major.

BUS 250 and BUS 443 are the designated Writing in the Discipline⁴⁸ courses for the B.B.A. in Marketing.

Business Requirements — 53 credit hours

Non-Business Courses - 12 credit hours

CST 107	Public Speaking for Change	3
ENG 107	College Writing	3
MTH 141	Finite Mathematics	3
MTH 161	Elementary Statistics	3

P4 Professional Development Requirements - 3 credit hours

BUS 202	Professional Development	1
BUS 302	Internship Preparation	1
BUS 397	Professional Development Internship	1

Global Acumen Requirements - 4 credit hours

BUS 360	Cross Cultural Organizational Behavior and Ethics	3
BUS 496	Meaningful International Experience	1

Business Foundation Lower Division - 28 credit hours

BUS 100	Introduction to Leadership Skills	3
BUS 101	Software Applications Workshop	1
ECN 120	Principles of Macroeconomics	3
ECN 121	Principles of Microeconomics	3
BUS 200	Principles of Marketing	3
BUS 205	Foundations of Finance	3
BUS 209	Financial Accounting	3
BUS 210	Managerial Accounting	3
BUS 250	Legal and Social Responsibility in Business	3
BUS 255	Introduction to Operations & Technology Management	3

Business Foundation Upper Division - 6 credit hours

BUS 355	Decision Modeling and Analytics	3
BUS 364	Innovation	3

Major Requirements — 27 credit hours**Required Courses — 15 credit hours**

BUS 371	Consumer Behavior	3
BUS 443	International Marketing Management	3
BUS 470	Marketing Research	3
BUS 471	Brand Promotions Management	3
BUS 474	Digital Marketing	3

Major Electives 12 credit hours

Select four courses from the following:

BUS 330	Managerial Finance	3
BUS 361	Foundations of Operations Management	3
BUS 376	Marketing for Sustainability	3
BUS 385	Entrepreneurship Opportunity Assessment	3
BUS 400	Strategic Management	3

BUS 452	Project Management	3
BUS 453	Supply Chain Analytics	3
BUS 472	Personal Selling	3
BUS 473	Sports Marketing	3
BUS 475	Design Thinking	3
BUS 476	Product Design & Development	3
BUS 477	Brand Design	3
CST 352	News Writing and Reporting	3
	One 300 or 400 level ECN course	3

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120

Bachelor of Business Administration in Operations and Technology Management

Operations and technology management (OTM) is a hybrid major involving information technology and operations management. OTM is an innovative, quantitative major designed to equip students with the tools necessary to guide them as they face the growing challenges and constant changes in managing global operations. The OTM major prepares students for careers as supply chain analysts, management consultants, quality engineers, data/information analysts, business systems analysts, etc.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

Two of the three core requirements in the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by ECN 120 and the mathematics requirements within the major.

BUS 250 and BUS 456 are the designated Writing in the Discipline⁴⁸ courses for the B.B.A. in Operation & Technology Management.

Business Requirements — 56 credit hours

Non-Business Courses - 15 credit hours

CST 107	Public Speaking for Change	3
ENG 107	College Writing	3
MTH 121	Calculus for Business and Social Science	3
MTH 141	Finite Mathematics	3
MTH 161	Elementary Statistics	3

P4 Professional Development Requirements - 3 credit hours

BUS 202	Professional Development	1
BUS 302	Internship Preparation	1
BUS 397	Professional Development Internship	1

Global Acumen Requirements - 4 credit hours

BUS 360	Cross Cultural Organizational Behavior	3

	and Ethics	
BUS 496	Meaningful International Experience	1

Business Foundation Lower Division - 28 credit hours

BUS 100	Introduction to Leadership Skills	3
BUS 101	Software Applications Workshop	1
ECN 120	Principles of Macroeconomics	3
ECN 121	Principles of Microeconomics	3
BUS 200	Principles of Marketing	3
BUS 205	Foundations of Finance	3
BUS 209	Financial Accounting	3
BUS 210	Managerial Accounting	3
BUS 250	Legal and Social Responsibility in Business	3
BUS 255	Introduction to Operations & Technology Management	3

Business Foundation Upper Division - 6 credit hours

BUS 355	Decision Modeling and Analytics	3
BUS 364	Innovation	3

Major Requirements — 27 credit hours**Required Courses — 12 credit hours**

BUS 361	Foundations of Operations Management	3
BUS 452	Project Management	3
BUS 453	Supply Chain Analytics	3
BUS 456	Systems Analysis and Design	3

Coding Course - 3 credit hours

Select one course from the following:

BUS 461	Introduction to R Programming in Business	3
	Approved Coding Course	3

Major Electives - 12 credit hours

Select four courses from the following:

BUS 356	Database Management	3
BUS 454	Project Management Processes and Certification	3
BUS 455	Prescriptive Analytics	3
BUS 457	Inventory Management	3
BUS 459	Business Analytics	3
BUS 460	Process Analysis & Quality Management	3

BUS 461	Introduction to R Programming in Business	3
BUS 463/BUS 558	Introduction to Data Science	3
BUS 469	Object Oriented Analysis and Design	3
BUS 485	IT Audit	3
BUS 488	IT Security	3

One of the four electives may be from the following non-OTM courses:

BUS 365	Accounting Information Systems	3
BUS 400	Strategic Management	3
BUS 441	International Finance	3
BUS 470	Marketing Research	3
BUS 474	Digital Marketing	3
BUS 483	Strategic Controls for New Venture Operations	3
ECN 440	International Economics	3

Any additional credit hours required to complete a minimum of 120 credit hours

Total Credit Hours: 120

Additional and Specialized Programs

To be awarded a minor at graduation, students must achieve an average G.P.A. of 2.50 or better in their minor classes. Students desiring to minor in business administration, economics, global business, sustainability, or entrepreneurship & design management should declare their intent with the Pamplin School of Business by the beginning of their junior year. Only one upper-division elective can be cross counted with major courses for a minor requirement. Only one course may be transferred from another institution and must be pre-approved by the Pamplin School of Business.

Minor in Business Administration

The business administration minor is open only to students outside the Pamplin School of Business Administration.

Students should take ECN 120 as one of their social science requirements. Statistics (MTH 161, MTH 361, or EGR 361) is a prerequisite to Business Finance (BUS 205). Only one upper-division business course can be cross-counted in both the minor and another major.

Prerequisites — 9 credit hours

BUS 200	Principles of Marketing	3
BUS 205	Foundations of Finance	3
BUS 209	Financial Accounting	3

Upper-Division Requirements — 15 credit hours

All prerequisites for these courses must be satisfied.

Required Course — 3 credit hours

BUS 360	Cross Cultural Organizational Behavior and Ethics	3

Upper-division business electives - 12 credit hours

Select four courses. May include one upper-division economics elective, and one Entrepreneur Scholars Program course.

Minor in Economics

An economy is a system that produces output and distributes it among members of a society. Economics studies show how that system functions and how it can be improved. For a student majoring in another social science, the study of economics is a way to broaden their analysis of society. For a student majoring in business, the study of economics will expand their understanding of the business environment.

The minor in economics is open to students both inside and outside the Pamplin School of Business. It requires completing two lower-division and five upper-division elective courses, listed below. Only one upper-division economics course can be cross-counted in both the minor and another major.

Prerequisites — 6 credit hours

ECN 120	Principles of Macroeconomics	3
ECN 121	Principles of Microeconomics	3

Upper-Division Requirements — 15 credit hours

All prerequisites for these courses must be satisfied.

Intermediate Economics - 3 credit hours

ECN 319	Intermediate Microeconomics	3
	Or	
ECN 320	Intermediate Macroeconomics	3

Upper-division Electives - 12 credit hours

Three of the four courses must be in in Economics.

BUS 312	Cost Accounting	3
BUS 330	Managerial Finance	3
BUS 356	Database Management	3
BUS 408/EGR 408/ENV 408	Innovation for Sustainability	3
BUS 431	Financial Markets and Institutions	3
BUS 433	Real Estate Finance	3
BUS 461	Introduction to R Programming in Business	3
	Any 300 or 400 level ECN course	3

Minor in Entrepreneurship

The minor in entrepreneurship is for students across campus, including business majors and E-Scholars, who are interested in developing their entrepreneurial mindset and learning how to create and build impactful ventures. The minor emphasizes experiential learning and complements all majors through the development of fundamental business skills and capability to see and realize new possibilities. Impactful ventures may be as new standalone companies or developed within existing organizations.

Requirements for Students who are not Entrepreneur Scholars — 15 credit hours

Students who are not in the Entrepreneur Scholar Program fulfill the minor requirements as follows:

Required Courses — 12 credit hours

BUS 364	Innovation	3
BUS 385	Entrepreneurship Opportunity Assessment	3
BUS 484	New Venture Finance and Accounting	3
BUS 487	Social Entrepreneurship	3

Elective Course - 3 credit hours

Select one elective course from the following:

BUS 452	Project Management	3
BUS 472	Personal Selling	3
BUS 475	Design Thinking	3
BUS 483	Strategic Controls for New Venture Operations	3
CST 333	The Future of Work	3
ENV 400	Integrating Seminar in Environmental Studies	3
EGR 484	Multi-disciplinary Capstone Project II	3
CE 484	Civil Engineering Capstone Project II	3
CS 484	Computer Science Capstone Project II	3
EE 484	Electrical Engineering Capstone Project II	3
ME 484	Mechanical Engineering Capstone Project II	3

Requirements for Entrepreneur Scholars -15 credit hours

Students in the Entrepreneur Scholar Program fulfill the minor requirements as follows:

Required Courses — 12 credit hours

BUS 364	Innovation	3
ENT 480	Creating a World-Class Venture	3
ENT 481	Entrepreneur Apprenticeship	3
ENT 482	Global Entrepreneurship	3

Entrepreneur Scholars Elective Course - 3 credit hours

Select one elective course from the following:

BUS 475	Design Thinking	3
BUS 483	Strategic Controls for New Venture Operations	3
BUS 484	New Venture Finance and Accounting	3
BUS 487	Social Entrepreneurship	3
CE 484	Civil Engineering Capstone Project II	3

CST 333	The Future of Work	3
CS 484	Computer Science Capstone Project II	3
EE 484	Electrical Engineering Capstone Project II	3
EGR 484	Multi-disciplinary Capstone Project II	3
ENV 400	Integrating Seminar in Environmental Studies	3
ME 484	Mechanical Engineering Capstone Project II	3

Minor in Global Business

This program will enhance a student's ability to contribute to inter-culturally complex communities and succeed in international and multicultural work environments. It focuses on international experiences, languages, systems, markets, and economics. The minor is open to students of all majors. Only one upper division course can be cross-counted in both the minor and another major.

Note: only one upper-division elective can be cross counted with major courses for a minor requirement.

Meaningful International Experience (MIE) requirement: A MIE may include a study abroad experience, an international internship, a non-traditional international academic experience, or other opportunities that include a robust international academic component. All MIEs must be approved by the Pamplin School of Business dean's office.

Foreign language proficiency requirement: Students must demonstrate proficiency through the intermediate level of one language (other than their native language). This requirement may be satisfied in the following ways:

- Four years of high school study of one language with grades of C or above or study of one language through the intermediate level at a nationally accredited college or university with grades of C or above;
- Completion of French, German, or Spanish 202 or 12 credits of Chinese; or
- International students whose first language is not English.

Minor Requirements

Prerequisites - 6 credit hours

ECN 120	Principles of Macroeconomics	3
MTH 161	Elementary Statistics	3

Upper-Division Requirements — 16 credit hours

All prerequisites for these courses must be satisfied.

Required Courses - 4 credit hours

BUS 360	Cross Cultural Organizational Behavior and Ethics	3
BUS 496	Meaningful International Experience	1

Electives - 12 credit hours

Select four courses from the following:

BUS 441	International Finance	3
BUS 443	International Marketing Management	3
BUS 453	Supply Chain Analytics	3
ECN 326	Climate Change Economics and Policy: A Global Perspective	3

ECN 426	Comparative Economics	3
ECN 429	Development Economics	3
ECN 440	International Economics	3
	Other international focused upper division business or economics course	3
	Upper division CAS course with an international focus (limited to one course)	3

Minor in Sustainability

The sustainability minor is intended as a complement to core fields of study. It focuses on sustainability as a framework for assessing social, environmental, and economic constraints and opportunities for value creation for organizations. All students minoring in sustainability will be better prepared for careers where sustainability is a major focus (e.g. sustainability managers, chief environmental officers, sustainable development specialists) and in all careers where organizations are facing rising consumer, regulatory, and competitive pressure to improve environmental and social outcomes (e.g. employees in the building, education, energy, food and transportation industries).

The minor in sustainability is open to students of all majors. It requires five upper-division courses, excluding prerequisites. Only one upper-division course can be cross-counted in both the minor and another major.

Minor Requirements

Prerequisites - 6 credit hours

ECN 120	Principles of Macroeconomics	3
	Or	
ECN 121	Principles of Microeconomics	3
ENV 182	Environmental Science	3
	Or	
CE 367	Environmental Engineering	3

Upper-Division Requirements — 15 credit hours

All prerequisites for these courses must be satisfied.

Required Courses - 6 credit hours

BUS 408/EGR 408/ENV 408	Innovation for Sustainability	3
ECN 325/ENV 325	Metrics for Sustainability	3

Electives - 9 credit hours

Select three courses from the following:

BUS 376	Marketing for Sustainability	3
BUS 487	Social Entrepreneurship	3
CE 462	Sustainable Design	3
CST 470	Plants, Nonhuman Animals, Food Systems, and Climate Communication	3
ECN 322	Environmental Economics	3

ECN 326	Climate Change Economics and Policy: A Global Perspective	3
ECN 424	Income Inequality	3
EGR 351	Engineering Economics	3
ENG 363	Environmental Literature	3
ENV 160	Science of a Sustainable Gourmet	3
ENV 314	Resilience and Policy	3
ENV 324	Environmental Ethics	3
ENV 348/POL 348	Geopolitics of Energy and the Environment	3
ENV 349	Environmental Policy	3
ENV 365	Climatology	3
ENV 482/THEP 482	Theology in Ecological Perspective	3
HST 357	Environmental History of the Americas and the World	3
ME 434	Energy Efficiency in Buildings	3
ME 438/EE 424	Renewable Energy	3
SOC 333	Social Class and Inequality	3
SW 456	Environmental Social Work	3
THE 343/THE 443	Ecological Spirituality	3

B.B.A./M.B.A Program for Accounting Majors

Degree Outcomes

Candidates who plan to sit for the CPA exam in Oregon (and most other states) must complete 150 semester credit hours and fulfill specific academic requirements before taking the exam. The Pamplin School of Business has developed a separate five-year B.B.A./M.B.A. program that allows students to fulfill Oregon requirements. (Because specific requirements for CPA licensing vary by state, students choosing CPA licensing in other states should review their state's CPA requirements.) Students will complete both degrees (120 semester credit hours B.B.A. and 30 semester credit hours M.B.A.) in five years.

Eligibility

Students enrolled as undergraduates at the University can complete the five-year B.B.A./M.B.A. program. This abbreviated M.B.A. program is intended only for students who will complete their undergraduate accounting degree including taking BUS 465 and a 400-level accounting elective. The latter are cross-listed as graduate courses, thus making the program equivalent of 36 hours. Eligibility for this five-year program are determined by the following program requirements.

MBA Program Requirements 30-33 credit hours

1. Earn a cumulative G.P.A. of at least 3.0 through fall semester of senior year.
2. Earn at least 500 on the Graduate Management Admissions Test (GMAT). The Graduate Record Exam (GRE) can be accepted in place of the GMAT exam. The minimum GRE score must be equivalent to earning 500 on the GMAT using the comparison tool. An admissions index score is calculated as 200 times the applicant's undergraduate G.P.A. plus the GMAT/GRE test score. An index of 1100 is required for admission.

3. Formally apply to the M.B.A. program through the graduate school by April 15 of the senior year. Students must have been accepted into the M.B.A. program prior to enrolling in any courses at the graduate level. Students should note that admission to the M.B.A. program is based on the entire application, not merely quantitative factors. Application requirements may be subject to change.
4. Enter the M.B.A. program within two semesters after the completion of their B.B.A. requirements at the University of Portland.
5. Students should note that the B.B.A./M.B.A. is composed of two separate programs. Undergraduate financial aid and scholarships do not continue in the M.B.A. program. However, financial aid is available in the graduate program.
6. Complete a B.B.A. at the University of Portland with a major in accounting, earning a B average in the following:

ECN 120	Principles of Macroeconomics	3
ECN 121	Principles of Microeconomics	3
MTH 161	Elementary Statistics	3
BUS 200	Principles of Marketing	3
BUS 209	Financial Accounting	3
BUS 210	Managerial Accounting	3
BUS 255	Introduction to Operations & Technology Management	3
BUS 355	Decision Modeling and Analytics	3

Prerequisite — 3 credit hours

BUS 500	Statistical and Quantitative Analysis	3

BUS 500 can be waived with a waiver exam.

Values Perspective — 6 credit hours

BUS 512	Leadership and Higher Level Management	3

Select one of the following courses:

BUS 508/ENV 501	Innovation for Sustainability	3
BUS 510	Economics and Metrics for Sustainability	3
BUS 511	Cross-Cultural Management and Ethics	3
BUS 513	Social Responsibility in Organizations	3
BUS 515	Social Venture Management	3

Core Courses — 12 credit hours

Students may waive a core course and take an advanced course in the same field with the preapproval of the M.B.A. program director.

BUS 520	Applied Marketing Strategies	3
BUS 530	Corporate Finance	3
	Operations Management elective	3
	International course	3

Capstone Component — 3 credit hours

BUS 580	Strategic Issues and Applications in	3

Management

Elective Courses — 9 credit hours

Select any three graduate business courses beyond the core courses. Suggestions for specializations include tax strategies, management accounting, or auditing.

International Component

All M.B.A. students are required to take an international experience course before they graduate. The courses with an international experience will be identified prior to the beginning of each academic year. The international experience will focus on a course-related project that will require a week-long trip to a foreign destination. Additional travel fees will be collected at the beginning of the course.

SCHOOL OF EDUCATION

John L. Watzke, Ph.D., dean

Bruce N. Weitzel, Ph.D., associate dean

Faculty: Ancil, Beckley, Danielson, Eifler, Flora, Gallegos, Gaudio, Hetherington, Hood, Kalnin, Katz, Morrell, Ralston, Smith, Thompson, Waggoner, Watzke, Weitzel

The School of Education is accredited through the National Council for Accreditation of Teacher Education (NCATE)/Council for the Accreditation of Educator Preparation (CAEP) and the Oregon Teacher Standards and Practices Commission. In addition, School of Education programs are approved by the Oregon Teacher Standards and Practices Commission (TSPC). The school receives further recognition by the University of Portland's accrediting body, the Northwest Commission on Colleges and Universities (NWCCU). The School of Education is a member of the American Association of Colleges for Teacher Education, the Association of Teacher Educators, and the Association of Independent Liberal Arts Colleges of Teacher Education and several other professional organizations.

Federal law requires that all schools of education report required teacher licensure exams and the percentage of graduates from their programs passing those exams. All candidates within our initial teacher preparation programs must achieve passing scores on the TSPC approved tests required for licensure. Any School of Education program which includes field work in schools and/or with minors requires a fingerprint clearance. Courses outside the designated program of study may be taken only with written permission of the associate dean.

Mission

Affirming an ethos that each individual is a learner, that dignity and justice are achieved through education, and that education is a community responsibility, the School of Education continues a Holy Cross mission begun two centuries ago to prepare teachers and leaders to “educate the whole child: the heart, the mind, the hands” (Moreau, 1856). Through programs of professional preparation, service, and community building, the School engages society both in the present, and in the future, through generations of alumni in the pursuit of the common good.

“Education is the art of helping young people to completeness.

Rev. Basil Moreau, Founder of the Congregation of Holy Cross

Guided by the University commitment to be a premier comprehensive Catholic university, the School of Education prepares individuals at all stages of their careers to become exceptional professional educators who teach and lead. Such educators, the School of Education believes, demonstrate an array of knowledge, skills, and professional dispositions. They are life-long learners who are empathetic and respectful of others. They are exceptional communicators and can work effectively with others. Knowledgeable of both theory and practice, they have a broad and deep knowledge about students, the curriculum, and learning, and the concomitant skills to organize classrooms and employ instructional strategies to meet the diverse needs of learners.

Program Objectives

The objective of all programs in the School of Education stem from the mission statement to create teachers and administrators who exhibit the characteristics mentioned in the following shared values and allow these values to guide their practice.

1. Exceptional professional educators are lifelong learners.
2. Exceptional professional educators are empathetic and respectful.
3. Exceptional professional educators communicate and work effectively with others.
4. Exceptional professional educators have a broad knowledge about the diversity of individuals and world around them.
5. Exceptional professional educators have deep knowledge about content.
6. Exceptional professional educators have deep knowledge about how people learn.
7. Exceptional professional educators have deep knowledge and skills necessary to use instruction and the organization of classrooms, schools, and school systems to assist all learners to succeed.
8. Exceptional professional educators fuse theory and practice.

Additionally, all initial licensure programs adhere to the following Interstate Teacher Assessment and Support Consortium (InTASC) standards:

Standard #1: Learner Development – The teacher understands how learners grow and develop, recognizing that patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas, and designs and implements developmentally appropriate and challenging learning experiences.

Standard #2: Learning Differences – The teacher uses understanding of individual differences and diverse cultures and communities to ensure inclusive learning environments that enable each learner to meet high standards.

Standard #3: Learning Environments – The teacher works with others to create environments that support individual and collaborative learning, and that encourage positive social interaction, active engagement in learning, and self motivation.

Standard #4: Content Knowledge – The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and creates learning experiences that make the discipline accessible and meaningful for learners to assure mastery of the content.

Standard #5: Application of Content – The teacher understands how to connect concepts and use differing perspectives to engage learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues.

Standard #6: Assessment – The teacher understands and uses multiple methods of assessment to engage learners in their own growth, to monitor learner progress, and to guide the teacher's and learner's decision making.

Standard #7: Planning for Instruction – The teacher plans instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context.

Standard #8: Instructional Strategies – The teacher understands and uses a variety of instructional strategies to encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways.

Standard #9: Professional Learning and Ethical Practice – The teacher engages in ongoing professional learning and uses evidence to continually evaluate his/her practice, particularly the effects of his/her choices and actions on others (learners, families, other professionals, and the community), and adapts practice to meet the needs of each learner.

Standard #10: Leadership and Collaboration – The teacher seeks appropriate leadership roles and opportunities to take responsibility for student learning, to collaborate with learners, families, colleagues, other school professionals, and community members to ensure learner growth, and to advance the profession.

Programs of Study

The School of Education and the Graduate School offer the following degrees and programs:

Bachelor of Arts in Elementary Education

Bachelor of Arts in Elementary Education pathway leading to MAT licensure

Bachelor of Science in Secondary Education

Bachelor of Science in Secondary Education pathway leading to MAT licensure

Master of Arts in Teaching (see Graduate School249)

Master of Education (see Graduate School249)

Master of Arts (see Graduate School249)

Post Baccalaureate Certificate (see Graduate School249)

Post Master's Certificate (see Graduate School249)

Doctor of Education (see Graduate School249)

Additional and Specialized Programs:

Minor in Education

Reading Intervention Endorsement

Special Education Generalist Endorsement

English for Speakers of Other Languages Endorsement

Neuroeducation (see Graduate School249)

Preliminary Administrator License (see Graduate School249)

Professional Administrator License (see Graduate School249)

Higher Education and Student Affairs (see Graduate School249)

School of Education Undergraduate Requirements

The undergraduate teacher education programs have two strategic points during the four-year program, namely: (1) admission to the School of Education, and (2) advancement to the professional year.

Admission to the School of Education

First-year Candidates: Admission of first-year candidates is based upon a derived matrix score which includes a combination of predictors of probable success: SAT scores, academic records (including grade point average), essay sample, and a personal recommendation.

Transfer Candidates: Admission of transfer candidates is determined on the evaluation of college transcripts (high school transcripts if fewer than 26 semester credit hours or 39 quarter credit hours of college work have been completed) and essays.

Advancement to the Professional Year

The professional year includes a two-semester student teaching experience. In the fall semester, candidates complete a part-time clinical placement and concurrent professional education coursework. In the spring semester, candidates complete a full-time, 15-week clinical placement and continue completing concurrent professional education coursework.

Ordinarily, elementary and secondary undergraduate majors must take a minimum of 12 semester credit hours in education courses at the University of Portland in order to enter the professional year. In addition, secondary candidates must take and successfully complete 75 percent of the courses required in their secondary endorsement area at the University of Portland. The permission of the associate dean must be obtained for an exception.

Candidates may not advance to the professional year until all courses required in the endorsement area and all other required content courses have been completed. Should it be necessary, a clear plan for completing these requirements by the summer before the beginning of the professional year must be filed before application to the University Teacher Education Committee (UTEC) is made.

Only those candidates who satisfy the requirements for scholarship and personal qualifications suitable for teaching will advance to the professional year. Candidates must successfully meet the requirements of all course work while demonstrating academic integrity. In addition, ethical, competent behavior is required during all field work and practica.

The process of advancement to the professional year entails review by the School of Education associate dean and approval by UTEC. Ordinarily, placements occur only in districts where professional year candidates do not have personal relationships with employees of the district.

Requirements for advancement to the professional year:

1. Passage of all TSPC approved tests required for licensure.
2. Minimum of 2.50 cumulative G.P.A. for all academic work at the University of Portland.
3. A minimum cumulative 2.70 G.P.A. in all education classes.
4. A grade of C or better in all education courses; candidates who receive a grade of C- or lower in any education course must repeat the course.
5. Minimum 2.70 G.P.A. in the teaching specialty (secondary/endorsement) area.
6. Passage of ENG 107 or equivalent course with a grade of B- or better. Note: ENG 107 is waived if the candidate's SAT Verbal score is 630 or above (for candidates who took the SAT prior to March 2016) **or** if the candidate's SAT Evidence Based Reading and Writing score is 640 or above (for candidates who took the SAT in March 2016 or later).

7. Recommendations from two University of Portland School of Education faculty members for elementary education candidates. For secondary education candidates, an additional recommendation from a University of Portland School of Education faculty member in the endorsement area is required.
8. Successful completion of a minimum of 144 hours of field work.
9. Completion of all paperwork and approvals necessary for student teaching by June 1 prior to fall semester for site placement in the professional year.
10. Demonstration of positive disposition.

Multiple Endorsements A candidate may earn more than one subject area endorsement when the prescribed program of study has been completed, related tests are passed, and a practicum including an edTPA portfolio are completed. Permission of the associate dean is required to enroll in the related practicum.

Degrees and Majors

Bachelor of Arts in Elementary Education

B.A. Learning Outcomes

The bachelor of arts in education degree leads to recommendation for an Oregon P-12 "multiple subjects" (elementary) preliminary license. Additional endorsements may also be completed with additional credit hours of study. General degree outcomes are listed below. Candidates for the degree will be able to meet the following Oregon Teacher Standards and Practices Commission standards:

- Plan instruction that supports student progress in learning in multiple subject areas and is appropriate for the early childhood, elementary, or middle developmental levels.
- Establish a classroom climate conducive to learning.
- Engage students in planned learning activities.
- Evaluate, act upon, and report student progress in learning.
- Exhibit professional behaviors, ethics, and values.

Degree Requirements

To qualify for the degree and recommendation for Oregon licensure, the following requirements must be met:

1. Passage of all TSPEC approved tests required for licensure by March 1 of the sophomore year. Exceptions are subject to approval by the associate dean;
2. Completion of a minimum of 120 semester credit hours of study;
3. Successful completion of all coursework with a minimum cumulative GPA of 2.50;
4. A minimum cumulative GPA of 2.70 in all education classes;
5. A grade of C or better in all education courses; candidates who receive a grade of C- or lower in any education course must repeat the course;
6. Passage of ENG 107 or equivalent course with a grade of B- or better. (Note: ENG 107 is waived if SAT Verbal Score is 630 or above);
7. Successful completion of student teaching to include an edTPA portfolio;
8. Recommendation for licensure from the associate dean;
9. Subject to approval by the dean, candidates who are not able to complete student teaching and student teaching seminar and/or other licensure requirements may be recommended for graduation without licensure by substituting upper division educational coursework which meets University requirements for a degree;
10. During the professional year, candidates may not enroll in more than 15 semester credit hours each semester. Exceptions are subject to approval by the associate dean.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

The core requirement for the Commitment to Diversity, Inclusion & the Common Good Habit is satisfied by HST 210 or HST 211 within the major.

The core requirement for the Global and Historical Consciousness Habit is satisfied by the global history course within the major.

Two of the three core requirements for the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by the mathematics and science requirements within the major.

ED 320 and ED 400 are the designated Writing in the Discipline⁴⁸ courses for the B.A. in Elementary Education.

Common Education Requirements — 24-25 credit hours

ENG 107	College Writing	3
ENV 110	Earth Systems Science	3
HST 210	Who is America: The Early U.S.	3
	Or	
HST 211	Who is America: The Modern U.S.	3
MTH 105	Mathematics for Elementary Teachers I	3
MTH 106	Mathematics for Elementary Teachers II	3
PHY 109	Powerful Ideas in Physical Science	3

Select one global history course from the following:

HST 221	Modern Western Civilization	3
HST 251	Modern East Asia	3
HST 254	Colonial Latin America	3
HST 256	Modern Latin America	3

Other HST courses designated HTS 25x or HST 291 may fulfill this global history requirement. Please confirm eligible course offerings with a program counselor.

Select one mathematics course from the following:

MTH 160	Quantitative Reasoning	3
MTH 161	Elementary Statistics	3
MTH 201	Calculus I	4

Major Requirements — 54 credit hours

ED 150	Introduction to Education	3
ED 250	Theories of Child Development in Educational Contexts	3
ED 320	Sociocultural Foundations of Education	3
ED 330	Inclusive Policies and Practices for Diverse Learners	3
ED 340	Pre-Adolescent Health and Wellness for	3

	Educators	
ED 400	Pre-Adolescent Curriculum and Instruction	3
ED 411	Assessment Practices for Teaching and Learning	3
ED 414	Children's and Adolescent Literature and Library	3
ED 424	Technology in Education	3
ED 426	Pre-Adolescent Classroom Relationships and Management	3
ED 442	Reading and Language Arts Methods	3
ED 445	Mathematics and Science Methods	3
ED 447	Fostering Creativity in the Classroom	3
ED 470	Multiple Subjects (Elementary) Student Teaching	3
ED 472	Multiple Subjects (Elementary) Student Teaching	3
ED 476	Multiple Subjects (Elementary) Student Teaching: Advanced	3
ED 481	Language, Literacy & Culture	3
ED 487	Multiple Subjects (Elementary) Seminar for Student Teachers	3

General Electives — 13-14 credit hours

A minimum of 13-14 additional general elective credit hours are required to reach the minimum 120 credit hours required for the Bachelor of Arts in Elementary Education degree.

Total Credit Hours: 120

Bachelor of Arts in Elementary Education - Pathway Leading to MAT Licensure

B.A. Learning Outcomes

The bachelor of arts in education- pathway leading to MAT degree outcomes are listed below. Although the bachelor of arts in education- pathway leading to MAT degree does not complete all requirements for licensure, it provides a 3-year pathway which flows directly into final licensure preparation in the MAT program. Additional endorsements may also be completed with additional credit hours of study. Candidates for the degree will be able to meet the following Oregon Teacher Standards and Practices Commission standards:

- Plan instruction that supports student progress in learning in multiple subject areas and is appropriate for the early childhood, elementary, or middle developmental levels.
- Establish a classroom climate conducive to learning.
- Engage students in planned learning activities.
- Evaluate, act upon, and report student progress in learning.
- Exhibit professional behaviors, ethics, and values.

Degree Requirements

To qualify for the degree the following requirements must be met:

1. Completion of a minimum of 120 semester credit hours of study;
2. Successful completion of all coursework with a minimum cumulative GPA of 2.50;
3. A minimum cumulative GPA of 2.70 in all education classes;
4. A grade of C or better in all education courses; candidates who receive a grade of C- or lower in any education course must repeat the course;
5. Passage of ENG 107 or equivalent course with a grade of B- or better. (Note: ENG 107 is waived if SAT Verbal Score is 630 or above).

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

The core requirement for the Commitment to Diversity, Inclusion & the Common Good Habit is satisfied by HST 210 or HST 211 within the major.

The core requirement for the Global and Historical Consciousness Habit is satisfied by the global history course within the major.

Two of the three core requirements for the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by the mathematics and science requirements within the major.

ED 320 and ED 400 are the designated Writing in the Discipline⁴⁸ courses for the B.A. in Elementary Education.

Major Requirements — 36 credit hours

ED 150	Introduction to Education	3
ED 250	Theories of Child Development in Educational Contexts	3
ED 320	Sociocultural Foundations of Education	3
ED 330	Inclusive Policies and Practices for Diverse Learners	3
ED 340	Pre-Adolescent Health and Wellness for Educators	3
ED 414	Children's and Adolescent Literature and Library	3
ED 424	Technology in Education	3
ED 426	Pre-Adolescent Classroom Relationships and Management	3
ED 442	Reading and Language Arts Methods	3
ED 445	Mathematics and Science Methods	3
ED 447	Fostering Creativity in the Classroom	3
ED 481	Language, Literacy & Culture	3

Common Education Requirements — 24-25 credit hours

ENG 107	College Writing	3
ENV 110	Earth Systems Science	3
HST 210	Who is America: The Early U.S.	3
	Or	
HST 211	Who is America: The Modern U.S.	3
MTH 105	Mathematics for Elementary Teachers I	3
MTH 106	Mathematics for Elementary Teachers II	3
PHY 109	Powerful Ideas in Physical Science	3

Select one global history course from the following:

HST 221	Modern Western Civilization	3
HST 251	Modern East Asia	3
HST 254	Colonial Latin America	3
HST 256	Modern Latin America	3

Other HST courses designated HTS 25x or HST 291 may fulfill this global history requirement. Please confirm eligible course offerings with a program counselor.

Select one mathematics course from the following:

MTH 160	Quantitative Reasoning	3
MTH 161	Elementary Statistics	3
MTH 201	Calculus I	4

General Electives — 31-32 credit hours

A minimum of 31-32 additional general elective credit hours are required to reach the minimum 120 credit hours required for the Bachelor of Arts in Elementary Education degree.

Total Credit Hours: 120

Bachelor of Science in Secondary Education**B.S.S.E. Learning Outcomes**

The bachelor of science in secondary education leads to recommendation for an Oregon P-12 "single subject" (secondary) preliminary license. Subject area endorsements are available in biology, chemistry, physics, French, German, Spanish, language arts, advanced mathematics, social studies, and music. General degree outcomes are listed below. Candidates for the degree will be able to meet the following Oregon Teacher Standards and Practices Commission standards:

- Plan instruction that supports student progress in learning in content areas and is appropriate for the middle school and high school developmental levels.
- Establish a classroom climate conducive to learning.
- Engage students in planned learning activities.
- Evaluate, act upon, and report student progress in learning.
- Exhibit professional behaviors, ethics, and values.

Degree Requirements

1. Passage of all TSPC approved tests required for licensure by December 31 of the junior year. Exceptions are subject to approval by the associate dean;

2. Completion of a minimum of 120 semester credit hours of study;
3. Successful completion of all coursework with a minimum cumulative GPA of 2.50;
4. A minimum cumulative GPA of 2.70 in all education classes;
5. A grade of C or better in all education courses; candidates who receive a grade of C- or lower in any education course must repeat the course;
6. Passage of ENG 107 or equivalent course with a grade of B- or better. (Note: ENG 107 is waived if SAT Verbal Score is 630 or above);
7. Completion of a teaching endorsement (major) in at least one of the secondary endorsement areas with a cumulative G.P.A. of at least 2.70 in that area. In the event that a candidate receives more than two grades of C in the endorsement area classes, the candidate may be required to meet with the associate dean. Ordinarily, a minimum of 75 percent of the credit hours in an endorsement area of the secondary specialty area must be taken at the University of Portland for a secondary undergraduate major to student teach in that area. The permission of the associate dean must be obtained for an exception;
8. Successful completion of student teaching to include an edTPA portfolio;
9. Recommendation for licensure from the associate dean;
10. Subject to approval by the dean, candidates who are not able to complete student teaching and student teaching seminar and/or other licensure requirements may be recommended for graduation without licensure by substituting upper division educational coursework which meets University requirements for a degree;
11. During the professional year, candidates may not enroll in more than 15 semester credit hours each semester. Exceptions are subject to approval by the associate dean.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

One of the three core requirements for the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by the mathematics requirements within the major.

Some Endorsements may include courses that fulfill Core Curriculum Requirements.

ED 320 and ED 450 are the designated Writing in the Discipline⁴⁸ courses for the B.S. in Secondary Education.

Common Education Requirements — 6-7 credit hours

ENG 107	College Writing	3

Select one mathematics course from the following:

MTH 160	Quantitative Reasoning	3
MTH 161	Elementary Statistics	3
MTH 201	Calculus I	4

Major Requirements — 42 credit hours

ED 150	Introduction to Education	3
ED 251	Theories of Adolescent Development and Learning in Educational Contexts	3
ED 320	Sociocultural Foundations of Education	3
ED 330	Inclusive Policies and Practices for Diverse Learners	3
ED 411	Assessment Practices for Teaching and	3

	Learning	
ED 424	Technology in Education	3
ED 427	Adolescent Classroom Relationships and Management	3
ED 450	Models of Teaching and Literacy Development	3
ED 452	Content Methods: Language Arts	3
	Or	
ED 453	Content Methods: Math	3
	Or	
ED 454	Content Methods: World Language	3
	Or	
ED 456	Content Methods: Social Studies	3
	Or	
ED 457	Content Methods: Science	3
ED 471	Single-Subject (Secondary) Student Teaching	3
ED 473	Single-Subject (Secondary) Student Teaching	3
ED 475	Single-Subject (Secondary) Student Teaching: Advanced	3
ED 481	Language, Literacy & Culture	3
ED 486	Single-Subject (Secondary) Seminar for Student Teachers	3

Endorsements

At least one endorsement (27-54 credit hours) is required to be completed in combination with the Secondary Education major to fulfill the BSSE degree. Detailed individual endorsement requirements are listed below.

Biology Endorsement Requirements — 37 credit hours

Coursework and passage of the required Oregon Teacher Standards and Practices Commission (TSPC) test lead to the Oregon licensure Biology endorsement. Students must complete endorsement coursework with a minimum GPA of 2.7. Students pursuing the Biology endorsement will major in Secondary Education and minor in Biology.

BIO 207	Introduction to Molecular and Cellular Biology	3
BIO 208	Introduction to Evolution and Ecology	3
BIO 277	Introduction to Molecular and Cellular Biology Lab	1
BIO 278	Introduction to Evolution and Ecology Lab	1
BIO 330	Genetics	3
BIO 333	Genetics Lab	1
BIO 340	Ecology	3

BIO 343	Ecology Lab	1
BIO 453	Evolution	3
CHM 207	General Chemistry I	3
CHM 208	General Chemistry II	3
CHM 277	General Chemistry I Lab	1
CHM 278	General Chemistry II Lab	1
	Choose two of the following courses	
ENV 110	Earth Systems Science	3
	Or	
ENV 111	Natural Hazards in the Pacific Northwest	3
PHY 109	Powerful Ideas in Physical Science	3
PHY 201	College Physics I	3
PHY 202	College Physics II	3
PHY 271	College Physics Lab I	1
PHY 272	College Physics Lab II	1
	Choose one of the following courses with corresponding lab	
BIO 305	Human Anatomy and Physiology 1	3
	And	
BIO 365	Human Anatomy & Physiology Lab 1	1
BIO 306	Human Anatomy and Physiology 2	3
	And	
BIO 366	Human Anatomy & Physiology Lab 2	1
BIO 341	The Nature of Plants	3
	And	
BIO 371	Field Botany	1
BIO 354	Cell and Molecular Biology	3
	And	
BIO 372	Cell and Molecular Biology Lab	1

Chemistry Endorsement Requirements — 39-40 credit hours

Coursework and passage of the required Oregon Teacher Standards and Practices Commission (TSPC) test lead to the Oregon licensure Chemistry endorsement. Students must complete endorsement coursework with a minimum GPA of 2.7. Students pursuing the Chemistry endorsement will major in Secondary Education and minor in Chemistry.

CHM 207	General Chemistry I	3
CHM 208	General Chemistry II	3
CHM 277	General Chemistry I Lab	1
CHM 278	General Chemistry II Lab	1

CHM 325	Organic Chemistry I	3
CHM 326	Organic Chemistry II	3
CHM 331	Physical Chemistry I	3
CHM 372	Physical Chemistry I Laboratory	1
CHM 375	Organic Chemistry I Lab	1
CHM 376	Organic Chemistry II Lab	1
MTH 201	Calculus I	4
MTH 202	Calculus II	4
PHY 204	General Physics I	3
PHY 205	General Physics II	3
PHY 274	General Physics Lab I	1
PHY 275	General Physics Lab II	1
	Choose one of the following courses or one course with corresponding lab	
CHM 314	Analytical Chemistry	3
	And	
CHM 379	Analytical Chemistry Laboratory	1
CHM 332	Physical Chemistry II	3
	And	
CHM 373	Physical Chemistry II Laboratory	1
CHM 386/ENV 386	Environmental Chemistry	3
CHM 444	Inorganic Chemistry II	3
	And	
CHM 473	Inorganic Chemistry II Laboratory	1
CHM 453	Biochemistry I	3
	And	
CHM 471	Biochemistry I Laboratory	1
CHM 468	Advanced Organic Chemistry	3

Physics Endorsement Requirements — 45 credit hours

Coursework and passage of the required Oregon Teacher Standards and Practices Commission (TSPC) test lead to the Oregon licensure Physics endorsement. Students must complete endorsement coursework with a minimum GPA of 2.7. Students pursuing the Physics endorsement will major in Secondary Education and minor in Physics.

CHM 207	General Chemistry I	3
CHM 208	General Chemistry II	3
CHM 277	General Chemistry I Lab	1
CHM 278	General Chemistry II Lab	1

MTH 201	Calculus I	4
MTH 202	Calculus II	4
MTH 301	Vector Calculus	4
PHY 204	General Physics I	3
PHY 205	General Physics II	3
PHY 274	General Physics Lab I	1
PHY 275	General Physics Lab II	1
PHY 306	Modern Physics	3
PHY 356/MTH 356	Mathematical Methods for Science and Engineering	3
PHY 376	Modern Physics Lab	1
	Choose one of the following labs	
PHY 471	Advanced Laboratory	2
PHY 472	Advanced Optics Laboratory	2
	Electives	
	Any combination of 300- and or 400-level PHY courses totaling 6 credit hours	6

Spanish Endorsement Requirements — 27 credit hours

Coursework and passage of the required Oregon Teacher Standards and Practices Commission (TSPC) test lead to the Oregon licensure Spanish endorsement. Students must complete endorsement coursework with a minimum GPA of 2.7. Students pursuing the Spanish endorsement will double major in Secondary Education and Spanish. It is highly recommended that students pursuing language endorsements meet with an academic advisor each semester to discuss suggested courses for TSPC test preparation.

SPN 301	Advanced Spanish Composition, Conversation, and Culture I	3
SPN 302	Advanced Spanish Composition, Conversation, and Culture II	3
SPN 341	Twenty-First Century Spanish Literature	3
	Choose one of the following courses	
SPN 450	Advanced Latin American Culture and Civilization	3
SPN 451	Survey of Latin American Literature and Civilization	3
	Electives	
	Any combination of 300- and or 400-level SPN courses totaling 15 credit hours	15

Note: SPN 360 and SPN 441 are highly recommended electives.

At least two of the above courses (6 credit hours) must be completed while studying abroad.

French Endorsement Requirements — 27 credit hours

Coursework and passage of the required Oregon Teacher Standards and Practices Commission (TSPC) test lead to the Oregon licensure French endorsement. Students must complete endorsement coursework with a minimum GPA of 2.7. Students

pursuing the French endorsement will double major in Secondary Education and French. It is highly recommended that students pursuing language endorsements meet with an academic advisor each semester to discuss suggested courses for TSPC test preparation.

FRN 301	Advanced French Conversation and Culture	3
FRN 302	Advanced French Conversation, Composition and Culture	3
	Electives	
	Any combination of 400-level FRN courses totaling 21 credit hours	21

Note: FRN 403, FRN 404, FRN 406, FRN 411, FRN 417, FRN 418, FRN 419, and FRN 420 are highly recommended electives.

At least two of the above courses (6 credit hours) must be completed while studying abroad.

German Endorsement Requirements — 27 credit hours

Coursework and passage of the required Oregon Teacher Standards and Practices Commission (TSPC) test lead to the Oregon licensure German endorsement. Students must complete endorsement coursework with a minimum GPA of 2.7. Students pursuing the German endorsement will double major in Secondary Education and German. It is highly recommended that students pursuing language endorsements meet with an academic advisor each semester to discuss suggested courses for TSPC test preparation.

GRM 301	Advanced German Conversation, Composition, and Culture	3
GRM 302	Advanced German Conversation, Composition, and Culture	3
	Electives	
	Any combination of 400-level GRM courses totaling 6 credit hours excluding GRM 497 and GRM 499	6
	Any combination of 300- and or 400-level GRM courses totaling 15 credit hours	15

Note: At least two of the above courses (6 credit hours) must be completed while studying abroad.

Language Arts Endorsement Requirements — 30 credit hours

Coursework and passage of the required Oregon Teacher Standards and Practices Commission (TSPC) test lead to the Oregon licensure English endorsement. Students must complete endorsement coursework with a minimum GPA of 2.7. Students pursuing the Language Arts endorsement will double major in Secondary Education and English.

ED 410	Linguistics	3
ENG 225	Introduction to Literary Studies	3
ENG 311	Writing Workshop: Nonfiction	3
ENG 326	Shakespeare: Page, Performance, and Perceptions	3
ENG 499	Senior Capstone Seminar	3
	Choose three of the following courses	
ENG 301	British Literature I (Medieval through 18th Century)	3

ENG 302	British Literature II (19th Century to Present)	3
ENG 303	American Literature I (Beginnings to 1900)	3
ENG 304	American Literature II (1900 to Present)	3
	Choose two of the following courses	
ENG 401	Seminar in British Literature I	3
ENG 402	Seminar in American Literature I	3
ENG 403	Seminar in Topic I	3
ENG 404	Seminar in Non-Western Literature I	3
	Choose one of the following courses	
ENG 337	Modern/Contemporary Arabic Literature	3
ENG 338	European Literature in Translation	3
ENG 370	Studies in Women Writers	3
ENG 372	Multi-Ethnic American Literature	3
ENG 373	African-American Literature	3
ENG 404	Seminar in Non-Western Literature I	3

Math Endorsement Requirements — 34 credit hours

Coursework and passage of the required Oregon Teacher Standards and Practices Commission (TSPC) test lead to the Oregon licensure Math endorsement. Students must complete endorsement coursework with a minimum GPA of 2.7. Students pursuing the Math endorsement will double major in Secondary Education and Math.

CS 203	Introduction to Computer Science	3
CS 273	Computer Science Laboratory	1
MTH 201	Calculus I	4
MTH 202	Calculus II	4
MTH 301	Vector Calculus	4
MTH 311	Discrete Structures	3
MTH 341	Introduction to Linear Algebra	3
MTH 401	Real Analysis I	3
MTH 441	Group Theory	3
	Or	
MTH 442	Rings and Fields	3
	Electives	
	Any combination of 300- and or 400-level MTH courses totaling 9 credit hours	9

Social Studies Endorsement Requirements — 52-54 credit hours

Coursework and passage of the required Oregon Teacher Standards and Practices Commission (TSPC) test lead to the Oregon licensure Social Studies endorsement. Students must complete endorsement coursework with a minimum GPA of 2.7. Students will choose from one of two Social Studies tracks: History or Political Science.

History Track – 52 credit hours

ECN 120	Principles of Macroeconomics	3
ENV 182	Environmental Science	3
HST 210	Who is America: The Early U.S.	3
	Or	
HST 211	Who is America: The Modern U.S.	3
HST 220	The Search for Justice in the Western Tradition	3
HST 251	Modern East Asia	3
	Or	
HST 254	Colonial Latin America	3
	Or	
HST 256	Modern Latin America	3
HST 300	Introduction to Historical Methods	3
HST 470	The Practice of History	3
HST 471	Senior Seminar	3
POL 200	Introduction to United States Politics	3
POL 205	World Politics	3
SOC 101	Introduction to Sociology	3
	Choose one of the following courses	
HST 351	Modern Japan	3
HST 352	The United States and the Pacific Rim	3
HST 354	History of Modern Cuba	3
HST 355	History of Mexico	3
HST 356	Latin American History Through Popular Culture	3
HST 357	Environmental History of the Americas and the World	3
HST 358	Disease and Medicine in World History	3
HST 359	The Modern City	3
HST 364	World War I	3
HST 365	History of the Second World War	3
	Choose one of the following courses	
HST 311	The American Revolution	3
HST 312	Plains Indians History	3
HST 313	United States: Civil War Era	3
HST 314	American Expansion	3

HST 316	US in Depression and War, 1920-1945	3
HST 318	Cold War America	3
HST 321	Modern American Women's History	3
HST 322	American Protest and Reform	3
HST 323	African American History	3
HST 325	American Military History	3
	Choose one of the following courses	
HST 330	Ancient Mediterranean World	3
HST 332	Saints and Sinners in the Middle Ages	3
HST 333	Medieval Europe	3
HST 334	The Age of the Crusades	3
HST 335	Europe in the Age of Religious Wars	3
HST 336	Europe in the Age of Enlightenment	3
HST 342	Europe in the Age of Nationalism	3
HST 343	Europe in the Age of Dictatorship	3
HST 346	Modern Germany	3
HST 347	Modern France	3
HST 372	Modern Britain, 1800 - Present	3
HST 375	History of Modern Ireland	3
	Choose two of the following courses	
HST 420	Seminar in American History	3
HST 430	Seminar in European History	3
HST 450	Seminar in Non-Western History	3
	Electives	
	Any combination of 300- and or 400-level HST courses totaling 6 credit hours	6

Political Science Track – 51 credit hours

SOC 101	Introduction to Sociology	3
ECN 120	Principles of Macroeconomics	3
ENV 182	Environmental Science	3
POL 200	Introduction to United States Politics	3
POL 205	World Politics	3
POL 203	Introduction to Political Theory	3
	Choose three of the following courses	
HST 210	Who is America: The Early U.S.	3
HST 211	Who is America: The Modern U.S.	3

HST 220	The Search for Justice in the Western Tradition	3
HST 221	Modern Western Civilization	3
	Choose one of the following courses	
POL 305	Ancient and Medieval Political Thought	3
POL 306	Modern Political Thought	3
POL 307	Contemporary Political Theory	3
	Choose one of the following courses	
POL 321	Politics of Hip Hop	3
POL 335	American Public Policy	3
POL 344	Constitutional Law I: Federalism and Separation of Powers	3
POL 345	Constitutional Law II: Civil Liberties and Rights	3
POL 346	Constitutional Criminal Procedure	3
POL 348/ENV 348	Geopolitics of Energy and the Environment	3
POL 349	Environmental Policy	3
	Choose one of the following courses	
POL 350	American Foreign Policy	3
POL 351	International Law in Theory and Practice	3
POL 352	Survival	3
POL 353	Strategies of War and Peace	3
POL 354	American Way of War	3
POL 371	Politics of Central Europe	3
	Choose one of the following courses	
POL 372	Politics of the EU and Contemporary Europe	3
POL 376	Politics of Africa	3
POL 377	Politics of the Middle East	3
POL 391	Special Topics	Variable
POL 392	Special Topics	Variable
	Electives	
	Any combination of 400-level POL courses totaling 6 credit hours excluding POL 497	6
	Any combination of 300 and or 400-level POL courses totaling 6 credit hours	6

General Electives

0-9 additional credit hours may be required to reach the minimum 120 credit hours required for the Bachelor of Science in Secondary Education degree.

Total Credit Hours: 120

Bachelor of Science in Secondary Education - Pathway Leading to MAT Licensure**B.S.S.E. Learning Outcomes**

The bachelor of science in secondary education- pathway leading to MAT degree outcomes are listed below. Although the bachelor of arts in education- pathway leading to MAT degree does not complete all requirements for licensure, it provides a 3-year pathway which flows directly into final licensure preparation in the MAT program. Subject area endorsements are available in biology, chemistry, physics, French, German, Spanish, language arts, advanced mathematics, social studies, and music. Candidates for the degree will be able to meet the following Oregon Teacher Standards and Practices Commission standards:

- Plan instruction that supports student progress in learning in content areas and is appropriate for the middle school and high school developmental levels.
- Establish a classroom climate conducive to learning.
- Engage students in planned learning activities.
- Evaluate, act upon, and report student progress in learning.
- Exhibit professional behaviors, ethics, and values.

Degree Requirements

1. Completion of a minimum of 120 semester hours of study;
2. Successful completion of all coursework with a minimum cumulative GPA of 2.50;
3. A minimum cumulative GPA of 2.70 in all education classes;
4. A grade of C or better in all education courses; candidates who receive a grade of C- or lower in any education course must repeat the course;
5. Passage of ENG 107 or equivalent course with a grade of B- or better. (Note: ENG 107 is waived if SAT Verbal Score is 630 or above);
6. Completion of a teaching endorsement (major) in at least one of the secondary endorsement areas with a cumulative G.P.A. of at least 2.70 in that area. In the event that a candidate receives more than two grades of C in the endorsement area classes, the candidate may be required to meet with the associate dean. Ordinarily, a minimum of 75 percent of the credits in an endorsement area of the secondary specialty area must be taken at the University of Portland for a secondary undergraduate major to student teach in that area. The permission of the associate dean must be obtained for an exception.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

One of the three core requirements for the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by the mathematics requirements within the major.

Some Endorsements may include courses that fulfill Core Curriculum Requirements.

ED 320 and ED 450 are the designated Writing in the Discipline⁴⁸ courses for the B.S. in Secondary Education.

Common Education Requirements — 6-7 credit hours

ENG 107	College Writing	3

Select one mathematics course from the following:

MTH 160	Quantitative Reasoning	3
MTH 161	Elementary Statistics	3
MTH 201	Calculus I	4

Major Requirements - 24 credit hours

ED 150	Introduction to Education	3
ED 251	Theories of Adolescent Development and Learning in Educational Contexts	3
ED 320	Sociocultural Foundations of Education	3
ED 330	Inclusive Policies and Practices for Diverse Learners	3
ED 424	Technology in Education	3
ED 427	Adolescent Classroom Relationships and Management	3
ED 450	Models of Teaching and Literacy Development	3
ED 481	Language, Literacy & Culture	3

Endorsements

At least one endorsement (27-54 credit hours) is required to be completed in combination with the Secondary Education major to fulfill the BSSE Degree. Detailed individual endorsement requirements are listed below.

Biology Endorsement Requirements — 37 credit hours

Coursework and passage of the required Oregon Teacher Standards and Practices Commission (TSPC) test lead to the Oregon licensure Biology endorsement. Students must complete endorsement coursework with a minimum GPA of 2.7. Students pursuing the Biology endorsement will major in Secondary Education and minor in Biology.

BIO 207	Introduction to Molecular and Cellular Biology	3
BIO 208	Introduction to Evolution and Ecology	3
BIO 277	Introduction to Molecular and Cellular Biology Lab	1
BIO 278	Introduction to Evolution and Ecology Lab	1
BIO 330	Genetics	3
BIO 333	Genetics Lab	1
BIO 340	Ecology	3
BIO 343	Ecology Lab	1
BIO 453	Evolution	3
CHM 207	General Chemistry I	3
CHM 208	General Chemistry II	3
CHM 277	General Chemistry I Lab	1

CHM 278	General Chemistry II Lab	1
	Choose two of the following courses	
ENV 110	Earth Systems Science	3
	Or	
ENV 111	Natural Hazards in the Pacific Northwest	3
PHY 109	Powerful Ideas in Physical Science	3
PHY 201	College Physics I	3
PHY 202	College Physics II	3
PHY 271	College Physics Lab I	1
PHY 272	College Physics Lab II	1
	Choose one of the following courses with corresponding lab	
BIO 305	Human Anatomy and Physiology 1	3
	And	
BIO 365	Human Anatomy & Physiology Lab 1	1
BIO 306	Human Anatomy and Physiology 2	3
	And	
BIO 366	Human Anatomy & Physiology Lab 2	1
BIO 341	The Nature of Plants	3
	And	
BIO 371	Field Botany	1
BIO 354	Cell and Molecular Biology	3
	And	
BIO 372	Cell and Molecular Biology Lab	1

Chemistry Endorsement Requirements — 39-40 credit hours

Coursework and passage of the required Oregon Teacher Standards and Practices Commission (TSPC) test lead to the Oregon licensure Chemistry endorsement. Students must complete endorsement coursework with a minimum GPA of 2.7. Students pursuing the Chemistry endorsement will major in Secondary Education and minor in Chemistry.

CHM 207	General Chemistry I	3
CHM 208	General Chemistry II	3
CHM 277	General Chemistry I Lab	1
CHM 278	General Chemistry II Lab	1
CHM 325	Organic Chemistry I	3
CHM 326	Organic Chemistry II	3
CHM 331	Physical Chemistry I	3
CHM 372	Physical Chemistry I Laboratory	1
CHM 375	Organic Chemistry I Lab	1

CHM 376	Organic Chemistry II Lab	1
MTH 201	Calculus I	4
MTH 202	Calculus II	4
PHY 204	General Physics I	3
PHY 205	General Physics II	3
PHY 274	General Physics Lab I	1
PHY 275	General Physics Lab II	1
	Choose one of the following courses or one course with corresponding lab	
CHM 314	Analytical Chemistry	3
	And	
CHM 379	Analytical Chemistry Laboratory	1
CHM 332	Physical Chemistry II	3
	And	
CHM 373	Physical Chemistry II Laboratory	1
CHM 386/ENV 386	Environmental Chemistry	3
CHM 444	Inorganic Chemistry II	3
	And	
CHM 473	Inorganic Chemistry II Laboratory	1
CHM 453	Biochemistry I	3
	And	
CHM 471	Biochemistry I Laboratory	1
CHM 468	Advanced Organic Chemistry	3

Physics Endorsement Requirements — 45 credit hours

Coursework and passage of the required Oregon Teacher Standards and Practices Commission (TSPC) test lead to the Oregon licensure Physics endorsement. Students must complete endorsement coursework with a minimum GPA of 2.7. Students pursuing the Physics endorsement will major in Secondary Education and minor in Physics.

CHM 207	General Chemistry I	3
CHM 208	General Chemistry II	3
CHM 277	General Chemistry I Lab	1
CHM 278	General Chemistry II Lab	1
MTH 201	Calculus I	4
MTH 202	Calculus II	4
MTH 301	Vector Calculus	4
PHY 204	General Physics I	3
PHY 205	General Physics II	3

PHY 274	General Physics Lab I	1
PHY 275	General Physics Lab II	1
PHY 306	Modern Physics	3
PHY 356/MTH 356	Mathematical Methods for Science and Engineering	3
PHY 376	Modern Physics Lab	1
	Choose one of the following labs	
PHY 471	Advanced Laboratory	2
PHY 472	Advanced Optics Laboratory	2
	Electives	
	Any combination of 300- and or 400-level PHY courses totaling 6 credit hours	6

Spanish Endorsement Requirements — 27 credit hours

Coursework and passage of the required Oregon Teacher Standards and Practices Commission (TSPC) test lead to the Oregon licensure Spanish endorsement. Students must complete endorsement coursework with a minimum GPA of 2.7. Students pursuing the Spanish endorsement will double major in Secondary Education and Spanish. It is highly recommended that students pursuing language endorsements meet with an academic advisor each semester to discuss suggested courses for TSPC test preparation.

SPN 301	Advanced Spanish Composition, Conversation, and Culture I	3
SPN 302	Advanced Spanish Composition, Conversation, and Culture II	3
SPN 341	Twenty-First Century Spanish Literature	3
	Choose one of the following courses	
SPN 450	Advanced Latin American Culture and Civilization	3
SPN 451	Survey of Latin American Literature and Civilization	3
	Electives	
	Any combination of 300- and or 400-level SPN courses totaling 15 credit hours	15

Note: SPN 360 and SPN 441 are highly recommended electives.

At least two of the above courses (6 semester credit hours) must be completed while studying abroad.

French Endorsement Requirements — 27 credit hours

Coursework and passage of the required Oregon Teacher Standards and Practices Commission (TSPC) test lead to the Oregon licensure French endorsement. Students must complete endorsement coursework with a minimum GPA of 2.7. Students pursuing the French endorsement will double major in Secondary Education and French. It is highly recommended that students pursuing language endorsements meet with an academic advisor each semester to discuss suggested courses for TSPC test preparation.

FRN 301	Advanced French Conversation and Culture	3
FRN 302	Advanced French Conversation,	3

	Composition and Culture	
	Electives	
	Any combination of 400-level FRN courses totaling 21 credit hours	21

Note: FRN 403, FRN 404, FRN 406, FRN 411, FRN 417, FRN 418, FRN 419, and FRN 420 are highly recommended electives.

At least two of the above courses (6 semester credit hours) must be completed while studying abroad.

German Endorsement Requirements — 27 credit hours

Coursework and passage of the required Oregon Teacher Standards and Practices Commission (TSPC) test lead to the Oregon licensure German endorsement. Students must complete endorsement coursework with a minimum GPA of 2.7. Students pursuing the German endorsement will double major in Secondary Education and German. It is highly recommended that students pursuing language endorsements meet with an academic advisor each semester to discuss suggested courses for TSPC test preparation.

GRM 301	Advanced German Conversation, Composition, and Culture	3
GRM 302	Advanced German Conversation, Composition, and Culture	3
	Electives	
	Any combination of 400-level GRM courses totaling 6 credit hours excluding GRM 497 and GRM 499	6
	Any combination of 300- and or 400-level GRM courses totaling 15 credit hours	15

Note: At least two of the above courses (6 semester credit hours) must be completed while studying abroad.

Language Arts Endorsement Requirements — 30 credit hours

Coursework and passage of the required Oregon Teacher Standards and Practices Commission (TSPC) test lead to the Oregon licensure English endorsement. Students must complete endorsement coursework with a minimum GPA of 2.7. Students pursuing the Language Arts endorsement will double major in Secondary Education and English.

ED 410	Linguistics	3
ENG 225	Introduction to Literary Studies	3
ENG 311	Writing Workshop: Nonfiction	3
ENG 326	Shakespeare: Page, Performance, and Perceptions	3
ENG 499	Senior Capstone Seminar	3
	Choose three of the following courses	
ENG 301	British Literature I (Medieval through 18th Century)	3
ENG 302	British Literature II (19th Century to Present)	3
ENG 303	American Literature I (Beginnings to 1900)	3
ENG 304	American Literature II (1900 to Present)	3
	Choose two of the following courses	

ENG 401	Seminar in British Literature I	3
ENG 402	Seminar in American Literature I	3
ENG 403	Seminar in Topic I	3
ENG 404	Seminar in Non-Western Literature I	3
	Choose one of the following courses	
ENG 337	Modern/Contemporary Arabic Literature	3
ENG 338	European Literature in Translation	3
ENG 370	Studies in Women Writers	3
ENG 372	Multi-Ethnic American Literature	3
ENG 373	African-American Literature	3
ENG 404	Seminar in Non-Western Literature I	3

Social Studies Endorsement Requirements — 52-54 credit hours

Coursework and passage of the required Oregon Teacher Standards and Practices Commission (TSPC) test lead to the Oregon licensure Social Studies endorsement. Students must complete endorsement coursework with a minimum GPA of 2.7. Students will choose from one of two Social Studies tracks: History or Political Science.

History Track – 52 credit hours

ECN 120	Principles of Macroeconomics	3
ENV 182	Environmental Science	3
HST 210	Who is America: The Early U.S.	3
	Or	
HST 211	Who is America: The Modern U.S.	3
HST 220	The Search for Justice in the Western Tradition	3
HST 251	Modern East Asia	3
	Or	
HST 254	Colonial Latin America	3
	Or	
HST 256	Modern Latin America	3
HST 300	Introduction to Historical Methods	3
HST 470	The Practice of History	3
HST 471	Senior Seminar	3
POL 200	Introduction to United States Politics	3
POL 205	World Politics	3
SOC 101	Introduction to Sociology	3
	Choose one of the following courses	
HST 351	Modern Japan	3
HST 352	The United States and the Pacific Rim	3

HST 354	History of Modern Cuba	3
HST 355	History of Mexico	3
HST 356	Latin American History Through Popular Culture	3
HST 357	Environmental History of the Americas and the World	3
HST 358	Disease and Medicine in World History	3
HST 359	The Modern City	3
HST 364	World War I	3
HST 365	History of the Second World War	3
	Choose one of the following courses	
HST 311	The American Revolution	3
HST 312	Plains Indians History	3
HST 313	United States: Civil War Era	3
HST 314	American Expansion	3
HST 316	US in Depression and War, 1920-1945	3
HST 318	Cold War America	3
HST 321	Modern American Women's History	3
HST 322	American Protest and Reform	3
HST 323	African American History	3
HST 325	American Military History	3
	Choose one of the following courses	
HST 330	Ancient Mediterranean World	3
HST 332	Saints and Sinners in the Middle Ages	3
HST 333	Medieval Europe	3
HST 334	The Age of the Crusades	3
HST 335	Europe in the Age of Religious Wars	3
HST 336	Europe in the Age of Enlightenment	3
HST 342	Europe in the Age of Nationalism	3
HST 343	Europe in the Age of Dictatorship	3
HST 346	Modern Germany	3
HST 347	Modern France	3
HST 372	Modern Britain, 1800 - Present	3
HST 375	History of Modern Ireland	3
	Choose two of the following courses	
HST 420	Seminar in American History	3
HST 430	Seminar in European History	3

HST 450	Seminar in Non-Western History	3
	Electives	
	Any combination of 300- and or 400-level HST courses totaling 6 credit hours	6

Political Science Track – 51 credit hours

SOC 101	Introduction to Sociology	3
ECN 120	Principles of Macroeconomics	3
ENV 182	Environmental Science	3
POL 200	Introduction to United States Politics	3
POL 205	World Politics	3
POL 203	Introduction to Political Theory	3
	Choose three of the following courses	
HST 210	Who is America: The Early U.S.	3
HST 211	Who is America: The Modern U.S.	3
HST 220	The Search for Justice in the Western Tradition	3
HST 221	Modern Western Civilization	3
	Choose one of the following courses	
POL 305	Ancient and Medieval Political Thought	3
POL 306	Modern Political Thought	3
POL 307	Contemporary Political Theory	3
	Choose one of the following courses	
POL 321	Politics of Hip Hop	3
POL 335	American Public Policy	3
POL 344	Constitutional Law I: Federalism and Separation of Powers	3
POL 345	Constitutional Law II: Civil Liberties and Rights	3
POL 346	Constitutional Criminal Procedure	3
POL 348/ENV 348	Geopolitics of Energy and the Environment	3
POL 349	Environmental Policy	3
	Choose one of the following courses	
POL 350	American Foreign Policy	3
POL 351	International Law in Theory and Practice	3
POL 352	Survival	3
POL 353	Strategies of War and Peace	3
POL 354	American Way of War	3

POL 371	Politics of Central Europe	3
	Choose one of the following courses	
POL 372	Politics of the EU and Contemporary Europe	3
POL 376	Politics of Africa	3
POL 377	Politics of the Middle East	3
POL 391	Special Topics	Variable
POL 392	Special Topics	Variable
	Electives	
	Any combination of 400-level POL courses totaling 6 credit hours excluding POL 497	6
	Any combination of 300 and or 400-level POL courses totaling 6 credit hours	6

Math Endorsement Requirements — 34 credit hours

Coursework and passage of the required Oregon Teacher Standards and Practices Commission (TSPC) test lead to the Oregon licensure Math endorsement. Students must complete endorsement coursework with a minimum GPA of 2.7. Students pursuing the Math endorsement will double major in Secondary Education and Math.

CS 203	Introduction to Computer Science	3
CS 273	Computer Science Laboratory	1
MTH 201	Calculus I	4
MTH 202	Calculus II	4
MTH 301	Vector Calculus	4
MTH 311	Discrete Structures	3
MTH 341	Introduction to Linear Algebra	3
MTH 401	Real Analysis I	3
MTH 441	Group Theory	3
	Or	
MTH 442	Rings and Fields	3
	Electives	
	Any combination of 300- and or 400-level MTH courses totaling 9 credit hours	9

General Electives — 0-27 credit hours

0-27 additional general elective hours are required to reach the minimum 120 credits required for the Bachelor of Science in Secondary Education degree.

Total Credit Hours: 120

Education Minor

The education minor is for candidates interested in general educational studies and those preparing for advanced study in education related areas such as law, social work, and politics. Three semester credit hours of lower-division coursework and 12 semester credit hours of upper-division coursework are required.

Education Minor Requirements — 15 credit hours

ED 250	Theories of Child Development in Educational Contexts	3
	Or	
ED 251	Theories of Adolescent Development and Learning in Educational Contexts	3
ED 320	Sociocultural Foundations of Education	3
ED 330	Inclusive Policies and Practices for Diverse Learners	3
	Upper-division education electives	6

Field work is required in some courses. Candidates interested in this minor should declare intent with the School of Education.

Education Minor (Preparation for 5th Year M.A.T.) Requirements — 15 credit hours

This minor is for candidates who wish to major in a content area while preparing to enter an augmented Master of Arts in Teaching program (M.A.T.) after graduation. Three semester credit hours of lower-division coursework and 12 semester credit hours of upper-division coursework are required.

ED 250	Theories of Child Development in Educational Contexts	3
	Or	
ED 251	Theories of Adolescent Development and Learning in Educational Contexts	3
ED 320	Sociocultural Foundations of Education	3
ED 330	Inclusive Policies and Practices for Diverse Learners	3
ED 426	Pre-Adolescent Classroom Relationships and Management	3
	Or	
ED 427	Adolescent Classroom Relationships and Management	3
ED 442	Reading and Language Arts Methods	3
	Or	
ED 450	Models of Teaching and Literacy Development	3

Field work is required in some courses. Candidates interested in this minor must declare intent with the School of Education. Candidate must comply with specific G.P.A. and testing requirements in order to qualify for the M.A.T. program.

Endorsements in Reading Intervention, Special Education Generalist, and English for Speakers of Other Languages

Candidates may add any of the following special endorsements to initial licenses: reading intervention, special education generalist, or English for speakers of other languages. Details on the requirements for these endorsements may be obtained by reviewing the information below and/or contacting the School of Education.

Reading Intervention Endorsement

The reading intervention endorsement advances teachers' abilities to provide reading instruction and to diagnose and remediate reading problems in diverse instructional settings. Coursework and passage of the required Oregon Teacher Standards and Practices Commission (TSPC) test lead to the Oregon licensure reading intervention endorsement. Candidates may be required to demonstrate prior experiences before enrolling in specific reading intervention endorsement courses. All add-on endorsement courses are taught at the graduate level. Undergraduates may enroll in these course at the 400 level to complete their undergraduate course of study.

Reading Intervention Endorsement Learning Outcomes

Reading intervention endorsement program coursework and clinical experiences have been designed for candidates to demonstrate competencies listed in the TSPC standards for the Oregon licensure reading intervention endorsement (OAR 584-420-0440).

1. **Foundational Knowledge and Professional Dispositions:** Understand the theoretical and evidence-based foundations of reading and writing processes and instruction.
2. **Instructional Strategies and Curriculum Materials:** Use instructional approaches, materials, and an integrated, comprehensive, balanced curriculum to support student learning in reading and writing. Create and engage their students in literacy practices that develop awareness, understanding, respect and a valuing of differences in our society.
3. **Assessment, Diagnosis and Evaluation:** Use a variety of assessment tools and practices to plan and evaluate effective reading and writing instruction.
4. **Creating a Literate Environment:** Create a literate environment that fosters reading and writing by integrating foundational knowledge, use of instructional practices, approaches and methods, curriculum materials, and the appropriate use of assessments.
5. **Professional Development:** View professional learning and leadership as a career-long effort and responsibility.
6. **Leadership: Guidance and Supervision of Paraprofessionals:** Demonstrate positive dispositions, individual and collaborative learning, the ability to design and evaluate professional learning experiences, the importance of advocacy, and a need for knowledge about adult learning and school leadership. Learning is often collaborative and occurs in the workplace through grade-level meetings, academic team meetings, workshops, study groups, and so forth.

Oregon reading intervention endorsement standards model the International Literacy Association (ILA) standards.

Reading Intervention Endorsement Requirements — 18 credit hours

ED 464	Reading Practicum P-12	3
ED 480	Elements of Reading P-12	3
ED 481	Language, Literacy & Culture	3
ED 482	Content Area Literacy	3
ED 483	Diagnosis and Instruction for Literacy Achievement P-12	3
ED 484	Administration and Evaluation of Reading Programs	3

Note: Elementary Education majors complete ED 414 and ED 442 in lieu of ED 482. Secondary Education majors may complete ED 414 and ED 442 in lieu of ED 482.

Special Education Generalist Endorsement

The special education generalist endorsement advances teachers' abilities to assess special needs children and develop and design appropriate instruction support for these children. Coursework and passage of the required Oregon Teacher Standards and Practices Commission (TSPC) test lead to the Oregon licensure special education generalist endorsement. Candidates may be required to demonstrate prior experiences before enrolling in specific special education generalist endorsement courses. All add-on endorsement courses are taught at the graduate level. Undergraduates may enroll in these course at the 400 level to complete their undergraduate course of study.

Special Education Generalist Endorsement Learning Outcomes

Special education generalist endorsement program coursework and clinical experiences have been designed for candidates to demonstrate competencies listed in the TSPC standards for the Oregon licensure special education generalist endorsement (OAR 584-420-0460).

1. **Learner Development:** Understand how exceptionalities may interact with development and learning and use this knowledge to provide meaningful and challenging learning experiences for individuals with exceptionalities.
2. **Learning Environments:** Ability to create safe, inclusive, culturally responsive learning environments so that individuals with exceptionalities become active and effective learners and develop emotional well-being, positive social interactions, and self-determination
3. **Curricular Content Knowledge:** Ability to use knowledge of general and specialized curricula to individualize learning for individuals with exceptionalities.
4. **Assessment:** Ability to use multiple methods of assessment and data-sources in making educational decisions.
5. **Instructional Planning and Strategies:** Ability to select, adapt, and use a repertoire of evidence-based instructional strategies to advance learning of individuals with exceptionalities.
6. **Professional Learning and Ethical Practice:** Ability to use foundational knowledge of the field and the professional Ethical Principles and Practice Standards to inform special education practice, to engage in lifelong learning, and to advance the profession.
7. **Collaboration:** Ability to collaborate with families, other educators, related service providers, individuals with exceptionalities, and personnel from community agencies in culturally responsive ways to address the needs of individuals with exceptionalities across a range of learning experiences.

Oregon special education generalist endorsement standards model the Council for Exceptional Children (CEC) standards.

Special Education Generalist Endorsement Requirements — 18 credit hours

ED 403	Language Acquisition and Development: Assessment, Intervention and Strategies	3
ED 404	School, Parent, and Community Relations	3
ED 405	Behavior Support: Consultative and Collaborative	3
ED 406	Academic Assessment: Curriculum and Instruction for Diverse Learners	3
ED 408	Functional Assessment: Curriculum and Instruction for Diverse Learners	3
ED 468	Special Education Practicum P-12	3

English for Speakers of Other Languages Endorsement

The English for speakers of other languages (ESOL) endorsement advances teachers' abilities to provide assessment, instruction, and evaluation of English language learners. Coursework and passage of the required Oregon Teacher Standards and Practices Commission (TSPC) test lead to the Oregon licensure ESOL endorsement. All add-on endorsement courses are taught at the graduate level. Undergraduates may enroll in these course at the 400 level to complete their undergraduate course of study.

English for Speakers of Other Languages Learner Outcomes

ESOL endorsement coursework and clinical experiences have been designed for candidates to demonstrate competencies listed in the TSPC standards for the Oregon licensure ESOL endorsement (OAR 584-420-0360).

1. **Language:** Know, understand, and use the major concepts, theories, and research related to the nature and acquisition of language to construct learning environments that support English speakers of other languages (ESOL) and bilingual students' language and literacy development and content area achievement.
2. **Culture:** Know, understand, and use the major concepts, principles, theories, and research related to the nature and role of culture and cultural groups to construct learning environments that support ESOL and bilingual students' cultural identities, language and literacy development, and content area achievement.
3. **Planning, Implementing, and Managing Instruction:** Know, understand, and use standards-based practices and strategies related to planning, implementing, and managing ESOL and content instruction, including classroom organization, teaching strategies for developing and integrating language skills, and choosing and adapting classroom resource.
4. **Assessment:** Understand issues of assessment and use standards-based assessment measures with ESOL and bilingual students.
5. **Professionalism:** Demonstrate knowledge of the history of ESOL teaching. Candidates keep current with new instructional techniques, research results, advances in the ESOL field, and public policy issues. Candidates use such information to reflect upon and improve their instructional practices. Candidates provide support and advocate for ESOL and bilingual students and their families and work collaboratively to improve the learning environment.
6. **Technology:** Use information technology to enhance learning and to enhance personal and professional productivity.

Oregon ESOL endorsement standards model the Teaching English to Speakers of Other Languages (TESOL) International Association standards.

English for Speakers of Other Languages Endorsement Requirements — 18 credit hours

ED 404	School, Parent, and Community Relations	3
ED 407	Dual Language Education	3
ED 409	Methods and Materials for Teaching ESOL	3
ED 410	Linguistics	3
ED 469	ESOL Practicum P-12	3
ED 481	Language, Literacy & Culture	3

DONALD P. SHILEY SCHOOL OF ENGINEERING

Brian Fabien, Ph.D., dean

Shazib Vijlee, Ph.D. associate dean for academic affairs

Faculty: Abbasi, Bieryla, Cenek, Doughty, Egbo, Fabien, Farina, Hainley, Hoffbeck, A. Inan, Ivler, Kennedy, Kuhn, Lulay, Mansouri, Meyer, Moss, Murty, Nuxoll, Oberoi, Orara, Patel, Poor, Schulz, Takallou, Tribelhorn, VanDeGrift, Vegdahl, Vijlee, Wolfand

Introduction

Engineering and computer science are dynamic and creative professions dedicated to achieving the technological aims of society. They are professions in which knowledge of the natural sciences and mathematics is applied with judgment to develop ways to utilize, economically and with concern for the environment and society, the materials and forces of nature for the benefit of humankind. Engineers and computer scientists enjoy a unique professional satisfaction. They can usually point to tangible evidence of their efforts. For example, every artificial heart valve, skyscraper, solar panel, bridge, wind turbine, television, computer, robot, video game, smart phone, search engine, airplane, and automobile is a lasting testimonial to the engineers and computer scientists responsible for the design.

Mission

The Donald P. Shiley School of Engineering continues its progress within the framework of the University of Portland mission.

The Donald P. Shiley School of Engineering is committed to providing the best possible education to its students, thus enabling the students to become competent practicing engineers and computer scientists. The programs also provide a base for both graduate study and lifelong learning in support of evolving career objectives. These objectives include being informed, effective, and responsible participants in the engineering profession and society. The Shiley School endeavors to develop qualities that are essential for the practice of engineering and computer science and beneficial service to the community. These qualities include a knowledge of engineering and computer science principles, the ability to apply those principles to solve problems, and the development of professional, personal, and social values.

The Shiley School provides a personalized and caring learning environment for its students, enhanced by high quality faculty, staff, facilities, and equipment. The environment includes exceptional instruction; frequent opportunities for relevant laboratory experience; practice of communication and teamwork skills; the challenge of undertaking realistic projects; and the personal attention, guidance, and example of faculty and administrators. This environment is also enhanced by students who have an aptitude and motivation for engineering and computer science study, as well as general intellectual curiosity.

Program Educational Objectives

The Shiley School of Engineering prepares graduates who will:

1. Be successful as practicing professionals in diverse career paths or in graduate school.
2. Distinguish themselves in breadth of perspective and the ability to solve complex problems.
3. Be effective communicators and team members, with many assuming leadership roles.
4. Be active in their profession and participate in continuing education opportunities to foster personal and organizational growth.
5. Be able to advance, engage and respond to issues of justice, ethics, diversity, equity, and inclusion in professional and civic settings.

Professional Societies and Student Clubs

Student chapters of the following professional societies are currently active on campus:

American Society of Civil Engineers (ASCE)

American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)

American Society of Mechanical Engineers (ASME)

American Society for Metals (ASM — International)

Association for Computing Machinery (ACM)

Biomedical Engineering Society (BMES)

Computer Engineering Club (CODE)

Global Engineering Initiative (GEI)

Institute of Electrical and Electronics Engineers (IEEE)

Society of Automotive Engineers Collegiate Design Series (SAE CDS)

Society of Hispanic Professional Engineers (SHPE)

Students for the Exploration & Development of Space (SEDS)

Society of Women Engineers (SWE)

All students are encouraged to join organizations of interest to them. The University of Portland Oregon Gamma Chapter of Tau Beta Pi, the national engineering honor society, offers admission to the top upper-division engineering and computer science students.

Community College Transfers

Transfers from community colleges are accepted regardless of whether they have completed a course of study. Students from engineering transfer programs can generally complete the B.S. degree requirements with no loss of time. Students from non-engineering programs will likely need more time to complete prerequisites. Students who are interested in transferring to the University are encouraged to seek individual counseling both at their community college and at the University. Discussions at the University can be used to develop both a suitable academic plan and a financial plan.

Prospective transfer students are strongly urged to contact an academic program counselor in the Shiley School at least one semester before they plan to transfer to identify potential deficiencies that may cause sequencing problems and delay graduation. In some cases, students can save a full semester by taking key courses in the summer preceding planned entry.

Degrees and Programs

The Shiley School of Engineering offers four-year bachelor of science degrees in civil engineering (B.S.C.E.), electrical engineering (B.S.E.E.), and mechanical engineering (B.S.M.E.) that are accredited by the Engineering Accreditation Commission of ABET. The Shiley School offers a four-year bachelor of science degree in computer science (B.S.C.S.) that is accredited by the Computing Accreditation Commission of ABET. A post-baccalaureate professional bachelor of computer science (B.C.S.) degree is offered to students with a previous bachelor's degree. The B.C.S. is accredited by the Northwest Commission on Colleges and Universities (NWCCU.) but is not currently accredited by ABET.

A master of engineering degree and a master of biomedical engineering degree are offered by the Shiley School. Details of these degree programs are given in the Graduate School307 section of this bulletin.

Undergraduate Curriculum

The first year is common to all engineering curricula; the computer science program has a first year that is mostly common to the other engineering programs. During the first year the student lays the foundation for later engineering studies. This foundation consists of courses in mathematics, science, introduction to engineering, computing and applications, and core curriculum. During the second year the study of mathematics and science continues, and courses in basic engineering and computer science theory and application are introduced. In the junior and senior years the curriculum consists primarily of courses in the student's specialization. There is a progression from analysis-oriented courses to design and application-oriented courses. In all programs, a capstone project is required in the senior year. Some variation in the order in which courses are taken is permissible so long as the prerequisites are satisfied.

Throughout the four years, the student takes liberal arts courses to broaden their education and to improve communication skills.

Students are also required to take professional electives that are relevant to their future careers. Professional elective credit may not be awarded for AP and IB examinations, or ROTC credit.

Engineering students are encouraged to take the Fundamentals of Engineering Examination prior to graduation. This nationwide examination is a step toward registration as a Professional Engineer (P.E.) Our students' passing rates have been well above the national average in this examination.

Civil Engineering

Matthew Kuhn. Ph.D., chair

The civil engineering program at the University of Portland provides for an excellent engineering education complemented by a strong liberal arts foundation. The faculty has established a set of program educational objectives that are listed below.

Civil Engineering, B.S.C.E.

Civil engineers design, construct, and operate the world's infrastructure - from highways and bridges to water systems and prominent skyscrapers.

The program begins with mathematics and science topics in the first year and engineering science courses in the sophomore year. Junior and senior year courses are devoted to analysis and design topics. CE electives and professional electives are available in various specialties for students to pursue their particular fields of interest. Throughout the four-year curriculum, emphasis is placed on teamwork and cooperation, good oral and written communication skills, and hands-on laboratory and project work to graduate well-rounded engineers from the program.

The civil engineering program leads to a bachelor of science in civil engineering (B.S.C.E.) degree accredited by the Engineering Accreditation Commission of ABET.

Program Educational Objectives:

The civil engineering program prepares graduates who will:

1. Be successful as practicing professionals in diverse career paths or in graduate school.
2. Distinguish themselves in breadth of perspective and the ability to solve complex problems.
3. Be effective communicators and team members, with many assuming leadership roles.
4. Be active in their profession and participate in continuing education opportunities to foster personal and organizational growth.
5. Be able to advance, engage, and respond to issues of justice, ethics, diversity, equity, and inclusion in professional and civic settings.

Student Outcomes:

The Shiley School of Engineering prepares engineering majors with the following outcomes so that as graduates, they can attain the Program Educational Objectives listed above.

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Curriculum:

The Civil Engineering curriculum is 132-133 credit hours distributed into three categories:

1. University Core Curriculum Requirements – 40 credit hours
2. General Engineering Requirements – 42 credit hours (includes 6 credit hours shared with the Core Curriculum Requirements)
3. Civil Engineering Requirements – 56-57 credit hours

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

Two of the three core requirements in the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by the mathematics and science requirements within the major.

CE 376 and CE 371 are the designated Writing in the Discipline⁴⁸ courses for Civil Engineering.

General Engineering Requirements — 42 credit hours

CHM 207	General Chemistry I	3
CHM 277	General Chemistry I Lab	1
EGR 110	Introduction to Engineering	2
EGR 111	Engineering Computing with Applications	2
EGR 300	Introduction to Capstone Project	0
EGR 352	Engineering Economics	2
EGR 361	Analysis of Engineering Data	3
MTH 201	Calculus I	4
MTH 202	Calculus II	4
MTH 301	Vector Calculus	4
MTH 321	Ordinary Differential Equations	3
PHY 204	General Physics I	3
PHY 274	General Physics Lab I	1
PHY 205	General Physics II	3
PHY 275	General Physics Lab II	1
	Professional Electives	6

EGR 110: For transfer students into the Shiley School who have declared a major and have not had an Introduction to Engineering course, the dean may approve the substitution of an engineering or computer science elective depending on the student's educational background.

Professional Electives: The professional electives may be a combination of courses (each 3-credit hours or more unless approved by the program chair) offered by the University at the 200-level or higher (or equivalent transfer credit). Professional electives include: courses offered by the Shiley School, courses that comprise a University minor, and courses included in an approved cluster. Professional elective credit may not be awarded for AP and IB examinations, or ROTC credit. Must be taken for a grade A - F

Civil Engineering Requirements — 56-57 credit hours**Required Courses — 41-42 credit hours**

CE 200	Civil Engineering Seminar	1
CE 201	Introduction to Civil Engineering Design Graphics	2
CE 223	Surveying	2
CE 224	Surveying Laboratory	1
CE 302	Construction Materials	3
CE 315	Transportation Engineering	3
CE 321	Geotechnical Engineering	3
CE 351	Structural Analysis I	3
CE 353	Reinforced Concrete Design	3
CE 362	Water Resources Engineering	3
CE 367	Environmental Engineering	3
CE 371	Geotechnical Laboratory	1
CE 373	Water Resources Engineering Laboratory	1
CE 376	Environmental Engineering Laboratory	1
EGR 211	Engineering Mechanics-Statics	3
EGR 212	Engineering Mechanics-Dynamics	3
	Or	
EGR 214	Principles of Dynamics	2
EGR 311	Mechanics of Fluids I	3
EGR 322	Strength of Materials	3

Capstone Project I - 3 credit hours

Select one course from the following:

CE 483	Civil Engineering Capstone Project I	3
EGR 483	Multi-disciplinary Capstone Project I	3

Capstone Project II - 3 credit hours

Select one course from the following:

CE 484	Civil Engineering Capstone Project II	3
EGR 484	Multi-disciplinary Capstone Project II	3

Dual degrees within engineering: Students completing dual degrees within the Shiley School have two options for completing the Capstone requirements: 1) The student takes EGR 483 and EGR 484 and the student's contributions to the capstone project include both disciplines, or 2) The student takes both discipline-specific 483 and 484 courses.

Civil Engineering Electives - 6 credit hours

400 Level	CE Electives	6

Does not include CE 48x courses. Must be taken for a grade A - F.

Civil Engineering Science Elective - 3 credit hours

Select one course from the following.

BIO 107	Plants as Food and Medicine	3
BIO 203	Health and Longevity	3
BIO 205	Foundations of Biology	3
BIO 207	Introduction to Molecular and Cellular Biology	3
BIO 208	Introduction to Evolution and Ecology	3
ENV 110	Earth Systems Science	3
ENV 111	Natural Hazards in the Pacific Northwest	3
ENV 162	Introduction to Oceanography	3
ENV 182	Environmental Science	3
ENV 361	Meteorology	3
ENV 365	Climatology	3
ENV 383	Environmental Geoscience	3
ENV 385	Environmental Microbiology	3

Must be taken for a grade A - F.

Credit minima: 30 credit hours of math and science and 45 credit hours of engineering.

Total Credit Hours: 132-133

Environmental Engineering Minor

Environmental engineering applies concepts from biology, chemistry, physics, hydraulics, and environmental science to solve environmental problems. Environmental engineering addresses significant questions of human concern that are pervasive in the 21st Century, e.g. access to clean water, environmental cleanup, environmental ethics and social justice, climate change, etc.

Learning Outcomes:

- Gain depth of understanding in at least one aspect of environmental engineering design.
- Apply concepts of sustainability and low impact design to engineering problems.

Minor Prerequisites - 13 credit hours

MTH 202	Calculus II	4
CHM 207	General Chemistry I	3
CE 367	Environmental Engineering	3
ME 331	Fundamental Thermodynamics	3

All prerequisites are required, regardless of chosen minor electives.

Non-engineering majors may need to take additional prerequisites for some of these courses.

Minor Requirement - 3 credit hours

CE 462	Sustainable Design	3

Minor Electives - 9 credit hours

Select three courses from the following:

CE 458/BIO 384/ENV 384	Remote Sensing and Geographic Information Systems	3
CE 464	Watershed Systems Modeling	3
CE 465/CE 565	Open Channel Flow	3
CE 466	Water and Wastewater Design	3
CE 467/CE 567	Project Delivery Lifecycle: The Challenges of Implementing Wet Infrastructure in the 21st Century	3
ME 434	Energy Efficiency in Buildings	3
CE 468	Environmental Engineering Topics	3
ME 438/EE 424	Renewable Energy	3

Computer Science

Tammy VanDeGrift, Ph.D., chair

The computer science program at the University of Portland provides for an excellent computer science education complemented by a strong liberal arts foundation. The faculty has established a set of program educational objectives that are listed below.

Computer Science, B.S.C.S.

Software is at the core of many fields: science, medicine, education, business, and government. As a computer science major, you will study the entire software engineering process from defining a problem to designing a solution, as well as building, refining, and testing it.

The program of study provides both breadth and depth of topics in a progression of course work, beginning with a foundation of mathematics and computer science fundamentals during the first and second years. Courses during the junior year provide additional theoretical and practical background in computer science. Capstone course work during the senior year enables students to pursue their areas of interest through in-depth analysis, experimentation, and design. CS electives and professional electives are available in various specialties for students to pursue their particular fields of interest. Development of written and oral communication skills and teamwork are incorporated as important components of the educational experience.

The computer science program leads to a bachelor of science in computer science (B.S.C.S.) degree accredited by the Computing Accreditation Commission of ABET.

Program Educational Objectives:

The computer science program prepares graduates who will:

1. Be successful as practicing professionals in diverse career paths or in graduate school.
2. Distinguish themselves in breadth of perspective and the ability to solve complex problems.
3. Be effective communicators and team members, with many assuming leadership roles.
4. Be active in their profession and participate in continuing education opportunities to foster personal and organizational growth.
5. Be able to advance, engage, and respond to issues of justice, ethics, diversity, equity, and inclusion in professional and civic settings.

Student Outcomes:

The Shiley School of Engineering prepares computer science majors with the following outcomes so that as graduates, they can attain the Program Educational Objectives listed above.

1. Analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Apply computer science theory and software development fundamentals to produce computing-based solutions.

Curriculum:

The Computer Science curriculum is 129 credit hours distributed into three categories:

1. University Core Curriculum Requirements – 40 credit hours
2. General Engineering Requirements – 33 credit hours (includes 6 credit hours shared with the Core Curriculum Requirements)
3. Computer Science Requirements – 62 credit hours

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

Two of the three core requirements in the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by the mathematics and science requirements within the major.

CS 341 and CS 483 are the designated Writing in the Discipline⁴⁸ courses for Computer Science.

General Engineering Requirements — 33 credit hours

EGR 110	Introduction to Engineering	2
EGR 300	Introduction to Capstone Project	0
EGR 361	Analysis of Engineering Data	3
MTH 201	Calculus I	4
MTH 202	Calculus II	4
PHY 204	General Physics I	3
PHY 274	General Physics Lab I	1
PHY 205	General Physics II	3
PHY 275	General Physics Lab II	1
	Professional Electives	9
	General Elective	3

EGR 110: For transfer students into the Shiley School who have declared a major and have not had an Introduction to Engineering course, the dean may approve the substitution of an engineering or computer science elective depending on the student's educational background.

EGR 361: MTH 361447 AND MTH 461449 can substitute for EGR 361417 and 3 math/science or CS math elective credit hours.

PHY 205/PHY 275: Students who complete the requirements for a minor that requires 4 science credit hours (including at least 1 credit hour of lab) may substitute those credits for the PHY 205/275 degree requirement. Course combinations allowed for the substitution include: CHM 207/277, BIO 207/277, BIO 208/278 or any 300-level or above science course/lab requirement for the minor.

Professional Electives: The professional electives may be a combination of courses (each 3-credit hours or more unless approved by the program chair) offered by the University at the 200-level or higher (or equivalent transfer credit). Professional electives include: courses offered by the Shiley School, courses that comprise a University minor, and courses included in an approved cluster. Professional elective credit may not be awarded for AP and IB examinations, or ROTC credit. Must be taken for a grade A - F

Computer Science Requirements — 62 credit hours

Required Courses — 38 credit hours

CS 203	Introduction to Computer Science	3
CS 273	Computer Science Laboratory	1
CS 301	Object-Oriented Design	3
CS 305	Data Structures	3
CS 324	Analysis of Algorithms	3
CS 333	Computer Architecture	3
CS 334	Operating Systems	3
CS 341	Software Engineering	3
CS 352	Programming Languages	3
CS 357	Theory of Computation	3
CS 358	Compiler Design	3
CS 368	Computer Science Seminar	2
CS 371	Object-Oriented Design Laboratory	1
CS 376	Unix/Linux Tools Laboratory	1
MTH 311	Discrete Structures	3

Capstone Project I - 3 credit hours

Select one course from the following:

CS 483	Computer Science Capstone Project I	3
EGR 483	Multi-disciplinary Capstone Project I	3

Capstone Project II - 3 credit hours

Select one course from the following:

CS 484	Computer Science Capstone Project II	3
EGR 484	Multi-disciplinary Capstone Project II	3

Dual degrees within engineering: Students completing dual degrees within the Shiley School have two options for completing the Capstone requirements: 1) The student takes EGR 483 and EGR 484 and the student's contributions to the capstone project include both disciplines, or 2) The student takes both discipline-specific 483 and 484 courses.

Tech Ventures Elective - 3 credit hours

Select one course from the following:

BUS 364	Innovation	3

CS 364	Business and Technology Ventures	3
ENT 480	Creating a World-Class Venture	3

ENT 480 may only be used if the student has completed the Entrepreneur Scholars program. Must be taken for a grade A - F.

Computer Science Electives - 6 credit hours

400 level	CS Electives	6

Does not include CS 48x courses. Must be taken for a grade A - F.

Computer Science Math Elective - 3 credit hours

	MTH 300 or higher	3

Does not include MTH 387 and other specific math courses required for the degree. Excess credits can be applied to math/science electives, professional electives, or general electives. Must be taken for a grade A - F.

Computer Science Math/Science Electives - 6 credit hours

Select courses from:

	BIO 200 or higher	
	CHM 200 or higher	
	MTH 300 or higher	
	PHY 300 or higher	

Does not include: BIO 384, BIO 387, CHM 387, MTH 387, and other specific math/science courses required for the degree. Must be taken for a grade A - F.

Credit minima: 15 credit hours of math, 6 credit hours of natural science, and 40 credit hours of computer science.

Total Credit Hours: 129

Computer Science Minor

A minor in computer science is available for those students who may want to add this option to their major program of study. In the 21st century, computer science knowledge can help individuals succeed in nearly any profession. The Computer Science minor prepares students for careers in which an understanding of computing is important.

Learning Outcomes:

- Program in different languages.
- Design, develop, and test software as part of a team.
- Examine a program's efficiency.
- Design abstractions to organize data and programs.
- Use computing tools such as development environments, compilers, debuggers, and Unix.

Minor Prerequisites - 4 credit hours

CS 203	Introduction to Computer Science	3
CS 273	Computer Science Laboratory	1

Minor Requirements - 14 credit hours

CS 301	Object-Oriented Design	3
CS 305	Data Structures	3
CS 371	Object-Oriented Design Laboratory	1

CS 376	Unix/Linux Tools Laboratory	1
	Upper division computer science courses	6

CS 364, CS 368, and CS 369 may not be used to satisfy the upper division computer science requirements.

Post Baccalaureate Professional Computer Science Degree

The Donald P. Shiley School of Engineering offers a post-baccalaureate program leading to a professional bachelor of computer science (B.C.S.) degree. The degree is designed to enable students with a broad range of undergraduate degrees to pursue careers that benefit from a strong preparation in computer science. The B.C.S. degree program is accredited by the Northwest Commission on Colleges and Universities (N.W.C.C.U.) but is not currently accredited by A.B.E.T.

Student Outcomes

Students will:

- Adapt to rapidly changing technology by learning core principles of computing.
- Define and analyze the requirements of complex computing problems.
- Design, implement, and evaluate computational solutions.
- Focus on Agile development and the software development lifecycle.

Admission Requirements

1. Statement of goals
2. Current resume
3. Two recommendation letters
4. Official transcripts from all previously attended academic institutions. (International Applicants: all foreign transcripts will be evaluated by International Student Services prior to an admissions decision.)
5. A bachelor's degree or its equivalent from an accredited college or university recognized by the University of Portland.
6. International Applicants: An official score from either the TOEFL (minimum score of 80), IELTS (minimum score of 7.0), or Duolingo (minimum score of 110) exam is required.
7. International Applicants: Proof of financial support will be required to attend the University of Portland, but is not required for application review.
8. Prerequisites (see below)

Degree Requirements

All students must complete a minimum of 31 credit hours towards the degree. If students complete any of the required courses for the degree prior to matriculation, they will need to complete additional courses at the 300-level or higher in CS (only) to reach the 31-credit hour requirement.

Prerequisites - 18 credit hours

The program includes 18 credit hours of prerequisite courses or their equivalents, before matriculation into the program.

MTH 201	Calculus I	4
MTH 202	Calculus II	4
MTH 311	Discrete Structures	3
CS 203	Introduction to Computer Science	3
CS 273	Computer Science Laboratory	1
CS 305	Data Structures	3

Required Courses - 31 credit hours

CS 301	Object-Oriented Design	3
CS 371	Object-Oriented Design Laboratory	1
CS 333	Computer Architecture	3
CS 357	Theory of Computation	3
CS 376	Unix/Linux Tools Laboratory	1
CS 324	Analysis of Algorithms	3
CS 334	Operating Systems	3
CS 341	Software Engineering	3
CS 352	Programming Languages	3
CS 358	Compiler Design	3
CS 368	Computer Science Seminar	2
EGR 361	Analysis of Engineering Data	3

CS 358: A CS 400-level elective may be substituted for CS 358.

Electrical Engineering

Joseph Hoffbeck, Ph.D., chair

The electrical engineering program at the University of Portland provides an excellent engineering education complemented by a strong liberal arts foundation. The faculty has established a set of program educational objectives that are listed below.

Electrical Engineering, B.S.E.E.

Electrical engineers improve lives by designing, testing, and supporting a wide range of products and systems, such as medical imaging, renewable energy, robots, wireless communications, computers, and all sorts of other electronic devices. The program begins with a foundation of mathematics, science, and engineering fundamentals during the first and second years. Courses during the junior and senior years provide additional theoretical foundation and hands-on laboratory experience. Students work in teams to design, build, and test a device or system in the senior year capstone courses. EE electives and professional electives are available in various specialties for students to pursue their particular field of interest. Development of written and oral communication skills and teamwork are important components of the educational experience.

The electrical engineering program leads to a bachelor of science in electrical engineering (B.S.E.E.) degree accredited by the Engineering Accreditation Commission of ABET.

Program Educational Objectives:

The electrical engineering program prepares graduates who will:

1. Be successful as practicing professionals in diverse career paths or in graduate school.
2. Distinguish themselves in breadth of perspective and the ability to solve complex problems.
3. Be effective communicators and team members, with many assuming leadership roles.
4. Be active in their profession and participate in continuing education opportunities to foster personal and organizational growth.
5. Be able to advance, engage, and respond to issues of justice, ethics, diversity, equity, and inclusion in professional and civic settings.

Student Outcomes:

The Shiley School of Engineering prepares engineering majors with the following outcomes so that as graduates, they can attain the Program Educational Objectives listed above.

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Curriculum:

The Electrical Engineering curriculum is 132 credit hours distributed into three categories:

1. University Core Curriculum Requirements – 40 credit hours
2. General Engineering Requirements – 42 credit hours (includes 6 credit hours shared with the Core Curriculum Requirements)
3. Electrical Engineering Requirements – 56 credit hours

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

Two of the three core requirements in the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by the mathematics and science requirements within the major.

EE 373 and EE 371 are the designated Writing in the Discipline⁴⁸ courses for Electrical Engineering.

General Engineering Requirements — 42 credit hours

CHM 207	General Chemistry I	3
CHM 277	General Chemistry I Lab	1
EGR 110	Introduction to Engineering	2
EGR 111	Engineering Computing with Applications	2
EGR 300	Introduction to Capstone Project	0
EGR 352	Engineering Economics	2
EGR 361	Analysis of Engineering Data	3
MTH 201	Calculus I	4
MTH 202	Calculus II	4
MTH 301	Vector Calculus	4
MTH 321	Ordinary Differential Equations	3
PHY 204	General Physics I	3
PHY 274	General Physics Lab I	1

PHY 205	General Physics II	3
PHY 275	General Physics Lab II	1
	Professional Electives	6

EGR 110: For transfer students into the Shiley School who have declared a major and have not had an Introduction to Engineering course, the dean may approve the substitution of an engineering or computer science elective depending on the student's educational background.

Professional Electives: The professional electives may be a combination of courses (each 3-credit hours or more unless approved by the program chair) offered by the University at the 200-level or higher (or equivalent transfer credit). Professional electives include the following: courses offered by the Shiley School, courses that comprise a University minor, and courses included in an approved cluster. Professional elective credit may not be awarded for AP and IB examinations, or ROTC credit. Must be taken for a grade A - F.

Electrical Engineering Requirements – 56 credit hours

Required Courses — 35 credit hours

CS 203	Introduction to Computer Science	3
CS 273	Computer Science Laboratory	1
CS 305	Data Structures	3
EE 231	Logic Design	3
EE 261	Electrical Circuits	3
EE 262	Signals and Systems	3
EE 271	Electrical Circuits Laboratory	1
EE 300	Electrical Engineering Seminar	1
EE 301	Electromagnetic Fields	3
EE 332	Digital Systems Design	3
EE 334	Embedded Systems Design	3
EE 351	Electronic Circuits I	3
EE 352	Electronic Circuits II	3
EE 371	Electronic Circuits Laboratory	1
EE 373	Digital Systems Design Laboratory	1

Capstone Project I - 3 credit hours

Select one course from the following:

EE 483	Electrical Engineering Capstone Project I	3
EGR 483	Multi-disciplinary Capstone Project I	3

Capstone Project II - 3 credit hours

Select one course from the following:

EE 484	Electrical Engineering Capstone Project II	3
EGR 484	Multi-disciplinary Capstone Project II	3

Dual degrees within engineering: Students completing dual degrees within the Shiley School have two options for completing the Capstone requirements: 1) The student takes EGR 483 and EGR 484 and the student's contributions to the capstone project include both disciplines, or 2) The student takes both discipline-specific 483 and 484 courses.

Electrical Engineering Electives - 12 credit hours

400 level	EE Electives	12

Does not include EE 48x courses. Must be taken for a grade A - F.

Engineering, Math, or Science Elective - 3 credit hours

Select one 3 credit hour engineering, computer science, math, or science course at the 300-level or higher. Must be taken for a grade A - F.

Credit minima: 30 credit hours of math and science and 45 credit hours of engineering.

Total Credit Hours: 132

Computer Engineering Minor

A minor in computer engineering is available for those students interested in gaining knowledge and experience in the areas of computer hardware and software.

Learning Outcomes:

- Design and analyze digital circuits such as those used in computer systems.
- Design and write low-level and high-level computer software.

Prerequisites - 7 credit hours

CS 203	Introduction to Computer Science	3
CS 273	Computer Science Laboratory	1
EE 231	Logic Design	3

Required Upper-division Courses - 10 credit hours

CS 305	Data Structures	3
EE 332	Digital Systems Design	3
EE 373	Digital Systems Design Laboratory	1
EE 334	Embedded Systems Design	3

EE 373: Electrical Engineering students substitute CS 371 or CS 376 for EE 373.

Elective Course - 3 credit hours

Select one course from the following:

EE 434	ASIC Design	3
EE 435	Verilog Digital Systems Modeling	3
EE 436/EE 536	Testing of Digital Systems	3
EE 437	Advanced Computer Architecture	3
EE 438	Introduction to Digital VLSI Design	3
EE 439/EE 539	Pre-silicon Verification	3
	Any upper-level 3 credit-hour CS course except CS 368/369	3

If more than 3 credit hours of the 10 required upper-division credit hours are also required for a student's major, select courses of an equal (or greater) number of credit hours from the Elective Course list. A maximum of 4 credit hours may be CS courses.

Mechanical Engineering

Timothy Doughty, Ph.D., chair

The mechanical engineering program at the University of Portland provides for an excellent engineering education complemented by a strong liberal arts foundation. The faculty has established a set of program educational objectives that are listed below.

Mechanical Engineering, B.S.M.E.

From renewable energies to space exploration, from autonomous vehicles to assistive technologies, mechanical engineers design, build, and test in service to humanity.

The program begins with mathematics and science topics in the first year, and engineering science courses in the sophomore year. Junior and senior year courses are devoted to analysis, testing, and design topics. ME electives and professional electives are available in various specialties for students to pursue their particular fields of interest. Throughout the four-year curriculum, emphasis is placed on teamwork and cooperation, good oral and written communication skills, and hands-on laboratory and project work to graduate well-rounded engineers from the program.

The mechanical engineering program leads to a bachelor of science in mechanical engineering (B.S.M.E.) degree accredited by the Engineering Accreditation Commission of ABET.

Program Educational Objectives:

The mechanical engineering program prepares graduates who will:

1. Be successful as practicing professionals in diverse career paths or in graduate school.
2. Distinguish themselves in breadth of perspective and the ability to solve complex problems.
3. Be effective communicators and team members, with many assuming leadership roles.
4. Be active in their profession and participate in continuing education opportunities to foster personal and organizational growth.
5. Be able to advance, engage, and respond to issues of justice, ethics, diversity, equity, and inclusion in professional and civic settings.

Student Outcomes:

The Shiley School of Engineering prepares engineering majors with the following outcomes so that as graduates, they can attain the Program Educational Objectives listed above.

1. Identify, formulate, and solve complex engineering problems by applying principles of engineering, science and mathematics.
2. Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. Communicate effectively with a range of audiences.
4. Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. Acquire and apply new knowledge as needed, using appropriate learning strategies.

Curriculum:

The Mechanical Engineering curriculum is 130 credit hours distributed into three categories:

1. University Core Curriculum Requirements – 40 credit hours

2. General Engineering Requirements – 42 credit hours (includes 6 credit hours shared with the Core Curriculum Requirements)

3. Mechanical Engineering Requirements – 54 credit hours

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

Two of the three core requirements in the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by the mathematics and science requirements within the major.

EGR 270 and ME 372 are the designated Writing in the Discipline⁴⁸ courses for Mechanical Engineering.

General Engineering Requirements — 42 credit hours

CHM 207	General Chemistry I	3
CHM 277	General Chemistry I Lab	1
EGR 110	Introduction to Engineering	2
EGR 111	Engineering Computing with Applications	2
EGR 300	Introduction to Capstone Project	0
EGR 352	Engineering Economics	2
EGR 361	Analysis of Engineering Data	3
MTH 201	Calculus I	4
MTH 202	Calculus II	4
MTH 301	Vector Calculus	4
MTH 321	Ordinary Differential Equations	3
PHY 204	General Physics I	3
PHY 274	General Physics Lab I	1
PHY 205	General Physics II	3
PHY 275	General Physics Lab II	1
	Professional Electives	6

EGR 110: For transfer students into the Shiley School who have declared a major and have not had an Introduction to Engineering course, the dean may approve the substitution of an engineering or computer science elective depending on the student's educational background.

EGR 361: MTH 3XX or MTH 4XX can substitute for EGR 361.

Professional Electives: The professional electives may be a combination of courses (each 3-credit hours or more unless approved by the program chair) offered by the University at the 200-level or higher (or equivalent transfer credit). Professional electives include the following: courses offered by the Shiley School, courses that comprise a University minor, and courses included in an approved cluster. Professional elective credit may not be awarded for AP and IB examinations, or ROTC credit. Must be taken for a grade A - F.

Mechanical Engineering Requirements — 54 credit hours

Required Courses — 48 credit hours

EE 261	Electrical Circuits	3

EE 271	Electrical Circuits Laboratory	1
EGR 211	Engineering Mechanics-Statics	3
EGR 212	Engineering Mechanics-Dynamics	3
EGR 221	Materials Science	3
EGR 270	Materials Laboratory	1
EGR 311	Mechanics of Fluids I	3
EGR 322	Strength of Materials	3
ME 222	Engineering Graphics	2
ME 272	Fabrication & Assembly Processes Lab	1
ME 303	Numerical Methods	3
ME 305	Stress Visualization	2
ME 307	Dynamic Systems and Control	2
ME 312	Mechanics of Fluids II	2
ME 331	Fundamental Thermodynamics	3
ME 332	Applied Thermodynamics	2
ME 336	Heat and Mass Transfer	3
ME 348	Machine Design	3
ME 368	Mechanical Design Project	1
ME 372	Fluids Laboratory	2
ME 376	Thermal Systems Laboratory	1
ME 377	Dynamic Systems & Control Lab	1

Capstone Project I - 3 credit hours

Select one course from the following:

ME 483	Mechanical Engineering Capstone Project I	3
EGR 483	Multi-disciplinary Capstone Project I	3

Capstone Project II - 3 credit hours

Select one course from the following:

ME 484	Mechanical Engineering Capstone Project II	3
EGR 484	Multi-disciplinary Capstone Project II	3

Dual degrees within engineering: Students completing dual degrees within the Shiley School have two options for completing the Capstone requirements: 1) The student takes EGR 483 and EGR 484 and the student's contributions to the capstone project include both disciplines, or 2) The student takes both discipline-specific 483 and 484 courses.

Credit minima: 30 credit hours of math and science and 45 credit hours of engineering.

Total Credit Hours: 130

Innovation Minor

Salvador Orara, M.F.A., director

The innovation minor provides a formal structure to introduce and develop the innovative mindset. The innovative mindset understands and applies design as thought and action in identifying and solving problems and imagining new futures. The program is open to all majors and concentrations, creating spaces for interdisciplinary collaboration and opportunities for students to push the boundaries of their areas of interest.

Learning Outcomes:

- Apply the mindset, skills, tools, and methods associated with design and innovation in the context of their academic and professional interest.
- Develop theory and techniques of human-centered design, design ethnography, and experiential futures.
- Make sketches and prototypes for sharing and evaluating ideas in 2D and 3D forms.
- Learn and demonstrate critical thinking, decision-making, and creative problem-solving within interdisciplinary teams.
- Expand the ability and build expertise in persuasive storytelling through contextually relevant modalities.
- Demonstrate transdisciplinary collaboration and innovation as a service-driven practice for a local community, business, or organization.

Minor Prerequisites - 3 credit hours

INV 200	Introduction to Creativity, Design, and Innovation	3

Minor Requirements - 9 credit hours

INV 300	Empathy, Observational Research and Human-Centered Design	3
INV 350	Making, Sketching, Prototyping	3
INV 400	Collaborative Innovation Practicum	3

Minor Elective - 3 credit hours

Electives from inside (or outside) the student's major are chosen in consultation with the program director and/or program counselors.

Select one course from the following:

BME 466/BME 566	Human Factors Engineering & Ergonomics	3
BUS 360	Cross Cultural Organizational Behavior and Ethics	3
BUS 364	Innovation	3
BUS 371	Consumer Behavior	3
BUS 376	Marketing for Sustainability	3
BUS 408/EGR 408/ENV 408	Innovation for Sustainability	3
BUS 452	Project Management	3
BUS 470	Marketing Research	3
BUS 474	Digital Marketing	3
BUS 476	Product Design & Development	3

BUS 487	Social Entrepreneurship	3
CE 462	Sustainable Design	3
CE 468	Environmental Engineering Topics	3
CS 301	Object-Oriented Design	3
EGR 380	Medical Instrument Repair in the Developing World	3
EGR 411/EGR 511	Telescope Design	3
EGR 480	Global Engineering	3
EGR 483	Multi-disciplinary Capstone Project I	3
EGR 484	Multi-disciplinary Capstone Project II	3
FA 320	Digital Video and Moving Media	3
FA 325	3-D Design	3
IHW 312	Research Design and Analysis: Understanding and Utilizing Evidence	3
MUS 310	Fundamentals of Music Technology	3
NRS 460	Advancing the Culture of Health	3
THTR 351	Beginning Stage Lighting and Sound	3
THTR 353	Beginning Scenic Design	3

SCHOOL OF NURSING

The University of Portland School of Nursing inspires future nurse leaders and other healthcare professionals through academic excellence to create systems and environments that support optimal holistic health and wellness. The School of Nursing offers baccalaureate and doctoral degrees.

The School of Nursing is nationally accredited by the Commission on Collegiate Nursing Education (C.C.N.E.). Additionally, the School of Nursing's bachelor of science in nursing (B.S.N.) and doctor of nursing practice (D.N.P.) programs are approved by the Oregon State Board of Nursing. The School of Nursing is a member of the Western Institute of Nursing Research (W.I.N.), the American Association of Colleges of Nursing (A.A.C.N.), and the National League for Nursing (N.L.N.).

The B.S.N. program is designed to prepare graduates for the practice of professional nursing in a variety of settings. Graduates of the program are eligible to take the National Council Licensure Examination for Registered Nurses (N.C.L.E.X.-R.N.), a requirement in all states to obtain professional registered nurse (R.N.) licensure.

The bachelor of science in integrative health and wellness (B.S.-I.H.W.) program prepares graduates to enhance health, wellness, and well-being among individuals, families, populations and communities. As health educators, graduates of this program are able to teach integrative health concepts and guide individuals by providing holistic, wellness-focused education. The University of Portland School of Nursing Integrative Health Coaching Program is an Approved Health and Wellness Coach Training & Education Program by the National Board for Health and Wellness Coaching (NBHWC). Graduates of this program are eligible to apply for the HWC Certifying Examination to become National Board Certified Health & Wellness Coach (NBC-HWC).

The D.N.P. degree is a practice-focus degree with emphasis on a scientific foundation for guiding nursing practice, improving care delivery models, influencing health policy, leading organizations and systems, and engaging in the scholarship of application. The family nurse practitioner (F.N.P.) track prepares graduates to take the F.N.P. certification exam through the American Academy of Nurse Practitioners Certification Board or the American Nurses Credentialing Center and assume the advanced practice role of an F.N.P. The adult-gerontology primary care nurse practitioner (A.G.P.C.N.P.) track prepares graduates to take the A.G.P.C.N.P. exam through the American Academy of Nurse Practitioners Certification Board or the American Nurses Credentialing Center and assume the advanced practice role of an A.G.P.C.N.P. The A.G.P.C.N.P. track also prepares graduates take the Advanced Certified Hospice and Palliative Nurse exam, if they wish to be distinguished as a palliative care expert and complete the required clinical hours and experiences. Individuals who are prepared as nurse practitioners at the master's level retain their nurse practitioner specialty and earn the D.N.P. degree.

Vision

The University of Portland School of Nursing creates positive change in health care through academic excellence to improve the health of society.

Mission

The University of Portland School of Nursing educates leaders of the future through innovative learning and engagement that enriches the culture of health care to promote health and wellness of the population. Faculty, staff, and students are accountable for fostering a spirit of discovery creating an environment that cultivates lifelong learning.

Values Statement

The University of Portland School of Nursing upholds the core values of social justice, academic excellence, integrity, and compassion. We believe that nurses should serve as the inspiration for health care teams to support individuals, families, and communities in transforming systems to attain optimal health and wellness.

We inspire leaders of the future through academic excellence to create systems and environments that support optimal health and wellness.

Programs of Study

Because nursing is a dynamic field, the nursing curriculum is subject to change at the School of Nursing's discretion.

The School of Nursing and the Graduate School offer the following degrees and programs:

Bachelor of Science in Nursing (B.S.N.)²⁴²

Bachelor of Science in Integrative Health & Wellness (B.S.)239

Minor in Integrative Health and Wellness241

Doctor of Nursing Practice (D.N.P.) (see Graduate School)311

Bachelor of Science in Integrative Health and Wellness (B.S.-I.H.W.)

The B.S.-I.H.W. program prepares students to enhance health, wellness, and well-being among individuals, families, populations, and communities. Students choose one of the following concentration options: wellness promoting, health coaching, or community organizing.

As health educators, all graduates of this program will be able to teach integrative health concepts and guide individuals and communities by providing holistic, wellness-focused education.

The B.S.-I.H.W. program prepares a knowledgeable workforce that speaks the language of conventional health care, while also supporting a shift from a focus on disease to a focus on promoting health, wellness and resilience.

The University of Portland School of Nursing Integrative Health Coaching Program is an Approved Health and Wellness Coach Training & Education Program by the National Board for Health and Wellness Coaching (NBHWC). Graduates of this program are eligible to apply for the HWC Certifying Examination to become National Board Certified Health & Wellness Coach (NBC-HWC).

B.S.-I.H.W. Program Outcomes

The B.S.-I.H.W. program prepares graduates in the following areas of health promotion:

1. *Integrative Health Promotion:* Students will demonstrate personal and professional understanding of *integrative health* as a perspective through which to support individuals, organizations and communities to optimize their highest expression of health and well-being.
2. *Spiritual Health Promotion:* Students will demonstrate personal and professional understanding of spirituality to promote integrative *spiritual health* within person-centered relationships.
3. *Mental Health Promotion:* Students will demonstrate personal and professional understanding of mental wellness to promote integrative *mental health* and well-being within themselves and others.
4. *Physical Health Promotion:* Students will demonstrate personal and professional understanding of physical wellness to promote the importance of maintaining a healthy lifestyle for supporting integrative *physical health* through a balance of nourishment, movement, and rest.
5. *Social Health Promotion:* Students will demonstrate personal and professional understanding and application of the impact of social relationships (society and social groups) for promoting individual and population *social health* and well-being.
6. *Population Health Promotion:* Students will demonstrate personal and professional understanding of multisector policies, *population health promotion* concepts, and evolving health care systems to promote integrative population health.
7. *Health Education/Promotion:* Students will demonstrate personal and professional understanding of foundational knowledge in integrative *health education/promotion* program planning, implementation and evaluation.

Admission

First-year and transfer applicants for admission must meet the general entrance requirements of the University as set forth in the "Office of Admissions318" section of this Bulletin.

Progression

For students admitted to the B.S.-I.H.W. program, progression in the program is dependent upon:

1. Good academic standing.
2. A grade of D or better in required I.H.W. courses.

B.S.-I.H.W. Degree Requirements

To qualify for the I.H.W. degree, the following requirements must be met:

1. A cumulative G.P.A. of 2.0 or above.

2. A grade of D or better in all required I.H.W. courses.
3. Successful completion of all I.H.W. courses and program requirements.
4. Completion of a minimum of 120 semester credit hours, including University Core Requirements.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

Two of the three core requirements for the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by the mathematics and science requirements within the major.

IHW 116 and IHW 312 are the designated Writing in the Discipline⁴⁸ courses for the B.S.-I.H.W.

B.S.-I.H.W. Major Requirements - 86-87 credit hours

Because I.H.W. is a dynamic field, the curriculum is subject to change at the School of Nursing's discretion.

BIO 205	Foundations of Biology	3
	with	
BIO 005	BIO 205 Workshop	0
	Or	
BIO 207	Introduction to Molecular and Cellular Biology	3
	with	
BIO 277	Introduction to Molecular and Cellular Biology Lab	1
IHW 101	Introduction to Integrative Health in Populations	3
IHW 116	Health and Wellness Across the Lifespan I	3
IHW 204	Anatomy of Wellness	3
IHW 214	Physiology of Wellness & Strategies for Healthy Living	3
IHW 216	Health and Wellness Across the Lifespan II	3
IHW 224	Integrative Health Promotion with Populations	3
IHW 301	Mind/Body/Energy Perspectives	3
IHW 305	Approaches to Care: Systems of Medicine	3
IHW 310	Foundations of Health Education and Health Promotion	3
IHW 312	Research Design and Analysis: Understanding and Utilizing Evidence	3
IHW 411	Resilience and the Human Condition	3
IHW 417	Integrative Health and Wellness Seminar	3

	I: Project Design and Management	
IHW 418	Integrative Health and Wellness Seminar II: Leadership	3
IHW 427	Integrative Health & Wellness Practicum	3
MTH 161	Elementary Statistics	3

IHW 427: Total credit hours in IHW 427 include 135 practicum hours.

NRS 202 and NRS 203 may be substituted for IHW 116 and IHW 216.

NRS 116 and NRS 216 may be substituted for IHW 116 and IHW 216.

BIO 305 and BIO 365 may be substituted for IHW 204 at the discretion of the School of Nursing.

IHW 411 is offered as IHW 491: Technology in Health in 2021-22.

Concentration Areas - 6 credit hours

Select one of the following concentration areas:

Community Organizing

IHW 325	Community Organizing I: Introduction	3
IHW 326	Community Organizing II: Advanced Applications	3

IHW 326: Total credit hours in IHW 326 include 45 field experience hours.

Health Coaching

IHW 307	Integrative Health Coaching I – Concepts of Individual Wellness	3
IHW 407	Integrative Health Coaching II: Supporting Individual Wellness	3

Wellness Promoting

IHW 316	Nature's Pharmacy: Foods, Herbs and Supplements that Support Health	3
	Upper division health focused elective	3

Electives - 32 credit hours

Total Credit Hours: 120-121

Minor in Integrative Health and Wellness (I.H.W. Minor)

The I.H.W. minor prepares students to develop competency in all four dimensions of wellness: psychological, social, spiritual and physical. Through knowledge and skill in the realms of integrative health, population health, and health education, students will be prepared to bridge the changing paradigm of health and wellness in our diverse society.

Because I.H.W. is a dynamic field, the curriculum is subject to change at the School of Nursing's discretion.

Minor Prerequisites - 6 credit hours

BIO 205	Foundations of Biology	3
BIO 005	BIO 205 Workshop	0
IHW 204	Anatomy of Wellness	3

BIO 207/BIO 277 may be substituted for BIO 205/BIO 005.

BIO 305/BIO 365 may be substituted for IHW 204 at the discretion of the School of Nursing.

Minor Requirements - 15 credit hours

IHW 301	Mind/Body/Energy Perspectives	3
IHW 305	Approaches to Care: Systems of Medicine	3
IHW 310	Foundations of Health Education and Health Promotion	3

Select two courses from the following - 6 credit hours

IHW 307	Integrative Health Coaching I – Concepts of Individual Wellness	3
IHW 316	Nature's Pharmacy: Foods, Herbs and Supplements that Support Health	3
IHW 325	Community Organizing I: Introduction	3
IHW 326	Community Organizing II: Advanced Applications	3
IHW 407	Integrative Health Coaching II: Supporting Individual Wellness	3
	Upper division health focused elective	3

IHW 326: Total credit hours in IHW 326 include 45 field experience hours.

Bachelor of Science in Nursing (B.S.N.)**B.S.N. Program Outcomes**

The B.S.N. program provides students with a liberal arts and science foundation along with concentrated study in the professional nursing major. Students are provided the opportunity to develop competency in the assessment of health needs and in the promotion, maintenance, and restoration of health in a holistic framework. A rich variety of settings are used to reflect the array of actual and potential health problems experienced by individuals, families, and communities throughout the life cycle.

The B.S.N. program of study prepares graduates to:

1. Provide safe, high-quality nursing care to individuals.
2. Deliver holistic nursing care to populations across a health care continuum.
3. Contribute to the nursing profession.
4. Improve health care delivery across the continuum of care.
5. Create and support healthy work environments.

Admission**Admission for First-year Students**

First-year applicants for admission must meet the general entrance requirements of the University as set forth in the "Office of Admissions"318 section of this *Bulletin*. All entering first-year students must complete a high school or college-level general chemistry course prior to enrolling in BIO 205. All entering first-year nursing majors with a redesigned SAT reading score less than 29 or an ACT English score less than 22 will be enrolled in ENG 107 College Writing.

Admission for Transfer Students

University of Portland non-nursing majors who wish to transfer into the nursing program must apply as a transfer student and be considered for admission with external applicants. The application process for internal transfers is very competitive and there is no guarantee of acceptance into the transfer cohort.

Prerequisite Courses

The prerequisite courses required for admission to the School of Nursing for Summer 2022-entry transfer students are:

University Core Curriculum Foundation Requirements — credit hours may vary

See Core Curriculum Requirements⁴⁵

The number of credit hours may vary depending on where these courses are completed.

Two of the three core requirements in the *Scientific and Quantitative Literacy and Problem Solving Habit* are satisfied by the mathematics and science requirements within the B.S.N. Foundation Requirements.

B.S.N. Foundation Requirements

- Foundations of Biology – If taken at UP, BIO 205 and BIO 005. If taken outside of UP, one or two courses (depending on the school) that include(s) molecular biology, cellular biology, and genetics. Must have been completed within five years of acceptance to the program.
- Anatomy and Physiology with labs – If taken at UP, BIO 305, BIO 365, BIO 306, and BIO 366. If taken outside of UP, one school year of coursework. Must have been completed within five years of acceptance to the program.
- Microbiology with lab – If taken at UP, BIO 359 and BIO 379. If taken outside of UP, one course and the accompanying lab. Must have been completed within five years of acceptance to the program.
- Elementary Statistics – If taken at UP, MTH 161. If taken outside of UP, one course. Must have been completed within five years of acceptance to the program.
- A high school or college level general chemistry course is also required for admission.
- Any University of Portland student who plans to apply for transfer into the School of Nursing and wishes to transfer a prerequisite B.S.N. Foundation Requirement course from another institution must first obtain the permission of the B.S.N. program counselor or the associate director for academic counseling and student success initiatives prior to registration in the course. Such permission is required to ensure that the course is suitable for transfer to the School of Nursing.

Electives

Transfer students must have a total of 52 semester credit hours to begin B.S.N. Program Nursing courses. Elective credit hours in writing, speech, science, foreign languages, or social sciences may be accepted to bring transfer students up to at least 52 semester credit hours. AP, IB, or CLEP credits may also be accepted.

For transfer students, acceptance into the B.S.N. program is based on the following criteria:

1. A cumulative G.P.A. of 3.0 or above in college courses at the time of admission.
2. A cumulative G.P.A. of 3.0 or above in the prerequisite B.S.N. Foundation Requirement courses of Anatomy and Physiology with labs and Microbiology with lab at the time of admission.
3. The grade earned in courses transferred from an institution on the quarter system will be calculated against the semester credit hour equivalency. Examples include: 3 quarter credit hours equal 2 semester credit hours; 4 quarter credit hours equal 2.67 semester credit hours; 5 quarter credit hours equal 3.33 semester credit hours.
4. Completion of a high school or college-level general chemistry course.
5. For internal transfers, completion of all prerequisite B.S.N. Foundation Requirement courses by the time the transfer application is submitted.
6. Completion of all prerequisite courses by the time the student begins University of Portland nursing (NRS) courses. Prerequisite coursework must be taken at an accredited college or university and must be graded with a C or higher. Pass/No Pass is not accepted for prerequisites. Students may not audit a required prerequisite course.
7. Satisfactory completion of all professional practice entry requirements, including required background check, clean drug screen, HIPAA, American Heart Association Basic Life Support (BLS) Cardiopulmonary Resuscitation (CPR) certification, and completion of all immunizations.

Progression

Progression for First-year Students

Progression in the B.S.N. program is based on the following criteria:

1. A cumulative G.P.A. of 3.0 or above by the end of summer session I of the sophomore year.
2. A cumulative G.P.A. of 3.0 or above in the required 300 level B.S.N. Foundation Requirement courses (see “B.S.N. Degree Requirements”) by the end of summer session I of the sophomore year.
 - Any University of Portland School of Nursing student wishing to transfer any B.S.N. Foundation Requirement course from another institution first needs the permission of the School of Nursing. Permission must be obtained prior to registering for or taking any B.S.N. Foundation Requirement courses to ensure that the courses are suitable for transfer to the School of Nursing. The student must earn a grade of C or better in any B.S.N. Foundation Requirement course they wish to transfer. A grade of Pass/No Pass is not allowed.
3. Grades earned in courses transferred from an institution on the quarter system will be calculated against the semester credit hour equivalency. Examples include: 3 quarter credit hours equal 2 semester credit hours; 4 quarter credit hours equal 2.67 semester credit hours; 5 quarter credit hours equal 3.33 semester credit hours.
4. A grade of C or better or Pass in all required nursing (NRS) courses.
5. Completion of all University Core Requirements (see “B.S.N. Degree Requirements”) by the end of summer session I of the sophomore year or with permission of the School of Nursing.
6. Completion of all B.S.N. Foundation Requirement courses by the end of summer session I of the sophomore year.
7. Completion of all 100- and 200- level nursing courses by the end of spring semester of the sophomore year.
8. A required nursing course may be repeated only once, regardless of whether it is repeated due to withdrawal or unsuccessful completion (a grade of C- or lower or No Pass).
9. If a student’s progression in the B.S.N. program is interrupted such that they are not engaged in off-campus professional practice for one semester or more, the student must successfully complete NRS 401 prior to starting the next professional practice course.
10. All required nursing (NRS) courses must be successfully completed with a grade of C or better or Pass before progressing to the next semester.
11. Satisfactory completion of all professional practice entry requirements including required background check, clean drug screen, HIPAA, American Heart Association Basic Life Support (BLS) Cardiopulmonary Resuscitation (CPR) certification, and completion of all immunizations.
12. Students may not audit a University Core Curriculum Requirement, B.S.N. Foundation Requirement, or B.S.N. Major Requirement (see “B.S.N. Degree Requirements”) course.
13. A grade of C- or lower or No Pass in or withdrawal from any required nursing (NRS) course will result in delayed progression and delayed program completion.
14. Students who receive a grade of C- or lower or No Pass in or withdraw from their second attempt (repeat) of a required nursing (NRS) course will be dismissed from the B.S.N. program.

Additional Progression Information

- Students interested in studying abroad should consult with their academic advisor, their program counselor, and the UP Studies Abroad office to understand study abroad options and their impact on the B.S.N. program of study. Note: The UP Studies Abroad program recommends a GPA of 3.0 or higher before going abroad but will consider applications from anyone with a cumulative GPA of 2.5 or above.
- Student conduct issues will be taken into consideration for progression in the nursing program.
- Students with a positive drug screen prior to entry into professional practice courses will be dismissed from the School of Nursing.
- Students who have been suspended from the University may be dismissed from the School of Nursing.

- All B.S.N. students are responsible for adhering to the policies in the most current version of the School of Nursing B.S.N. Student Handbook.

Progression for Transfer Students

For internal and external transfer students, progression in the B.S.N. program is based on the following criteria:

1. A grade of C or better or Pass in all required nursing courses.
2. A required nursing (NRS) course may be repeated only once, regardless of whether it is repeated due to withdrawal or unsuccessful completion (a grade of C- or lower or No Pass).
3. If a student's progression in the B.S.N. program is interrupted such that they are not engaged in off-campus professional practice for one semester or more, the student must successfully complete NRS 401 prior to starting the next professional practice course.
4. All required nursing (NRS) courses must be successfully completed with a grade of C or better or Pass before progressing to the next semester.
5. Satisfactory completion of all professional practice entry requirements including required background check, clean drug screen, HIPAA, American Heart Association Basic Life Support (BLS) Cardiopulmonary Resuscitation (CPR) certification, and completion of all immunizations.
6. Students may not audit a B.S.N. Major Requirement course.
7. A grade of C- or lower or No Pass in or withdrawal from any required nursing (NRS) course will result in delayed progression and delayed program completion.
8. Students who receive a grade of C- or lower or No Pass in or withdraw from their second attempt (repeat) of a required nursing (NRS) course will be dismissed from the B.S.N. program.

Additional Progression Information

- Transfer students may only study abroad in the summer semester between their junior and senior year. Students interested in studying abroad should consult with their academic advisor, their program counselor, and the UP Studies Abroad office to understand study abroad options and their impact on the B.S.N. program of study. The UP Studies Abroad program recommends a GPA of 3.0 or higher before going abroad but will consider applications from anyone with a cumulative GPA of 2.5 or above.
- Student conduct issues will be taken into consideration for progression in the nursing program.
- Students with a positive drug screen prior to entry into professional practice courses will be dismissed from the School of Nursing.
- Students who have been suspended from the University may be dismissed from the School of Nursing.
- All B.S.N. students are responsible for adhering to the policies in the most current version of the School of Nursing B.S.N. Student Handbook.

B.S.N. Degree Requirements for Students Enrolled as First-Year Students

To qualify for the degree, the following requirements must be met:

1. A grade of C or better or Pass in all nursing courses.
2. Successful completion of all nursing courses and program requirements.
3. Completion of a minimum of 122 semester credit hours, including University Core Curriculum Requirements, B.S.N. Foundation Requirements, and B.S.N. Major Requirements.

University Core Curriculum Requirements — 40 credit hours

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

See Core Curriculum Requirements⁴⁵

Two of the three core requirements for the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by the mathematics and science requirements within the major.

One Exploration Level course is satisfied by THE 348 within the major.

NRS 104 and NRS 440 are the designated Writing in the Discipline⁴⁸ courses for the B.S.N.

B.S.N. Foundation Requirements - 18 credit hours

BIO 205	Foundations of Biology	3
BIO 005	BIO 205 Workshop	0
BIO 305	Human Anatomy and Physiology 1	3
BIO 365	Human Anatomy & Physiology Lab 1	1
BIO 306	Human Anatomy and Physiology 2	3
BIO 366	Human Anatomy & Physiology Lab 2	1
BIO 359	Microbiology for Nurses	3
BIO 379	Microbiology Lab for Nurses	1
MTH 161	Elementary Statistics	3

B.S.N. Major Requirements - 73 credit hours

Because nursing is a dynamic field, the nursing curriculum is subject to change at the School of Nursing's discretion.

NRS 104	Nursing Professionalism and Practice	3
NRS 116	Health and Wellness Across the Lifespan I	3
NRS 200	Nursing Licensure Lab I	1
NRS 204	Foundations in Health Assessment	3
NRS 206	Professional Practice: Health Assessment	1
NRS 207	Clinical Reasoning Seminar: Health Assessment	1
NRS 216	Health and Wellness Across the Lifespan II	3
NRS 300	Nursing Licensure Lab II	1
NRS 302	Nursing Licensure Lab III	1
NRS 306	Professional Practice: Population Health and Wellness	4
NRS 307	Clinical Reasoning Seminar: Population Health and Wellness	3
NRS 308	Professional Practice: Acute Illness Management	4
NRS 309	Clinical Reasoning Seminar: Acute Illness Management	3
NRS 316	Population Health and Wellness Across the Lifespan	3
NRS 317	Acute Illness Management Across the Lifespan	3

NRS 325	Pathophysiology and Pharmacology I	3
NRS 326	Pathophysiology and Pharmacology II	3
NRS 400	Nursing Licensure Lab IV	1
NRS 406	Professional Practice: Chronic Illness Management	4
NRS 407	Clinical Reasoning Seminar: Chronic Illness Management	3
NRS 408	Transition to Professional Practice	4
NRS 409	Clinical Reasoning Seminar: Transition to Professional Practice	3
NRS 416	Chronic Illness Management Across the Lifespan	3
NRS 440	Social Justice and Population Health	3
NRS 460	Advancing the Culture of Health	3
NRS 480	Life-Long Learning	3
THE 348	Theological Dimensions of Suffering and Death	3

Total Credit Hours: 122

B.S.N. Degree Requirements for Transfer Students

To qualify for the B.S.N. degree, the following requirements must be met:

1. A grade of C or better or Pass in all nursing courses.
2. Successful completion of all nursing courses and program requirements.
3. Completion of a minimum of 122 semester credit hours, including all required prerequisite courses, University Core Curriculum Requirements, and B.S.N. Major Requirements..

University Core Curriculum Requirements — credit hours may vary

All University of Portland students progress through a set of shared course options as part of the University's liberal arts Core Curriculum. This curriculum offers a foundation of multiple lenses to address enduring questions of human concern, integrating the liberal arts, the University mission, and the knowledge, skills, and values needed in a diverse society and in the workplace.

Transfer students into the School of Nursing complete the University Core Curriculum Foundation Requirements as prerequisites for admission to the B.S.N. program. The number of credit hours may vary depending on where these courses are completed.

See Core Curriculum Requirements⁴⁵

Two of the three core requirements for the Scientific and Quantitative Literacy and Problem Solving Habit are satisfied by the mathematics and science requirements within the B.S.N. Foundation Requirements.

One Exploration Level course is satisfied by THE 348 within the major.

NRS 104 and NRS 440 are the designated Writing in the Discipline⁴⁸ courses for the B.S.N.

B.S.N. Foundation Requirements

Credit hours will vary depending on where the courses are completed. See the "Admission for Transfer Students" section above for the B.S.N. Foundation Requirements for Summer 2022-entry transfer students, which are prerequisites for admission.

Electives

Credit hours will vary depending on where the courses are completed. See the “Admission for Transfer Students” section above for the Electives Requirements for Summer 2022-entry transfer students, which are prerequisites for admission.

B.S.N. Major Requirements - 73 credit hours

Because nursing is a dynamic field, the nursing curriculum is subject to change at the School of Nursing’s discretion

NRS 200	Nursing Licensure Lab I	1
NRS 204	Foundations in Health Assessment	3
NRS 206	Professional Practice: Health Assessment	1
NRS 207	Clinical Reasoning Seminar: Health Assessment	1
NRS 208	Transition into Professional Nursing	6
NRS 300	Nursing Licensure Lab II	1
NRS 302	Nursing Licensure Lab III	1
NRS 306	Professional Practice: Population Health and Wellness	4
NRS 307	Clinical Reasoning Seminar: Population Health and Wellness	3
NRS 308	Professional Practice: Acute Illness Management	4
NRS 309	Clinical Reasoning Seminar: Acute Illness Management	3
NRS 316	Population Health and Wellness Across the Lifespan	3
NRS 317	Acute Illness Management Across the Lifespan	3
NRS 325	Pathophysiology and Pharmacology I	3
NRS 326	Pathophysiology and Pharmacology II	3
NRS 400	Nursing Licensure Lab IV	1
NRS 406	Professional Practice: Chronic Illness Management	4
NRS 407	Clinical Reasoning Seminar: Chronic Illness Management	3
NRS 408	Transition to Professional Practice	4
NRS 409	Clinical Reasoning Seminar: Transition to Professional Practice	3
NRS 416	Chronic Illness Management Across the Lifespan	3
NRS 440	Social Justice and Population Health	3
NRS 460	Advancing the Culture of Health	3
NRS 480	Life-Long Learning	3
THE 348	Theological Dimensions of Suffering and Death	3

Total Credit Hours: 122

GRADUATE SCHOOL

John L. Watzke, Ph.D., dean

Introduction

The Graduate School currently offers 14 degree programs in five academic areas. The courses, curricula, and faculty are provided cooperatively by the Pamplin School of Business, the Shiley School of Engineering, the Schools of Education and Nursing, and the College of Arts and Sciences. Each program is administered by a director within its school or department. These directors, together with the dean of the Graduate School, comprise the Graduate School Council. The Graduate School was established in 1950 and has awarded over 10,000 degrees since then, including more than 300 doctoral degrees.

Mission

The Graduate School offers rigorous educational experiences in a personalized learning environment. The University of Portland's graduate curricula are designed to provide candidates with the cutting-edge knowledge and skills they need to provide insightful, global, and ethical leadership within their professions, both now and into the future.

Programs of Study

The degrees and certificate programs currently offered in the Graduate School are:

Business:

Master of Business Administration (M.B.A.)
 Master of Business Administration in Nonprofit Management (M.B.A.)
 Master of Science in Finance (M.S.)
 Master of Science in Operations and Technology Management (M.S.)
 Post Baccalaureate and Post Master's Certificates

Communications Studies:

Master of Arts in Communication (M.A.)
 Master of Science in Management Communication (M.S.)

Education:

Master of Arts in Education (M.A.)
 Master of Arts in Higher Education and Student Affairs (M.A.H.E.S.A.)
 Master of Education (M.Ed.)
 Master of Arts in Teaching (M.A.T.)
 Post Baccalaureate and Post Master's Certificates
 Doctor of Education (Ed.D.)

Engineering:

Master of Engineering (M.E.)
 Master of Biomedical Engineering (M.B.M.E.)

Nursing:

Doctorate of Nursing Practice (D.N.P.)

Academic Regulations

The academic regulations listed in the opening section of this University Bulletin also apply to graduate students with the following modifications:

1. No student may register for more than 12 semester credit hours in a semester without the consent of the dean of the Graduate School and the program director.
2. The grade of C is the lowest grade that carries with it graduate credit. Courses receiving lower grades (e.g. C-) will not carry graduate credit, but will be included in the student's cumulative grade point average (G.P.A.) calculated according to the point system described in the University Academic Regulations (V. Grades and Credits³⁴).
3. Only courses in which a grade of C-, D+, D, D- or F has been received may be repeated at the University of Portland for academic credit. In such cases the new grade and credit will replace the original in the calculation of grade point average; however both courses and grades will remain on the permanent record, with the original course denoted by the symbol E.
4. Students who receive an IP in Thesis 599 or a graduate course are normally expected to comply with the academic regulation that the work be completed within one year. However, in exceptional cases the dean of the Graduate School may, upon recommendation of the graduate program director, extend the period of time which a student has to complete the thesis or the course and receive a grade.
5. No course or practicum numbered above 499 may be taken on a "pass/no pass" basis for credit hours required toward an advanced degree except Thesis 599, Dissertation 699/699X, or if the grade mode for the course has been designated in the Bulletin by the individual graduate program as pass/no pass.
6. Students may not use credit hours obtained by challenge or advanced placement toward the credit hours required for an advanced degree.
7. Thirty semester credit hours of courses numbered 500 and above are the minimum requirements for a master's degree. (Consult the individual programs for the precise requirements as some programs require more than 30 credit hours.)
8. Students must have a cumulative G.P.A. of 3.00 to earn a degree.
9. A student must maintain a G.P.A. of 3.00 to remain in good standing. A student who is not in good standing will be given specific conditions by the program director. If these conditions are not fulfilled, the student will be dismissed from the Graduate School by the dean of the Graduate School.
10. Graduate degrees requiring 30 to 36 semester credit hours must normally be completed within a period of five years. Graduate degrees requiring 37 or more semester credit hours must normally be completed within a period of six years. In exceptional cases these periods may be extended by the dean of the Graduate School upon recommendation of the graduate program director.
11. Students completing a graduate degree with a thesis or dissertation requirement must complete the project in compliance with regulations adopted by the Graduate School Council. Copies are available from the Graduate School or the graduate program director for each degree program.
12. Transfer of credits:
 - a. With the approval of the dean of the Graduate School, a maximum of nine semester credit hours may be transferred to a master's degree program and twelve semester credit hours to a doctoral program from an accredited institution if they are acceptable for graduate degree credit in the source institution. (Consult the individual graduate programs for details as some allow less than this number of transfer credit hours.) However, credit hours or courses used to satisfy the requirements of any other degree cannot be applied to the fulfillment of a subsequent master's or doctorate degree in the Graduate School.
 - b. Only those courses graded B or better are eligible for transfer.
 - c. No credit hours transferred from another institution may be applied to a graduate degree if they were earned in courses that were completed more than five years before the start of the graduate program.
 - d. Graduate credit hours earned through distance learning will be considered for transfer, subject to the same criteria as traditional courses with respect to quality, relevance, and timeliness as well as the accreditation of the source institution, including the provisions of regulation 12[g] below.
 - e. Normally credit hours should be transferred at the time of the applicant's original acceptance into a graduate program so they may be integrated into the planning of a program. A request for a later transfer may be denied.

- f. To transfer graduate credit hours taken at another university during the time of a student's graduate work at the University of Portland requires written authorization before such work is taken.
 - g. Where the University of Portland graduate program has a special accreditation, the source institution may be required to have the same or an equivalent accreditation.
 - h. M.B.A. students who qualify for admission may transfer more than nine credit hours of graduate credit under provisions of multilateral admission agreements.
13. Students may not accumulate more than nine credit hours of graduate credit in the non-degree seeking graduate student status. After nine graduate credit hours, such student must seek admission to a program in order to have the credit hours apply to a degree.
14. A student who expects to receive a degree at the end of a semester or the summer session must apply for the degree within the time limits set by the registrar.
15. Unless excused by the dean of the Graduate School, the candidate for a graduate degree is expected to attend commencement exercises at which the degree is conferred.

Student Classification

All students, regardless of classification, must apply for admission.

Graduate degree students are those who have earned a baccalaureate degree or higher and who have been accepted into a program leading to an advanced degree.

Doctoral students are those who are fully admitted to a doctoral degree program.

Post Baccalaureate students are those who are admitted to the University for post baccalaureate work but not into a degree program. Admission as a post baccalaureate student does not imply acceptance to a graduate degree program. Regular admission to the Graduate School must be obtained from the dean of the Graduate School before any work will be accepted towards a graduate degree.

Post Master students are those who are admitted into a certificate program extending educational experiences beyond the master's degree.

Non-degree seeking graduate students are those who have completed an undergraduate degree or higher and apply for admission in order to register for credit but are not seeking a graduate degree at the University. Enrollment as a non-degree seeking graduate student implies no commitment on the part of the University regarding regular admission at a later time. Credits earned while in the non-degree seeking graduate student classification do not necessarily apply toward requirements for a degree should a student later be accepted into a degree program. Regular admission to the Graduate School must be obtained from the dean of the Graduate School before coursework will be accepted toward a graduate degree.

Admission as a non-degree seeking graduate student requires that the student submit a non-degree seeking graduate student application to the Graduate School along with a \$50.00 application fee, relevant transcripts, and other requested documents prior to their initial registration. The application fee is waived for current faculty and staff members as well as alumni of the University.

Accumulation of more than nine graduate credit hours in the non-degree seeking graduate student status is not permitted, and any such student who accumulates nine graduate credit hours is required to seek regular admission to a degree program in keeping with procedures determined by the Graduate School.

Application and Admission

1. Correspondence concerning admission to the Graduate School under any classification should be addressed to the Graduate School, 5000 N. Willamette Blvd., Portland, OR 97203-5798; phone: (503) 943-7107; e-mail: gradschl@up.edu.
2. Before applicants will be considered for admission as degree seeking students the following must have been received or met:
 - a. Completed online application.
 - b. An official transcript sent directly to the University of Portland Graduate School showing all college credit attempted and/or completed from each college and university previously attended. Transcripts from foreign universities must be in English or be accompanied by an English translation certified as authentic. For students applying for a master's program or a post baccalaureate program, evidence of possession of a bachelor's degree or its equivalent from an accredited

college or university recognized by the University of Portland is required. For applicants to a post graduate program or doctoral program, evidence of possession of a master's degree or its equivalent from an accredited college or university recognized by the University of Portland is required. For the D.N.P. in Nursing, a bachelor's or master's degree in nursing from an accredited college or university recognized by the University of Portland and from a school of nursing accredited by an appropriate national nursing accrediting body may apply. All foreign degrees submitted by International applicants will be evaluated by International Student Services prior to an admission decision. All official transcripts submitted become the property of the University and cannot be copied or returned to the applicant.

- c. The number of recommendations from persons knowledgeable of the applicant's ability depends upon the specific program of choice. Consult the individual program requirements or the person directing that program for specified information.
 - d. Evidence of scholastic background that indicates ability to do satisfactory graduate work. Usually this is considered to be a B average.
 - e. Appropriate score on standardized test(s). Test score minimums are program dependent. International applicants, whose native language is not English, are required to take the TOEFL, IELTS, or Duolingo exam, unless they have attended and attained a degree from a United States institution. Consult the individual program requirement or the person directing that program for specified information.
 - f. A resume and a statement of academic or professional goals, appropriate to the specific program.
 - g. Specific admission requirements, including undergraduate G.P.A., of individual degree programs are listed in the individual programs' information.
3. Admission to a program leading to a master's or doctorate degree is given only by the dean of the Graduate School when the following conditions are fulfilled:
 - a. The documentation required above is complete.
 - b. A positive recommendation is received from the associate dean or graduate program director of the department or school involved. (A personal interview may be required).
 4. Applications should be complete no later than one month before the student's beginning class at the University to provide time for adequate consideration and program arrangement. Some programs have a fixed deadline for submission of all materials.
 5. Students who fail to register in the first semester after admission, or who in the regular year-round program fail to register for a semester, or who in a summer-only program fail to register for a summer session, must seek re-admission from the dean of the Graduate School.
 6. The graduate student who desires to change to a different degree program must submit a formal change of program application to the dean of the Graduate School.
 7. If offered a place in the M.A.T., Ed.D., M.Ed., M.E., or M.B.M.E. program, a non-refundable deposit is required and will be credited towards the first semester tuition.

2021-2022 Tuition and Fees³²³

Programs

Business

Brian Adams, Ph.D., director of graduate business programs

Melissa McCarthy, director of M.B.A. program

Faculty: Adams, Adrangi, Arbabian, Barnes, Chatrath, Cruz Megchun, DeV Vaughn, Down, Dunnaville, Eom, Grimmer, Gritta, Gudigantala, Hanig, Hao, Holloway, Jurinski, Kolay, Laird-Magee, Lin, Lippman, Meckler, Mitchell, Molkentin, Parkman, Rachor, Reed, Stephens, Vemprala, Yu

Introduction

The Dr. Robert B. Pamplin, Jr. School of Business was founded in 1939; the master's program in business administration (M.B.A.) began in 1959, the Master of Science in Finance (M.S.F.) began in 2009, the Executive Master of Business Administration in Nonprofit Management (E.M.B.A) (now M.B.A. in Nonprofit Management) began in 2011, and the Master of Science in Operations and Technology Management (M.S.O.T.M) began in 2014. The University of Portland's business school is accredited by AACSB, the Association for the Advancement of Collegiate Schools of Business.

Mission

The Pamplin School of Business's innovative curriculum is an outgrowth of its mission statement. This mission is to create a collaborative learning environment that develops our students' knowledge of effective business practices, enhances their analytic and interpersonal skills, and enables them to be successful and ethical leaders in their communities and the changing world.

Master of Business Administration, M.B.A.

Degree Outcomes

The M.B.A. curriculum focuses on contemporary leadership by challenging graduate students to think cross-functionally about a variety of large and small business issues. To operationalize these objectives, the basic structure of our M.B.A. program consists of the following components:

- A prerequisite class in statistical and quantitative analysis.
- Values perspective courses introducing students to issues of leadership, sustainability, understanding cultural differences and developing multicultural skills, and the role of business in society.
- Core courses exploring the application of analytical tools in economic analysis, marketing, finance, operations and technology management, and accounting to identify and solve contemporary business problems.
- A elective component allowing students to earn a certificate in an area of interest in business analytics, customer experience management and analytics, entrepreneurship and design management, health care management, finance, marketing, nonprofit management, operations and technology management, personal selling, strategy, or sustainability. Students may also choose to design their own specialization by selecting courses from more than one field.
- A capstone course providing a final integration of the themes covered in the M.B.A. program with an emphasis on the strategic role played by top management in integrating corporate policies.

Learning Goals and Objectives for Master of Business Administration Graduates

Students who successfully complete all requirements for a Master of Business Administration should be able to:

1. **Core of Business Knowledge:** Demonstrate a broad core of business knowledge and be able to integrate and apply this knowledge to business situations requiring interdisciplinary and global perspectives.
 - a. Demonstrate competency in the underlying concepts, theory, and tools taught in the core curriculum of our M.B.A. program.
 - b. Develop a global perspective through international experience and a cross cultural curriculum.
2. **Analytical Skills:** Possess analytical, research, and critical thinking skills needed by middle and upper-level managers.
 - a. Acquire the competencies needed to identify, analyze, and evaluate alternative solutions to business problems.
 - b. Have the ability to write and present comprehensive research reports/briefs and present facts, analysis, and conclusions.
3. **Leadership Competencies:** Possess the interpersonal competencies needed to be effective managers and leaders.
 - a. Be skilled at oral and written communication.
 - b. Be skilled at leadership, including motivation, negotiation and management of conflict.
4. **Value System:** Be able to evaluate the ethical and societal implications of managerial decisions.
 - a. Identify ethical dilemmas and analyze them from multiple ethical and stakeholder perspectives, and recommend appropriate resolutions to those dilemmas.

- b. Understand the overarching issues of corporate social responsibility and sustainability.
- c. Understand the connection between an organization's cultural and its ethical climate.

Admission Requirements

1. Statement of Goals
2. Current resume
3. Two recommendation forms and letters
4. Official transcripts (from all previously attended academic institutions)
5. A bachelor's degree or its equivalent from an accredited college or university recognized by the University of Portland
6. International Applicants: All foreign transcripts will be evaluated by International Student Services prior to an admission decision
7. Undergraduate GPA of 3.0 or higher (on a scale of 4.0)
8. Official GMAT (score of 550 or higher) or GRE (score equivalent to a GMAT score of 550) may be required
9. International Applicants: an official score from the TOEFL (minimum score of 88), IELTS (minimum score of 7.0), or Duolingo (minimum score of 110) exam is required.
10. International Applicants: Proof of financial support will be required to attend the University of Portland, but is not required for application review

The GMAT/GRE requirement can be waived if an applicant has significant and relevant work experience (at least three years); has successfully completed 9 hours of coursework at an AACSB accredited graduate business program with a cumulative G.P.A. of 3.0 or higher; has a business-related graduate degree from an AACSB accredited program; has taken six hours of graduate business courses at the University of Portland as a non-degree seeking student and earned a 3.0 cumulative G.P.A. or higher; or have earned CFP, CPA, CFA or JD professional designations. It is strongly recommended that applicants have two to three years of professional experience after their bachelor's degree to fully benefit from the program.

Jesuit Transfer Agreement

The University of Portland is a participant in an educational consortium with more than twenty other faith-based and AACSB accredited institutions. This program allows M.B.A. students exceptional flexibility if their education is affected in such a way as to require a move to another geographic location.

Under this agreement, students who have completed at least 50 percent of their credits at the University of Portland may attend another AACSB accredited M.B.A. program at one of the participating schools involved in this consortium and transfer units back to the University of Portland to complete their degree. If a student has less than 50 percent of the credits required to award an M.B.A. degree, they may apply to a participating school and transfer the credits already earned at the University of Portland to that university. Under this agreement, the student transferring out of the University of Portland is required to meet all application and admission criteria of the receiving school and will, in turn, earn their degree from that school. For further details please see the M.B.A. program director.

Honors Pledge

The faculty of the Pamplin School of Business encourages students to acknowledge the ethical component of teaching and learning that is an essential factor in fulfilling the University's mission in the classroom. Students are asked to reflect upon the core value of academic integrity and make this an integral part of their work at the University. Students are asked to sign an honors pledge and attach it to all submitted course work to affirm the integrity of their scholarship to all concerned.

Prerequisite Course and Waiver Exam

All students must take the prerequisite course BUS 500 (Statistics) or pass a statistics waiver exam in one of the first two semesters in the program. A student passing this exam will have the BUS 500 class waived from their course requirements and will have a 36 hour program. See the M.B.A. program director for details on the statistics waiver exam. Please note: students are expected to have some familiarity with statistics, and a basic proficiency with Excel applications.

Values Perspective

The values perspective courses are designed to provide a common set of managerial experiences that foster thinking across functional disciplines. The courses provide a framework for considering ethics, sustainability, social responsibility, diversity

and multiculturalism, and the changing role of managers. Students take two courses. One course, BUS 512 *Leadership and Higher Level Management*, is required. The second course is chosen by the student from a list of five values courses.

Core Classes

Students complete core courses in five discipline areas. If the basic course is waived then a more advanced course must be completed to fulfill the requirement of five core classes.

The core courses are designed to provide students with the quantitative and qualitative tools used in business problem solving. Students take economic analysis, marketing, finance, operations and technology management, and accounting. The emphasis in these courses is on applying analytical tools and concepts to emerging issues in business practices.

Students may be waived from one or more of the basic core courses if they have completed comparable courses from an AACSB accredited school with a grade of B or better within eight years of acceptance to the M.B.A. program. Where appropriate, work experience directly related to the core course will be taken into account. These waivers must be approved by the M.B.A. program director. If a waiver is approved, students will substitute an advanced course in that discipline from a list of eligible courses. If a student has coursework from a non-AACSB accredited school, it will be further reviewed for acceptability by the M.B.A. program director.

Electives

Students may select a certificate from one the following areas: business analytics, customer experience management and analytics, entrepreneurship and design management, health care management, finance, marketing, nonprofit management, operations and technology management, personal selling, strategy, or sustainability. Alternatively, students who do not want to focus in one particular area may select courses from two or more fields. Many students find that a specialized certificate helps in marketing their degree to prospective employers. Others find that selecting courses from different fields gives them a broader foundation for management. Students choosing not to pursue a certificate in one area may select any four elective courses.

Capstone Class

The M.B.A. program closes with the capstone strategy course (BUS 580) taken in the student's last semester. This course brings together the skills learned within the program through a final interdisciplinary look at problem solving strategies and solutions.

International Component

All M.B.A. students are required to complete an international experience before they graduate. The learning goal for the international experience is to demonstrate the ability to confidently initiate professional interactions and lead meetings with business executives from other cultures in any international setting. The international experience can take several different forms: learning lab with a project, volunteer hours for an international organization, international business plan competition, or a course. The courses with the international experience will be identified prior to the beginning of each academic year. The international experience will focus on a course-related project that will require a week-long trip to a foreign destination. The international course can be used as one of the two required values perspective classes. Additional travel fees will be collected at the beginning of the course.

Degree Requirements

The M.B.A. program consists of 36-39 credit hours of course work: a 3-credit hour prerequisite in statistics (if necessary), 6 credit hours of values perspective courses, 15 credit hours of core courses, 12 credit hours of electives, and a 3-credit hour capstone class.

Prerequisite—3 credit hours

BUS 500	Statistical and Quantitative Analysis	3

Select one course from the following:

BUS 508/ENV 501	Innovation for Sustainability	3
BUS 510	Economics and Metrics for Sustainability	3
BUS 511	Cross-Cultural Management and Ethics	3
BUS 513	Social Responsibility in Organizations	3

BUS 515	Social Venture Management	3

Values Perspective— 6 credit hours

BUS 512	Leadership and Higher Level Management	3

Core Courses — 15 credit hours

BUS 501	Economic Analysis	3
BUS 505	Introduction to Operations & Technology Management	3
BUS 506	Accounting Information for Decision Makers	3
BUS 520	Applied Marketing Strategies	3
BUS 530	Corporate Finance	3

BUS 501: if waived based on completion of microeconomics and macroeconomics, students can substitute any business elective.

BUS 505: if waived based on completion of three OTM courses including operations management, students may substitute any OTM elective.

BUS 506: if waived based on completion of managerial and financial accounting, students may substitute an accounting elective; students who are CPAs may substitute any business elective.

BUS 520: if waived based on completion of three marketing courses, students may substitute any marketing elective.

BUS 530: if waived based on completion of three finance courses, students may substitute any finance elective.

Capstone Component — 3 credit hours

BUS 580	Strategic Issues and Applications in Management	3

M.B.A. Certificates—12 credit hours**Business Analytics**

BUS 519	Business Analytics	3
BUS 543	Decision Modeling and Analytics	3
BUS 552	Prescriptive Analytics	3
BUS 555	Database Management	3

Entrepreneurship and Design Management

Select four courses from the following:

BUS 510	Economics and Metrics for Sustainability	3
BUS 512	Leadership and Higher Level Management	3
BUS 513	Social Responsibility in Organizations	3
BUS 515	Social Venture Management	3
BUS 523	Negotiation and Persuasion Strategies	3
BUS 526	Marketing for Sustainability	3

BUS 544	Managing Innovation and Technology	3
BUS 571	New Venture Creation	3
BUS 572	Family Business Planning	3
BUS 573	International Ventures	3
BUS 574	New Venture Finance and Accounting	3
BUS 576	Brand Design	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Finance

Select four courses from the following:

BUS 519	Business Analytics	3
BUS 531	International Finance	3
BUS 532	Security and Portfolio Analysis	3
BUS 533	Financial Markets and Institutions	3
BUS 534	Derivatives and Risk Management	3
BUS 535	Sports Finance & Sponsorship	3
BUS 536	Personal Financial Planning	3
BUS 537	Applied Financial and Economic Forecasting	3
BUS 538	Corporate Financial Strategy: M&A and Restructure	3
BUS 539	Research Methods in Finance	3
BUS 543	Decision Modeling and Analytics	3
BUS 545	Project Management	3
BUS 552	Prescriptive Analytics	3
BUS 555	Database Management	3
BUS 561	Advanced Real Estate Finance	3
BUS 562	Real Estate Finance	3
BUS 564	Macro Economics in the Global Economy	3
BUS 567	Applied Portfolio Management	3
BUS 568	Income Tax Planning	3
BUS 574	New Venture Finance and Accounting	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Healthcare Management

Select four courses from the following:

BUS 515	Social Venture Management	3
BUS 517	Marketing for the Nonprofit Organization	3

BUS 519	Business Analytics	3
NRS 614	Health Organization Systems & Resource Management	3
NRS 650	Informatics in a Complex Health Care Environment	2

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Marketing

Select four courses from the following:

BUS 521	Consumer Behavior	3
BUS 522	Marketing Research	3
BUS 523	Negotiation and Persuasion Strategies	3
BUS 524	Brand Promotions Management	3
BUS 526	Marketing for Sustainability	3
BUS 527	Digital Marketing	3
BUS 528	Sports Marketing	3
BUS 529	Product Design and Development	3
BUS 576	Brand Design	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Nonprofit Management

Select four courses from the following:

BUS 509	Strategic Fundraising	3
BUS 514	Accounting and Financial Controls for the Nonprofit Organization	3
BUS 515	Social Venture Management	3
BUS 517	Marketing for the Nonprofit Organization	3
BUS 518	Financial Management for the Nonprofit Organization	3
BUS 523	Negotiation and Persuasion Strategies	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Operations and Technology Management

Select four courses from the following:

BUS 519	Business Analytics	3
BUS 540	Process Analysis & Quality Management	3
BUS 542	Systems Analysis and Design	3
BUS 543	Decision Modeling and Analytics	3
BUS 545	Project Management	3

BUS 546	Supply Chain Analytics	3
BUS 547	Inventory Management	3
BUS 548	Project Management Processes and Certification	3
BUS 552	Prescriptive Analytics	3
BUS 553	Introduction to R Programming in Business	3
BUS 555	Database Management	3
BUS 556	Distribution Center Operations	3
BUS 558/BUS 463	Introduction to Data Science	3
BUS 559/BUS 469	Object Oriented Analysis and Design	3
BUS 585	IT Audit	3
BUS 586	IT Security	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Strategy

Select four courses from the following:

BUS 508/ENV 501	Innovation for Sustainability	3
BUS 522	Marketing Research	3
BUS 538	Corporate Financial Strategy: M&A and Restructure	3
BUS 543	Decision Modeling and Analytics	3
BUS 544	Managing Innovation and Technology	3
BUS 571	New Venture Creation	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program directors.

Sustainability

Select four courses from the following:

BUS 508/ENV 501	Innovation for Sustainability	3
BUS 510	Economics and Metrics for Sustainability	3
BUS 513	Social Responsibility in Organizations	3
BUS 515	Social Venture Management	3
BUS 526	Marketing for Sustainability	3
BUS 527	Digital Marketing	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Other Certificates:

Customer Experience Management and Analytics courses may include: Strategy and Competition in the Experiential Economy, Creativity, Innovation and Human Centered Design, Designing Innovative Brands that Resonate with Customers, Gaining Customer Insights: Qualitative and Ethnographic Research Methods. Please confirm eligible yearly course offerings with the program director.

Personal Selling courses may include: Personal Selling, Marketing Automation, Marketing Operations, and CRM. Please confirm eligible yearly course offerings with the program director.

Business Internship

A 1-3 credit hour business internship course is available for students who need to receive academic credit to be eligible for an internship due to company policy, visa requirement, or other employment regulations. Students should contact the internship coordinator for more information.

Master of Science in Operations and Technology Management**Degree Outcomes**

The Master of Science in Operations and Technology Management (M.S.O.T.M.) program creates leaders who can manage the complexities of modern enterprises by achieving competitive advantage through the use of operations and technology. The program is STEM designated, and the curriculum is rigorous and quantitative in operations and technology management and integrates theories and applications from business analytics, decision modeling, networking & telecommunications, process modeling, project and quality management, supply chain management, and systems analysis & design.

Learning Goals and Objectives for Master of Science in Operations and Technology Management Graduates

Students who successfully complete all requirements for a MSOTM should be able to:

1. **Core of OTM Knowledge:** Develop and master the knowledge and skills in the fields of Operations and Information Technology necessary to engineer competitive advantage within organizations and apply these skills in real business cases and problems.
 - a. Demonstrate competency in the key fields of Operations and Information Technology when they apply the knowledge in the required courses and practical situations.
 - b. Integrate the knowledge in the subfields of Operations and Information Technology to solve complex business problems and provide value-adding solutions through the improvements of operations and processes and/or the utilization of technology applications.
2. **Analytical and Critical Thinking Skills:** Possess highly developed analytical and critical thinking skills needed to maximize organizational performance and oversee more efficient operations.
 - a. Acquire the analytical and critical thinking skills needed to identify and frame business problems and evaluate the value provided by possible solutions.
 - b. Select appropriate techniques and tools to analyze data and identify insights that aid problem solving and decision-making.
3. **Research Skills:** Possess the research skills necessary for data collection, analysis, interpretation, and reporting results to aid business problem-solving.
 - a. Be proficient in data collection using various venues such as surveys, electronic databases, the internet, library, and other sources.
 - b. Be adept at analyzing data to offer insights for a variety of business problems.
 - c. Be able to prepare and present research reports, appropriately presenting facts, analysis, and conclusions.
4. **Value System:** Evaluate the ethical and societal implications of managerial decisions.
 - a. Identify ethical dilemmas, analyze them from multiple ethical and stakeholder perspectives, and recommend appropriate solutions to these dilemmas.

Admission Requirements

1. Statement of Goals
2. Current resume
3. Two recommendation forms and letters
4. Official Transcripts (from all previously attended academic institutions)
5. A bachelor's degree or its equivalent from an accredited college or university recognized by the University of Portland
6. International Applicants: All foreign transcripts will be evaluated by International Student Services prior to an admission decision
7. Official GMAT (minimum score of 55th percentile in quantitative and 50th percentile in verbal) or GRE (minimum score equivalent to GMAT score) may be required
8. International Applicants: an official score from the TOEFL (minimum score of 88), IELTS (minimum score of 7.0), or Duolingo (minimum score of 110) exam is required.
9. Undergraduate G.P.A of 3.2 (on a scale of 4.0)
10. Undergraduate degree in business or a quantitative-based field of study
11. International Applicants: Proof of financial support will be required to attend the University of Portland, but not required for application review

The GMAT/GRE requirement can be waived if an applicant has significant and relevant work experience; has successfully completed 9 hours of coursework at an AACSB accredited graduate business program with a cumulative G.P.A of 3.0 or higher; has a business-related graduate degree from an AACSB accredited program; has taken six hours of graduate business courses at the University of Portland as a non-degree seeking student and earned a 3.0 cumulative G.P.A. or higher; or for those pursuing the 4+1 program, the GMAT/GRE can be waived if the student earned a 3.2 cumulative G.P.A. in a quantitative major. It is strongly recommended that applicants have two to three years of professional experience after their bachelor's degree to fully benefit from the program.

4+1 Program & Admission Requirements

1. Open to University of Portland juniors or seniors who complete the above application requirements.
2. Please note, a conditional admission of acceptance is given until a degree awarding transcript with G.P.A. verification is submitted to the Graduate School.

MSOTM Degree Requirements

For M.S.O.T.M. candidates who do not have an academic or professional OTM background, BUS 505 *Introduction to OTM*, will be required. M.S.O.T.M. students who do not have a business background will be required to successfully complete two online Harvard tutorials: *Finance* and *Financial Accounting*.

Students will complete 30 credit hours of specialized coursework in operations and technology management including four common courses (12 credit hours); and six courses in a specific track (18 credit hours). Students interested in focusing on a specific field can choose a track in one of the following areas: operations and technology management, business analytics, operations and supply chain management, or information technology management. By choosing a track, students will be required to take six courses in one of the tracks.

Prerequisite—3 credit hours

BUS 505	Introduction to Operations & Technology Management	3

Common Courses—12 credit hours

BUS 519	Business Analytics	3
BUS 540	Process Analysis & Quality Management	3
BUS 543	Decision Modeling and Analytics	3
BUS 545	Project Management	3

Tracks—18 credit hours***Operations and Technology Management Track***

Select six courses from the following:

BUS 542	Systems Analysis and Design	3
BUS 546	Supply Chain Analytics	3
BUS 547	Inventory Management	3
BUS 548	Project Management Processes and Certification	3
BUS 552	Prescriptive Analytics	3
BUS 553	Introduction to R Programming in Business	3
BUS 555	Database Management	3
BUS 556	Distribution Center Operations	3
BUS 558/BUS 463	Introduction to Data Science	3
BUS 559/BUS 469	Object Oriented Analysis and Design	3
BUS 580	Strategic Issues and Applications in Management	3
BUS 585	IT Audit	3
BUS 586	IT Security	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the track requirements. Please confirm eligible yearly course offerings with the program director.

Business Analytics Track

Select six courses from the following:

BUS 519	Business Analytics	3
BUS 543	Decision Modeling and Analytics	3
BUS 552	Prescriptive Analytics	3
BUS 553	Introduction to R Programming in Business	3
BUS 555	Database Management	3
BUS 558/BUS 463	Introduction to Data Science	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the track requirements. Please confirm eligible yearly course offerings with the program director.

Operations and Supply Chain Management Track

Required Courses - 12 credit hours

BUS 519	Business Analytics	3
BUS 540	Process Analysis & Quality Management	3
BUS 543	Decision Modeling and Analytics	3

BUS 545	Project Management	3

Select two elective courses from the following - 6 credit hours

BUS 542	Systems Analysis and Design	3
BUS 546	Supply Chain Analytics	3
BUS 547	Inventory Management	3
BUS 552	Prescriptive Analytics	3
BUS 555	Database Management	3
BUS 556	Distribution Center Operations	3
BUS 559/BUS 469	Object Oriented Analysis and Design	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the track requirements. Please confirm eligible yearly course offerings with the program director.

Information Technology Management Track

Select six courses from the following:

BUS 542	Systems Analysis and Design	3
BUS 548	Project Management Processes and Certification	3
BUS 553	Introduction to R Programming in Business	3
BUS 555	Database Management	3
BUS 558/BUS 463	Introduction to Data Science	3
BUS 559/BUS 469	Object Oriented Analysis and Design	3
BUS 585	IT Audit	3
BUS 586	IT Security	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the track requirements. Please confirm eligible yearly course offerings with the program director.

Master of Science in Finance, M.S.

Brian Adams, Ph.D., director

Degree Outcomes

Master of science in finance programs are designed to provide specialized skills for those interested in careers in corporate finance, investments, financial analysis, and/or risk management. The master of science in finance program is STEM designated and has a rigorous and quantitative curriculum in finance that integrates theories and applications from economics, accounting, mathematics, strategy, and other fields.

Learning Goals and Objectives for Master of Science in Finance

Students who successfully complete all requirements for a Master of Science in Finance should be able to:

1. **Core of Finance Knowledge:** Demonstrate mastery of the critical areas in the field of finance.
 - a. Demonstrate competency in the key fields of corporate finance, investments, banking and financial institutions, and risk management.

- b. Integrate their knowledge in these key fields to solve complex problems.
- 2. **Analytical Skills:** Demonstrate analytical and critical thinking skills needed by upper-level finance managers.
 - a. Build and analyze financial reports.
 - b. Craft strategic and tactical financial plans.
- 3. **Research Skills:** Demonstrate research skills necessary to study complex financial/economic problems.
 - a. Employ appropriate statistical/econometric techniques to identify and evaluate complex financial problems.
 - b. Articulate and defend their financial analyses and recommend solutions to upper level managers and other stakeholders.
- 4. **Value System:** Understand the importance of ethical financial governance to the sustainability of business enterprises, and the impact of their decisions on all stakeholders.

Admission Requirements

- 1. Statement of Goals
- 2. Current resume
- 3. Two recommendation forms and letters
- 4. Official transcripts (from all previously attended academic institutions)
- 5. A bachelor's degree or its equivalent from an accredited college or university recognized by the University of Portland
- 6. International Applicants: All foreign degrees will be evaluated by International Student Services prior to an admission decision
- 7. Undergraduate GPA of 3.2 or higher (on a scale of 4.0)
- 8. Official GMAT (Minimum quantitative score in the 55 percentile and verbal score of 50 percentile) or GRE (score equivalent to GMAT score) may be required
- 9. International Applicants: an official score from the TOEFL (minimum score of 88), IELTS (minimum score of 7.0), or Duolingo (minimum score of 110) exam is required.
- 10. International Applicants: Proof of financial support will be required to attend the University of Portland, but is not required for application review

The GMAT/GRE requirement can be waived if an applicant has significant and relevant work experience (at least three years); has successfully completed 9 hours of coursework at an AACSB accredited graduate business program with a cumulative G.P.A. of 3.0 or higher; has a business-related graduate degree from an AACSB accredited program; has taken six hours of graduate business courses at the University of Portland as a non-degree seeking student and earned a 3.0 cumulative G.P.A. or higher; has earned a CFP, CPA, CFA or JD professional designations; or for those pursuing the MSF as part of the 4+1 program, the GMAT/GRE can be waived if the student earned a 3.2 cumulative GPA in a quantitative major. It is strongly recommended that applicants have two to three years of professional experience after their bachelor's degree to fully benefit from the program.

4+1 Program & Admission Requirements

- 1. Open to University of Portland juniors or seniors who complete the above application requirements.
- 2. Please note, a conditional admission of acceptance is given until a degree awarding transcript with G.P.A. verification is submitted to the Graduate School.

M.S.F. Degree Requirements

Common body of knowledge prerequisites (CBK): The prerequisite courses provide incoming M.S.F. students with the basic knowledge necessary for graduate-level course work in the Pamplin School of Business. Students without the necessary background may take M.B.A. equivalent classes to fulfill the CBK requirements. The number of prerequisite courses required will be determined by the M.B.A. program director after reviewing the student's previous academic record. However, all students must take BUS 500 (Statistical and Quantitative Analysis) or pass a statistics waiver exam in their first two semesters in the program. A student passing this exam will have the BUS 500 class waived from their course requirements. Please note

that students are expected to have some familiarity with statistics and a basic proficiency with Excel applications before entering the BUS 500 class.

Students may be waived from one or more of the core courses if they have completed comparable courses from an AACSB-accredited school with a grade of B or better within eight years of acceptance to the M.S.F. program. If a student has coursework from a non-AACSB accredited school, it will be reviewed for acceptability by the M.B.A. program director.

Common body of knowledge (CBK) requirements include: Financial Accounting, Managerial Accounting, Principles of Microeconomics, and Principles of Macroeconomics.

Students can choose one of two tracks: a thesis option or a non-thesis option.

Students must complete 30 credit hours (ten courses) of finance coursework and must satisfy the common body of knowledge (CBK) required of the master of science in finance program.

Non-thesis Option

A minimum of 30 credit hours beyond the common body of knowledge.

Prerequisite — 3 credit hours

BUS 500	Statistical and Quantitative Analysis	3

Required Courses — 15 credit hours

BUS 530	Corporate Finance	3
BUS 531	International Finance	3
BUS 533	Financial Markets and Institutions	3
BUS 534	Derivatives and Risk Management	3
BUS 563	Financial Statement Analysis	3

BUS 530; if waived based on completion of three finance courses, students may substitute any finance elective.

Electives — 15 credit hours

Select 15 credit hours from the following:

BUS 519	Business Analytics	3
BUS 535	Sports Finance & Sponsorship	3
BUS 536	Personal Financial Planning	3
BUS 537	Applied Financial and Economic Forecasting	3
BUS 538	Corporate Financial Strategy: M&A and Restructure	3
BUS 539	Research Methods in Finance	3
BUS 543	Decision Modeling and Analytics	3
BUS 545	Project Management	3
BUS 552	Prescriptive Analytics	3
BUS 555	Database Management	3
BUS 561	Advanced Real Estate Finance	3
BUS 562	Real Estate Finance	3
BUS 564	Macro Economics in the Global Economy	3
BUS 567	Applied Portfolio Management	3

BUS 568	Income Tax Planning	3
BUS 574	New Venture Finance and Accounting	3
BUS 590	Directed Study	Variable

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

No more than three credit hours may be taken in directed study.

Thesis Option

A minimum of 27 credit hours beyond the common body of knowledge.

Prerequisite — 3 credit hours

BUS 500	Statistical and Quantitative Analysis	3

Required Courses — 15 credit hours

BUS 530	Corporate Finance	3
BUS 531	International Finance	3
BUS 533	Financial Markets and Institutions	3
BUS 534	Derivatives and Risk Management	3
BUS 563	Financial Statement Analysis	3

BUS 530; if waived based on completion of three finance courses, students may substitute any finance elective.

Electives — 12 credit hours

Select four courses from the following:

BUS 519	Business Analytics	3
BUS 535	Sports Finance & Sponsorship	3
BUS 536	Personal Financial Planning	3
BUS 537	Applied Financial and Economic Forecasting	3
BUS 538	Corporate Financial Strategy: M&A and Restructure	3
BUS 539	Research Methods in Finance	3
BUS 545	Project Management	3
BUS 543	Decision Modeling and Analytics	3
BUS 552	Prescriptive Analytics	3
BUS 555	Database Management	3
BUS 561	Advanced Real Estate Finance	3
BUS 562	Real Estate Finance	3
BUS 564	Macro Economics in the Global Economy	3
BUS 567	Applied Portfolio Management	3
BUS 568	Income Tax Planning	3
BUS 574	New Venture Finance and Accounting	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Thesis — 3 credit hours

BUS 599	Thesis	Variable

The thesis will follow the guidelines provided by the Graduate School of the University of Portland. Registration of BUS 599x is required for any graduate student who has received the grade of IP in BUS 599.

M.B.A./M.S.F. Dual Degree

Degree Outcomes

Please see “Degree Outcomes” and “Learning Goals and Objectives” in the M.B.A.253 and M.S.F.263 sections.

Degree & Admission Requirements

The Pamplin School of Business offers a dual degree program of master of business administration and master of science in finance, or M.B.A./M.S.F. Taken separately, the M.B.A. and M.S.F. degrees require a total of 69 credit hours. The dual degree requires a minimum of 60 credit hours. The degrees will be awarded when the requirements for both programs are fulfilled. The student earning the dual degree will receive two degrees: an M.B.A. degree with a specialization in finance, and an M.S.F. degree. Students take 33 M.B.A. credit hours and 27 M.S.F. credit hours.

Applicants to the program are encouraged to submit a single application for the dual degree. The admission requirements for the M.B.A.253 or the Master Science in Finance MS263 are listed in the Graduate School section for each of these programs.

M.B.A. Courses to be taken for the dual degree — 33 credit hours

Prerequisite — 3 credit hours

BUS 500	Statistical and Quantitative Analysis	3

BUS 500 may be waived via exam.

Values Perspective — 3 credit hours

BUS 512	Leadership and Higher Level Management	3

Values Perspective Elective — 3 credit hours

Select one course from the following:

BUS 508/ENV 501	Innovation for Sustainability	3
BUS 510	Economics and Metrics for Sustainability	3
BUS 511	Cross-Cultural Management and Ethics	3
BUS 513	Social Responsibility in Organizations	3
BUS 515	Social Venture Management	3

Required Core Courses — 15 credit hours

BUS 501	Economic Analysis	3
BUS 505	Introduction to Operations & Technology Management	3
BUS 506	Accounting Information for Decision Makers	3
BUS 520	Applied Marketing Strategies	3
BUS 530	Corporate Finance	3

BUS 501: if waived based on completion of microeconomics and macroeconomics, students can substitute any business elective.

BUS 505: if waived based on completion of three OTM courses including operations management, students may substitute any OTM elective.

BUS 506: if waived based on completion of managerial and financial accounting, students may substitute an accounting elective; students who are CPAs may substitute any business elective.

BUS 520: if waived based on completion of three marketing courses, students may substitute any marketing elective.

BUS 530: if waived based on completion of three finance courses, students may substitute any finance elective.

Capstone Course — 3 credit hours

BUS 580	Strategic Issues and Applications in Management	3

Electives — 6 credit hours

M.S.F. Courses to be taken for the dual degree — 27 credit hours

Required M.S.F. Courses — 12 credit hours

BUS 531	International Finance	3
BUS 533	Financial Markets and Institutions	3
BUS 534	Derivatives and Risk Management	3
BUS 563	Financial Statement Analysis	3

Electives — 15 credit hours

Select five courses from the following:

BUS 519	Business Analytics	3
BUS 535	Sports Finance & Sponsorship	3
BUS 536	Personal Financial Planning	3
BUS 537	Applied Financial and Economic Forecasting	3
BUS 538	Corporate Financial Strategy: M&A and Restructure	3
BUS 539	Research Methods in Finance	3
BUS 543	Decision Modeling and Analytics	3
BUS 545	Project Management	3
BUS 552	Prescriptive Analytics	3
BUS 555	Database Management	3
BUS 561	Advanced Real Estate Finance	3
BUS 562	Real Estate Finance	3
BUS 564	Macro Economics in the Global Economy	3
BUS 567	Applied Portfolio Management	3
BUS 568	Income Tax Planning	3
BUS 574	New Venture Finance and Accounting	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

M.B.A. in Nonprofit Management

Brian Adams, Ph.D., director

Degree Outcomes

The M.B.A. in Nonprofit Management provides nonprofit professionals a cohort program combining the best managerial and leadership skills taught in our traditional M.B.A. with the specialized content necessary to successfully manage nonprofit organizations. The program gives students the skills, knowledge, and perspectives necessary to generate value in the nonprofit sector and to help nonprofits meet the current management and leadership challenges of the 21st century.

Learning Goals and Objectives for the M.B.A. in Nonprofit Management

Students who successfully complete all requirements for a Master of Business Administration in Nonprofit Management should be able to:

1. **Core of Business Knowledge:** Demonstrate a broad core of business knowledge and be able to integrate and apply this knowledge in the nonprofit sector.
 - a. Demonstrate competency in the underlying concepts, theory and tools taught in the core curriculum of our program in nonprofit management.
 - b. Be able to use their knowledge of different business disciplines to identify, analyze, and recommend solutions to complex problems requiring interdisciplinary and global perspectives.
 - c. Be familiar with how the unique circumstances of the nonprofit sector impact decisions made by general managers regarding funding, human resources, and other aspects of a nonprofit's value creation activities.
2. **Analytical Skills:** Possess analytical, research, and critical thinking skills needed by middle and upper-level managers in the nonprofit sector.
 - a. Acquire the competencies needed to identify, analyze, and evaluate alternative solutions to business problems in the nonprofit sector.
 - b. Have the ability to write and present comprehensive research reports/briefs and present facts, analysis and conclusions relevant to issues in the nonprofit sector.
3. **Leadership Competencies:** Possess the interpersonal competencies needed to be effective managers and leaders in the nonprofit sector.
 - a. Be skilled at oral and written communication.
 - b. Be skilled at leadership; including motivation, negotiation and management of conflict.
 - c. Be able to communicate and work effectively in a diverse work setting.
4. **Value System:** Be able to evaluate the ethical and societal implications of managerial decisions within the nonprofit sector.
 - a. Identify ethical dilemmas facing nonprofit enterprises, and analyze them from multiple ethical and stakeholder perspectives, and recommend appropriate resolutions to those dilemmas.
 - b. Understand the overarching issues of corporate social responsibility and sustainability.
 - c. Be able to identify and evaluate the economic, social and environmental trade-offs resulting from decisions in the nonprofit sector.

Admission Requirements

1. Statement of Goals
2. Current resume (minimum of two years of work experience is strongly encouraged)
3. Two recommendation forms and letters
4. Official transcripts (from all previously attended academic institutions)

5. A bachelor's degree or its equivalent from an accredited college or university recognized by the University of Portland
6. International Applicants: All foreign degrees will be evaluated by International Student Services prior to an admission decision
7. Undergraduate GPA of 3.0 or higher (on a scale of 4.0)
8. Official GMAT (minimum score of 550 or higher) or GRE (minimum score equivalent to a GMAT score of 550) may be required
9. International Applicants: an official score from the TOEFL (minimum score of 88), IELTS (minimum score of 7.0), or Duolingo (minimum score of 110) exam is required.
10. International Applicants: Proof of financial support will be required to attend the University of Portland, but is not required for application review

The GMAT/GRE requirement can be waived if an applicant has significant and relevant work experience (at least three years); has successfully completed 9 hours of coursework at an AACSB accredited graduate business program with a cumulative G.P.A. of 3.0 or higher; has a business-related graduate degree from an AACSB accredited program; or has taken six hours of graduate business courses at the University of Portland as a non-degree seeking student and earned a 3.0 cumulative G.P.A. or higher. It is strongly recommended that applicants have two to three years of professional experience after their bachelor's degree to fully benefit from the program.

Honors Pledge

The faculty of the Pamplin School of Business encourages students to acknowledge the ethical components of teaching and learning; essential factors in fulfilling the University's mission in the classroom. Students are asked to reflect upon the core value of academic integrity and make this an integral part of their work at the University. Students are asked to sign an honors pledge and attach it to all submitted course work to affirm the integrity of their scholarship to all concerned.

Cohort Program

The M.B.A. in Nonprofit Management is a cohort program; in which a small group of students take the program together in lockstep. Thus, the entire group shares the same classroom and curricular experience. A cohort gives the student the opportunity to work with similar professionals and to connect and share an experience with them that transcends the classroom. By working together in a cohort, students build a network of adult learners who share a commitment to the nonprofit field. In certain classes, the M.B.A. cohort will also be blended with students in our traditional M.B.A. program.

Degree Requirements

The M.B.A. in Nonprofit Management requires students to take six consecutive semesters of classwork with six credit hours (two classes) offered each semester. A total of 36 credit hours will be completed before graduation and students will receive an M.B.A. degree.

Nonprofit Core Classes — 18 credit hours

The nonprofit core introduces students to courses specific in the nonprofit field including accounting for the nonprofit, management and social entrepreneurship, marketing for the nonprofit, financial management for the nonprofit, negotiations, and strategic fundraising.

BUS 509	Strategic Fundraising	3
BUS 514	Accounting and Financial Controls for the Nonprofit Organization	3
BUS 515	Social Venture Management	3
BUS 517	Marketing for the Nonprofit Organization	3
BUS 518	Financial Management for the Nonprofit Organization	3
BUS 523	Negotiation and Persuasion Strategies	3

MBA Core — 9 credit hours

BUS 500	Statistical and Quantitative Analysis	3

BUS 505	Introduction to Operations & Technology Management	3
BUS 510	Economics and Metrics for Sustainability	3

MBA Electives — 9 credit hours

Post-baccalaureate Business Certificates

The Pamplin School of Business offers a Post-baccalaureate Business Certificate program for students who would like to utilize an interesting variety of courses in many specialized areas. Our faculty created a curriculum that provides a unique opportunity for post-baccalaureate students to choose a concentration, gain additional training, and develop new competencies by completing the Post-baccalaureate Business Certificate program.

Learning Goals and Objectives for PSOB Certificate Programs

Students who successfully complete all requirements for a certificate should be able to:

1. Analytical Skills: Possess analytical, research, and critical thinking skills needed by middle and upper-level managers.
 - a. Acquire the competencies needed to identify, analyze, and evaluate alternative solutions to business problems, which could include writing and presenting research reports.
2. Leadership Competencies: Possess the interpersonal competencies needed to be effective managers and leaders.
 - a. Be skilled at oral and written communication.
3. Value System: Evaluate the ethical and societal implications of managerial decisions.
 - a. Understand the overarching issues of corporate social responsibility and sustainability.

Admission Requirements

To be admitted to this program, students must hold a bachelor's degree from an AACSB accredited institution and submit the following application components:

1. Current resume
2. Official transcripts (from all previously attended academic institutions) (minimum GPA of 3.0 or higher)
3. Online application form
4. Statement of goals
5. International Applicants: All foreign degrees will be evaluated by International Student Services prior to an admission decision
6. International Applicants: an official score from the TOEFL (minimum score of 88), IELTS (minimum score of 7.0), or Duolingo (minimum score of 110) exam is required.

Certificate Requirements

Students complete a twelve-credit hour program in one of the following areas: business analytics, customer experience and management, entrepreneurship and design management, finance, health care management, marketing, nonprofit management, operations and technology management, personal selling, strategy, or sustainability, and then receive a post-baccalaureate certificate in that area. Students may also create a general program where they survey courses from different business disciplines. There are distance-learning options for some courses in the certificate program.

Business Analytics - 12 credit hours

BUS 519	Business Analytics	3
BUS 543	Decision Modeling and Analytics	3
BUS 552	Prescriptive Analytics	3
BUS 555	Database Management	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Entrepreneurship and Design Management - 12 credit hours

Select four courses from the following:

BUS 510	Economics and Metrics for Sustainability	3
BUS 512	Leadership and Higher Level Management	3
BUS 513	Social Responsibility in Organizations	3
BUS 515	Social Venture Management	3
BUS 523	Negotiation and Persuasion Strategies	3
BUS 526	Marketing for Sustainability	3
BUS 544	Managing Innovation and Technology	3
BUS 571	New Venture Creation	3
BUS 572	Family Business Planning	3
BUS 573	International Ventures	3
BUS 574	New Venture Finance and Accounting	3
BUS 576	Brand Design	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Finance - 12 credit hours

Select four courses from the following:

BUS 519	Business Analytics	3
BUS 530	Corporate Finance	3
BUS 531	International Finance	3
BUS 532	Security and Portfolio Analysis	3
BUS 533	Financial Markets and Institutions	3
BUS 534	Derivatives and Risk Management	3
BUS 535	Sports Finance & Sponsorship	3
BUS 536	Personal Financial Planning	3
BUS 537	Applied Financial and Economic Forecasting	3
BUS 538	Corporate Financial Strategy: M&A and Restructure	3
BUS 539	Research Methods in Finance	3
BUS 543	Decision Modeling and Analytics	3
BUS 545	Project Management	3
BUS 552	Prescriptive Analytics	3
BUS 555	Database Management	3

BUS 561	Advanced Real Estate Finance	3
BUS 562	Real Estate Finance	3
BUS 564	Macro Economics in the Global Economy	3
BUS 567	Applied Portfolio Management	3
BUS 568	Income Tax Planning	3
BUS 574	New Venture Finance and Accounting	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Healthcare Management - 12 credit hours

Select four courses from the following:

BUS 515	Social Venture Management	3
BUS 517	Marketing for the Nonprofit Organization	3
BUS 519	Business Analytics	3
NRS 602	Leadership in a Complex Health care Environment	3
NRS 614	Health Organization Systems & Resource Management	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Marketing - 12 credit hours

Select four courses from the following:

BUS 520	Applied Marketing Strategies	3
BUS 521	Consumer Behavior	3
BUS 522	Marketing Research	3
BUS 523	Negotiation and Persuasion Strategies	3
BUS 524	Brand Promotions Management	3
BUS 526	Marketing for Sustainability	3
BUS 527	Digital Marketing	3
BUS 528	Sports Marketing	3
BUS 529	Product Design and Development	3
BUS 576	Brand Design	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Nonprofit Management - 12 credit hours

Select four courses from the following:

BUS 509	Strategic Fundraising	3
BUS 514	Accounting and Financial Controls for the Nonprofit Organization	3

BUS 515	Social Venture Management	3
BUS 517	Marketing for the Nonprofit Organization	3
BUS 518	Financial Management for the Nonprofit Organization	3
BUS 523	Negotiation and Persuasion Strategies	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Operations and Technology Management - 12 credit hours

Select four courses from the following:

BUS 505	Introduction to Operations & Technology Management	3
BUS 519	Business Analytics	3
BUS 540	Process Analysis & Quality Management	3
BUS 542	Systems Analysis and Design	3
BUS 543	Decision Modeling and Analytics	3
BUS 545	Project Management	3
BUS 546	Supply Chain Analytics	3
BUS 547	Inventory Management	3
BUS 548	Project Management Processes and Certification	3
BUS 552	Prescriptive Analytics	3
BUS 553	Introduction to R Programming in Business	3
BUS 555	Database Management	3
BUS 556	Distribution Center Operations	3
BUS 558/BUS 463	Introduction to Data Science	3
BUS 559/BUS 469	Object Oriented Analysis and Design	3
BUS 585	IT Audit	3
BUS 586	IT Security	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Strategy - 12 credit hours

Select four courses from the following:

BUS 508/ENV 501	Innovation for Sustainability	3
BUS 522	Marketing Research	3
BUS 538	Corporate Financial Strategy: M&A and Restructure	3

BUS 543	Decision Modeling and Analytics	3
BUS 544	Managing Innovation and Technology	3
BUS 571	New Venture Creation	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Sustainability - 12 credit hours

Select four courses from the following:

BUS 508/ENV 501	Innovation for Sustainability	3
BUS 510	Economics and Metrics for Sustainability	3
BUS 513	Social Responsibility in Organizations	3
BUS 515	Social Venture Management	3
BUS 526	Marketing for Sustainability	3
BUS 527	Digital Marketing	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Other Certificates:

Customer Experience Management and Analytics courses may include: Strategy and Competition in the Experiential Economy, Creativity, Innovation and Human Centered Design, Designing Innovative Brands that Resonate with Customers, Gaining Customer Insights: Qualitative and Ethnographic Research Methods. Please confirm eligible yearly course offerings with the program director.

Personal Selling courses may include: Personal Selling, Marketing Automation, Marketing Operations, and CRM. Please confirm eligible yearly course offerings with the program director.

Post Graduate Business Certificates

The Pamplin School of Business offers a post-graduate business certificate program for students who would like to utilize an interesting variety of courses in many specialized areas. Our faculty created a curriculum that provides a unique opportunity for post-graduate students to apply their business experiences in a professional learning environment. Students can update an older graduate business degree, gain additional training, and develop new competencies by completing the post-graduate business certificate program.

Learning Goals and Objectives for PSOB Certificate Programs

Students who successfully complete all requirements for a certificate should be able to:

1. Analytical Skills: Possess analytical, research, and critical thinking skills needed by middle and upper-level managers.
 - a. Acquire the competencies needed to identify, analyze, and evaluate alternative solutions to business problems, which could include writing and presenting research reports.
2. Leadership Competencies: Possess the interpersonal competencies needed to be effective managers and leaders.
 - a. Be skilled at oral and written communication.
3. Value System: Evaluate the ethical and societal implications of managerial decisions.
 - a. Understand the overarching issues of corporate social responsibility and sustainability.

Admission Requirements

To be admitted to this program, students must hold a graduate business degree from an accredited institution and submit the following application components

1. Current resume
2. Official transcripts (from all previously attended academic institutions) (minimum GPA of 3.0 or higher)
3. Online application form
4. Statement of goals
5. International Applicants: All foreign degrees will be evaluated by International Student Services prior to an admission decision
6. International Applicants: an official score from the TOEFL (minimum score of 88), IELTS (minimum score of 7.0), or Duolingo (minimum score of 110) exam is required.

Certificate Requirements

Students complete a twelve-credit hour program in one of the following areas: business analytics, customer experience, entrepreneurship and design management, finance, personal selling, operations and technology management, strategy, or sustainability, and then receive a post-baccalaureate certificate in that area. Students may also create a general program where they survey courses from different business disciplines. There are distance-learning options for some courses in the certificate program.

Business Analytics - 12 credit hours

BUS 519	Business Analytics	3
BUS 543	Decision Modeling and Analytics	3
BUS 552	Prescriptive Analytics	3
BUS 555	Database Management	3

Entrepreneurship and Design Management - 12 credit hours

Select four courses from the following:

BUS 510	Economics and Metrics for Sustainability	3
BUS 512	Leadership and Higher Level Management	3
BUS 513	Social Responsibility in Organizations	3
BUS 515	Social Venture Management	3
BUS 523	Negotiation and Persuasion Strategies	3
BUS 526	Marketing for Sustainability	3
BUS 544	Managing Innovation and Technology	3
BUS 571	New Venture Creation	3
BUS 572	Family Business Planning	3
BUS 573	International Ventures	3
BUS 574	New Venture Finance and Accounting	3
BUS 576	Brand Design	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Finance - 12 credit hours

Select four courses from the following:

BUS 519	Business Analytics	3
BUS 530	Corporate Finance	3

BUS 531	International Finance	3
BUS 532	Security and Portfolio Analysis	3
BUS 533	Financial Markets and Institutions	3
BUS 534	Derivatives and Risk Management	3
BUS 535	Sports Finance & Sponsorship	3
BUS 536	Personal Financial Planning	3
BUS 537	Applied Financial and Economic Forecasting	3
BUS 538	Corporate Financial Strategy: M&A and Restructure	3
BUS 539	Research Methods in Finance	3
BUS 543	Decision Modeling and Analytics	3
BUS 545	Project Management	3
BUS 552	Prescriptive Analytics	3
BUS 555	Database Management	3
BUS 561	Advanced Real Estate Finance	3
BUS 562	Real Estate Finance	3
BUS 564	Macro Economics in the Global Economy	3
BUS 567	Applied Portfolio Management	3
BUS 568	Income Tax Planning	3
BUS 574	New Venture Finance and Accounting	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Healthcare Management - 12 credit hours

Select four courses from the following:

BUS 515	Social Venture Management	3
BUS 517	Marketing for the Nonprofit Organization	3
BUS 519	Business Analytics	3
NRS 602	Leadership in a Complex Health care Environment	3
NRS 614	Health Organization Systems & Resource Management	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Marketing - 12 credit hours

Select four courses from the following:

BUS 520	Applied Marketing Strategies	3
BUS 521	Consumer Behavior	3

BUS 522	Marketing Research	3
BUS 523	Negotiation and Persuasion Strategies	3
BUS 524	Brand Promotions Management	3
BUS 526	Marketing for Sustainability	3
BUS 527	Digital Marketing	3
BUS 528	Sports Marketing	3
BUS 529	Product Design and Development	3
BUS 576	Brand Design	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Nonprofit Management - 12 credit hours

Select four courses from the following:

BUS 509	Strategic Fundraising	3
BUS 514	Accounting and Financial Controls for the Nonprofit Organization	3
BUS 515	Social Venture Management	3
BUS 517	Marketing for the Nonprofit Organization	3
BUS 518	Financial Management for the Nonprofit Organization	3
BUS 523	Negotiation and Persuasion Strategies	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Operations and Technology Management - 12 credit hours

Select four courses from the following:

BUS 505	Introduction to Operations & Technology Management	3
BUS 519	Business Analytics	3
BUS 540	Process Analysis & Quality Management	3
BUS 542	Systems Analysis and Design	3
BUS 543	Decision Modeling and Analytics	3
BUS 545	Project Management	3
BUS 546	Supply Chain Analytics	3
BUS 547	Inventory Management	3
BUS 548	Project Management Processes and Certification	3
BUS 552	Prescriptive Analytics	3
BUS 553	Introduction to R Programming in Business	3
BUS 555	Database Management	3

BUS 556	Distribution Center Operations	3
BUS 558/BUS 463	Introduction to Data Science	3
BUS 559/BUS 469	Object Oriented Analysis and Design	3
BUS 585	IT Audit	3
BUS 586	IT Security	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Strategy - 12 credit hours

Select four courses from the following:

BUS 508/ENV 501	Innovation for Sustainability	3
BUS 522	Marketing Research	3
BUS 538	Corporate Financial Strategy: M&A and Restructure	3
BUS 543	Decision Modeling and Analytics	3
BUS 544	Managing Innovation and Technology	3
BUS 571	New Venture Creation	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Sustainability - 12 credit hours

BUS 508/ENV 501	Innovation for Sustainability	3
BUS 510	Economics and Metrics for Sustainability	3
BUS 513	Social Responsibility in Organizations	3
BUS 515	Social Venture Management	3
BUS 526	Marketing for Sustainability	3
BUS 527	Digital Marketing	3

One time graduate course offerings in BUS (designated 591/592) may fulfill the certificate requirements. Please confirm eligible yearly course offerings with the program director.

Other Certificates:

Customer Experience Management and Analytics courses may include: Strategy and Competition in the Experiential Economy, Creativity, Innovation and Human Centered Design, Designing Innovative Brands that Resonate with Customers, Gaining Customer Insights: Qualitative and Ethnographic Research Methods. Please confirm eligible yearly course offerings with the program director.

Personal Selling courses may include: Personal Selling, Marketing Automation, Marketing Operations, and CRM. Please confirm eligible yearly course offerings with the program director.

Communication Studies

Jennette P. Lovejoy, Ph.D., director

Faculty: Dare, Fletcher, Kerssen-Griep, Lattin, Nelson-Marsh

The Department of Communication Studies offers graduate programs leading to master of arts and master of science degrees. Both programs prepare students broadly for professional advancement or for doctoral academic work.

Areas of emphasis in the M.A. program include rhetorical studies, journalism, and organizational communication. The M.S. program is a specialized course of study in management communication offered in conjunction with the Dr. Robert B. Pamplin, Jr. School of Business Administration. Combining advanced academic and professional study within communication and business, the M.S. is designed to educate public relations, human resources, and other organizational professionals regarding communication's important role in developing an organization's personnel and public messaging.

Admission Requirements

1. Statement of Goals
2. Current Resume
3. Three Letters of Recommendation
4. Official Transcripts (from all previously attended academic institutions)
5. A bachelor's degree or its equivalent from an accredited college or university recognized by the University of Portland
6. International Applicants: All foreign degrees will be evaluated by International Student Services prior to an admission decision
7. Undergraduate G.P.A. of 3.0 or higher (on a 4.0 scale)
8. Official GRE test score: A verbal score in the 60th percentile or higher
9. International Applicants: an official score from the TOEFL (minimum score of 100), IELTS (minimum score of 7.5), or Duolingo (minimum score of 120) exam is required.
10. International Applicants: Proof of financial support will be required to attend the University of Portland, but is not required for application review.

At the discretion of the graduate program director, a higher grade point average may compensate for a GRE result less than the stated minimum, and conversely, a superior GRE score may compensate for a G.P.A. lower than the stated criterion.

Communication, M.A.

Learning Outcomes

Students who successfully complete all requirements for a master's degree in the Department of Communication Studies should be able to:

1. Demonstrate skilled analysis of communication theory and praxis within the dimensions (ethical, social, legal, technological, relational, and/or cultural) most key to the student's chosen primary program focus.
2. Demonstrate appropriate and effective professional writing.
3. Demonstrate skilled independent decision-making relative to communication research and analysis, including abilities to conduct, interpret, and evaluate the quality of research and analytic designs.
4. Demonstrate understanding of ethical values central to the communication discipline.

The M.A. program requires a minimum of 36 credit hours of communication courses, including nine credit hours in core courses and six hours in each of two areas of emphasis. A thesis (with related oral defense) is optional. Students must complete core course requirements with a minimum B average.

Communication M.A. Requirements — 36 credit hours

Required Courses — 9 credit hours

CST 500	Research and Writing	3
CST 510	Communication Theory	3
CST 520	Rhetorical Theory and Criticism	3

Communication Electives — 27 credit hours

In consultation with the graduate program director, students select 12 credit hours (6 credit hours each) in two areas (rhetorical studies, journalism, organizational communication) to emphasize.

Students also select 15 additional credit hours of elective courses in any area of communication.

Program electives include the following:

CST 502	Social Media and Cultures	3
CST 503	Communication Law	3
CST 511	Communication Across Barriers	3
CST 516	Negotiation and Conflict Management	3
CST 525	Radical Relationships: Love, Care, Grief	3
CST 531	Intercultural Communication and Identity	3
CST 532	Gender and International Development	3
CST 535	Advanced Visual Persuasion	3
CST 545	Cinema Storytelling and Cultural Persuasion	3
CST 552	Public Affairs Reporting	3
CST 553/CST 453	Multimedia Journalism	3
CST 593	Advanced Research	Variable
CST 599	Thesis	Variable

One time course offerings, designated CST 591, may fulfill the elective requirements. Please confirm eligible yearly course offerings with the program director.

Thesis Option

If a student chooses to write a thesis, 3-6 credit hours of CST electives may be used for the thesis, CST 599.

Total Credit Hours: 36

Management Communication, M.S.

The M.S. in management communication degree requires a minimum of 36 credit hours of communication and business courses. A thesis (with related oral defense) is optional. Students must complete the core course requirements with a minimum B average.

Learning Outcomes

Students who successfully complete all requirements for a master's degree in the Department of Communication Studies should be able to:

1. Demonstrate skilled analysis of communication theory and praxis within the dimensions (ethical, social, legal, technological, relational, and/or cultural) most key to the student's chosen primary program focus.
2. Demonstrate appropriate and effective professional writing.

3. Demonstrate skilled independent decision-making relative to communication research and analysis, including abilities to conduct, interpret, and evaluate the quality of research and analytic designs.
4. Demonstrate understanding of ethical values central to the communication discipline.
5. Demonstrate appropriate and effective application of communication theory to oral communication practices.
6. Demonstrate ability to integrate communication and business scholarship to solve organizational problems.

Performance Indicators

- Ability to speak in public settings.
- Ability to synthesize communication theories and skills with knowledge about business in marketing or human resources.
- Ability to diagnose and address leadership, team building, interpersonal challenges in work settings.

Management Communication M.S. Requirements — 36 credit hours

Core Courses — 12 credit hours

CST 500	Research and Writing	3
CST 510	Communication Theory	3
CST 533	Critical Perspectives on Work, Labor, and Organizing	3
CST 534	Researching Organizational Life: Identity, Culture, Voice	3

Program Electives: Communication Courses — 12 credit hours

Select from the following:

CST 502	Social Media and Cultures	3
CST 503	Communication Law	3
CST 511	Communication Across Barriers	3
CST 516	Negotiation and Conflict Management	3
CST 525	Radical Relationships: Love, Care, Grief	3
CST 531	Intercultural Communication and Identity	3
CST 532	Gender and International Development	3
CST 535	Advanced Visual Persuasion	3
CST 545	Cinema Storytelling and Cultural Persuasion	3
CST 552	Public Affairs Reporting	3
CST 553/CST 453	Multimedia Journalism	3
CST 581/BUS 581	Advanced Business Communication	3
CST 593	Advanced Research	Variable
CST 599	Thesis	Variable

CST 581, Advanced Business Communication must be completed unless the student can demonstrate professional level competence in business communication. With the approval of the advisor, other courses in communication and business may be substituted for those listed.

One time course offerings, designated CST 591, may fulfill the elective requirements. Please confirm eligible yearly course offerings with the program director.

Thesis Option

If a student chooses to write a thesis, 3-6 credit hours of CST electives may be used for the thesis, CST 599.

Program Electives: Business Courses — 12 credit hours

In consultation with their graduate program advisor, students select twelve credit hours of business electives from the following:

One time course offerings, designated BUS 591, may fulfill the business elective requirements. Please confirm eligible yearly course offerings with the program director. BUS 591 electives taught in the past include: Strategy and Competition in the Experiential Economy, Creativity, Innovation and Human Centered Design, Designing Innovative Brands that Resonate with Customers, Gaining Customer Insights: Qualitative and Ethnographic Research Methods.

Human Resources Track

Select four courses from the following:

BUS 511	Cross-Cultural Management and Ethics	3
BUS 512	Leadership and Higher Level Management	3
BUS 513	Social Responsibility in Organizations	3
BUS 515	Social Venture Management	3
BUS 523	Negotiation and Persuasion Strategies	3
BUS 541	Human Resource Management	3
BUS 544	Managing Innovation and Technology	3

One time course offerings, designated BUS 591, may fulfill the elective requirements. Please confirm eligible yearly course offerings with the program director.

Public Relations/Advertising Track

Select four courses from the following:

BUS 517	Marketing for the Nonprofit Organization	3
BUS 520	Applied Marketing Strategies	3
BUS 521	Consumer Behavior	3
BUS 522	Marketing Research	3
BUS 523	Negotiation and Persuasion Strategies	3
BUS 524	Brand Promotions Management	3
BUS 526	Marketing for Sustainability	3
BUS 544	Managing Innovation and Technology	3
BUS 571	New Venture Creation	3

Total Credit Hours: 36

Education

Bruce Weitzel, Ph.D., director

Faculty: Ancil, Beckley, Eifler, Danielson, Flora, Gallegos, Gaudio, Hamilton, Hetherington, Hood, Kalnin, Katz, Morrell, Ralston, Smith, Thompson, Waggoner, Watzke, Weitzel

The School of Education offers advanced professional preparation through the doctor of education (Ed.D.) degree program or the master of education (M.Ed.) degree program, as well as initial teacher preparation for graduate candidates through the master of arts in teaching (M.A.T.) degree program. Professional multidisciplinary studies preparation may be found in the master of arts (M.A.) degree program and preparation for a career in higher education may be found in the master of arts in higher education and student affairs (M.A. H.E.S.A.) degree program. Educators who are licensed to teach may obtain an endorsement or administrator license through the post baccalaureate or post master's certificate programs.

All graduate degree programs within the School of Education are designed to include a sequence of courses and field work that focus on student learning and development, pedagogical knowledge, an understanding of cultural and special needs diversity, the use of technological skills, an integration of foundational theory with practice, a strong emphasis on reflection and inquiry, a research component, and a capstone exit project or thesis.

The School of Education offers courses in professional development for which credit is given but which are not applicable to requirements for degree programs. Such courses are indicated as "continuing education" on individual transcripts.

Federal law requires that all schools of education report required teacher licensure exams and the percentage of graduates from our programs passing these exams. Testing requirements vary depending upon program. Please see the Graduate School Academic Regulations²⁴⁹ section of the *Bulletin* for specific details.

Any School of Education graduate program which includes field work in schools and/or with minors requires a fingerprint clearance.

Program Objectives

The objectives of all programs in the School of Education stem from the mission statement to create teachers and administrators who exhibit the characteristics mentioned in the following shared values and allow these values to guide their practice.

1. Exceptional professional educators are lifelong learners.
2. Exceptional professional educators are empathetic and respectful.
3. Exceptional professional educators communicate and work effectively with others.
4. Exceptional professional educators have a broad knowledge about the diversity of individuals and world around them.
5. Exceptional professional educators have deep knowledge about content.
6. Exceptional professional educators have deep knowledge about how people learn.
7. Exceptional professional educators have deep knowledge and skills necessary to use instruction and the organization of classrooms, schools, and school systems to assist all learners to succeed.
8. Exceptional professional educators fuse theory and practice.

Master's and Doctorate Degree Programs

Admission to the School of Education

The School of Education uses a holistic approach in evaluating application materials. Upon completion of all application materials submitted to the Graduate School, the School of Education associate dean reviews the materials and makes a recommendation to the dean of the Graduate School. The undergraduate cumulative grade point average, along with the appropriate test scores, letters of recommendation, and goals statements are used together to determine a candidate's preparation for admission to a graduate program. The Ed.D., M.A.T., and the post master preliminary administrator licensure programs also require an interview before admission. All doctorate and master's degree applicants must meet the specific requirements of the program of interest. Admission requirements for each program are available through the Graduate School.

Master of Arts in Teaching (M.A.T.)

The master of arts in teaching is an on-campus initial teacher preparation degree program for those who want to obtain P-12 "multiple subjects" (elementary) or "single subject" (secondary) Oregon licensure. This includes coursework for a graduate degree and simultaneous preparation for initial licensure. Candidates may not transfer credits into the program without approval of the associate dean. A total of 36 semester hours is required for this degree.

M.A.T. Learning Outcomes

Candidates for the degree will be able to meet Oregon Teacher Standards and Practices Commission authorization standards:

1. Plan instruction that supports student progress in learning in multiple subject areas and is appropriate for the early childhood, elementary, middle, or high school development levels.
2. Establish a classroom climate conducive to learning.
3. Engage students in planned learning activities.
4. Evaluate, act upon, and report student progress in learning.
5. Exhibit professional behaviors, ethics, and values.

Additionally, the M.A.T. program adheres to the following Interstate Teacher Assessment and Support Consortium (InTASC) standards:

Standard #1: Learner Development – The teacher understands how learners grow and develop, recognizing that patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas, and designs and implements developmentally appropriate and challenging learning experiences.

Standard #2: Learning Differences – The teacher uses understanding of individual differences and diverse cultures and communities to ensure inclusive learning environments that enable each learner to meet high standards.

Standard #3: Learning Environments – The teacher works with others to create environments that support individual and collaborative learning, and that encourage positive social interaction, active engagement in learning, and self motivation.

Standard #4: Content Knowledge – The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and creates learning experiences that make the discipline accessible and meaningful for learners to assure mastery of the content.

Standard #5: Application of Content – The teacher understands how to connect concepts and use differing perspectives to engage learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues.

Standard #6: Assessment – The teacher understands and uses multiple methods of assessment to engage learners in their own growth, to monitor learner progress, and to guide the teacher's and learner's decision making.

Standard #7: Planning for Instruction – The teacher plans instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context.

Standard #8: Instructional Strategies – The teacher understands and uses a variety of instructional strategies to encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways.

Standard #9: Professional Learning and Ethical Practice – The teacher engages in ongoing professional learning and uses evidence to continually evaluate his/her practice, particularly the effects of his/her choices and actions on others (learners, families, other professionals, and the community), and adapts practice to meet the needs of each learner.

Standard #10: Leadership and Collaboration – The teacher seeks appropriate leadership roles and opportunities to take responsibility for student learning, to collaborate with learners, families, colleagues, other school professionals, and community members to ensure learner growth, and to advance the profession.

Advancement to Student Teaching

In the fall semester, MAT candidates complete a part-time student teaching placement and concurrent professional education coursework. In the spring semester, MAT candidates complete a full-time student teaching placement and continue completing the professional education coursework.

No MAT candidate will be able to enter into the Fall semester/student teaching until all program requirements have been completed, including meeting the passing scores set by the Oregon Teacher Standards and Practices Commission on all ORELA tests. Failure to complete all testing requirements by the dates given by the School of Education will result in the candidate having to step out of the program for up to one year. Candidates who must step out of the program may return and continue if all tests are passed by the following May 1st and a student teaching placement can be secured.

Additionally, only those MAT candidates who satisfy the requirements for scholarship and personal qualifications suitable for teaching will advance to student teaching. Candidates must successfully meet the requirements of all coursework while demonstrating academic integrity. In addition, ethical, competent behavior is required during all field work and practica.

The process of advancement to student teaching entails review by the School of Education associate dean and approval by the MAT Teacher Education Committee (MTEC). Ordinarily, clinical placements occur only in districts where MAT candidates do not have personal relationships with employees of the district.

Requirements for MAT candidate advancement to student teaching:

1. Passage of all TSPC approved tests required for licensure.
2. Minimum of 3.00 cumulative G.P.A.
3. A grade of C or better in all courses; candidates who receive a grade of C- or lower in any course must repeat the course.
4. Successful completion of a minimum of 50 hours of field work.
5. Completion of all paperwork and approvals necessary for student teaching.
6. Demonstration of positive professional dispositions.

M.A.T. Admission Requirements

1. Master of Arts in Teaching Statement of Goals.
2. Current resume.
3. Two MAT Recommendation Forms and Letters (one from a supervisor in a professional/academic capacity and another that exhibits evidence of experience with children/youth).
4. Official transcripts (from all previously attended academic institutions).
5. A bachelor's degree or its equivalent from an accredited college or university recognized by the University of Portland
6. International Applicants: All foreign transcripts will be evaluated by International Student Services prior to an admission decision.
7. An undergraduate G.P.A. of 3.0 or higher (on a 4.0 scale).
8. Student Teaching Background Information Form.
9. Desired Teaching Level/Subject Form.
10. International Applicants: an official score from the TOEFL (minimum score of 88), IELTS (minimum score of 7.0), or Duolingo (minimum score of 110) exam is required.
11. Official Test Scores: Multi-Subject (Elementary):
 - ORELA Elementary Education Subtests I and II
 - ORELA Protecting Student and Civil Rights in the Educational Environment Test
12. Official Test Scores: Single-Subject (Secondary):
 - ORELA Subject Area Test
 - ORELA Protecting Student and Civil Rights in the Educational Environment Test
13. International Applicants: Proof of financial support will be required to attend the University of Portland, but is not required for application review.

M.A.T. Degree Requirements - 36 credit hours

ED 529	Summer Learning	1
ED 530	Educating for Sociocultural Diversity and Equity in Education	3
ED 531	Principles of Learning and Development for Equitable Classrooms	3
ED 532	Assessment and Evaluation in Inclusive Classrooms	3
ED 534	Classroom Management for Inclusive Learning Communities	3
ED 535	Literacy Across Curriculum	3
ED 536	Student Teaching Seminar	2
ED 537	Research in Schools	3
ED 538	Master of Arts in Teaching Capstone Project	3
ED 540	Student Teaching	3
ED 541	Student Teaching	3
ED 542	Student Teaching - Advanced	3

Methods Course - 3 credit hours

Select one course from the following:

ED 533	Methods of Teaching and Learning	3
ED 560	Content Methods: Language Arts	3
ED 561	Content Methods: Math	3
ED 572	Content Methods: World Language	3
ED 576	Content Methods: Social Studies	3
ED 577	Content Methods: Science	3

For candidates who have completed the Bachelor of Education degree – Pathway Leading to MAT Licensure, the following coursework is required for the MAT degree.

MAT Degree Requirements - 23 credit hours

ED 532	Assessment and Evaluation in Inclusive Classrooms	3
ED 536	Student Teaching Seminar	2
ED 537	Research in Schools	3
ED 538	Master of Arts in Teaching Capstone Project	3
ED 540	Student Teaching	3
ED 541	Student Teaching	3
ED 542	Student Teaching - Advanced	3

Methods Course - 3 credit hours

Select one course from the following:

ED 533	Methods of Teaching and Learning	3
ED 560	Content Methods: Language Arts	3
ED 561	Content Methods: Math	3
ED 572	Content Methods: World Language	3
ED 576	Content Methods: Social Studies	3
ED 577	Content Methods: Science	3

Practicum Requirements - 4 credit hours

Select from the following:

ED 564	Reading Practicum P-12	3
ED 566	Practicum P-12	Credit arranged.
ED 568	Special Education Practicum P-12	3
ED 569	ESOL Practicum P-12	3

Education Electives - 3 credit hours

3 additional credit hours in graduate-level Education electives are required to reach the minimum 30 credit hours required for the MAT degree.

Master of Education (M.Ed.)

The master of education (M.Ed.) degree is designed for licensed and practicing educators to continue building upon professional knowledge and experience. This advanced preparation program is delivered on the University of Portland campus as well as at other approved off-campus sites. All M.Ed. candidates complete a 15 semester hour core of professional knowledge and research courses. On-campus candidates, in consultation with an academic advisor, choose a specialty option and complete 21 semester hours in educational leadership²⁹⁰, reading intervention²⁸⁹, special education generalist²⁹⁰, English for speakers of other languages²⁹⁰, preliminary administrator licensure²⁹¹, or neuroeducation²⁹¹. Off-campus candidates are expected to follow a two-year sequence of courses in the specialty option of educational leadership. Students in the off-campus M.Ed. program (except for Guam) must complete a 3 semester hour residency requirement at the University of Portland campus. All School of Education M.Ed. programs are 36 semester hours in length.

Edmonton M.Ed. Cohort Program Approval in Alberta:

This program is offered pursuant to the written approval of the Minister of Advanced Education and Technology effective September 2010, having undergone a quality assessment process and been found to meet the criteria established by the Minister. Nevertheless, prospective students are responsible for satisfying themselves that the program and the degree will be appropriate to their needs (for example, acceptable to potential employers, professional licensing bodies, or other educational institutions).

M.Ed. Learning Outcomes

Candidates for the M.Ed. program will be able to meet outcomes of the School of Education shared values. Additionally, the core courses in the M.Ed. program address the following Teacher Leader Model Standards:

Domain 1: Fostering a Collaborative Culture to Support Educator Development and Student Learning – The teacher leader is well versed in adult learning theory and uses that knowledge to create a community of collective responsibility within his or her school. In promoting this collaborative culture among fellow teachers, administrators, and other school leaders, the teacher leader ensures improvement in educator instruction and, consequently, student learning.

Domain 2: Accessing and Using Research to Improve Practice and Student Learning – The teacher leader keeps abreast of the latest research about teaching effectiveness and student learning, and implements best practices where appropriate. He or she models the use of systematic inquiry as a critical component of teachers' ongoing learning and development.

Domain 3: Promoting Professional Learning for Continuous Improvement – The teacher leader understands that the processes of teaching and learning are constantly evolving. The teacher leader designs and facilitates job-embedded professional development opportunities that are aligned with school improvement goals.

Domain 4: Facilitating Improvements in Instruction and Student Learning – The teacher leader possesses a deep understanding of teaching and learning, and models an attitude of continuous learning and reflective practice for colleagues. The teacher leader works collaboratively with fellow teachers to constantly improve instructional practices.

Domain 5: Promoting the Use of Assessments and Data for School and District Improvement – The teacher leader is knowledgeable about the design of assessments, both formative and summative. He or she works with colleagues to analyze data and interpret results to inform goals and to improve student learning.

Domain 6: Improving Outreach and Collaboration with Families and Community – The teacher leader understands the impact that families, cultures, and communities have on student learning. As a result, the teacher leader seeks to promote a sense of partnership among these different groups toward the common goal of excellent education.

Domain 7: Advocating for Student Learning and the Profession – The teacher leader understands the landscape of education policy and can identify key players at the local, state, and national levels. The teacher leader advocates for the teaching profession and for policies that benefit student learning.

M.Ed. Admission Requirements

1. M.Ed. Statement of Goals.
2. Current resume.
3. Copy of either a United States or Canadian issued teaching license (must be current and valid)
 - Note: The Preliminary Administrator License specialty option requires a minimum of 3 years of in-school experience as a licensed educator prior to beginning Preliminary Administrator License coursework.
4. Two Graduate Recommendation Forms and letters.
5. Official transcripts (from all previously attended academic institutions).
6. A bachelor's degree or its equivalent from an accredited college or university recognized by the University of Portland.
7. An undergraduate G.P.A. of 3.0 or higher (on a 4.0 scale).

M.Ed. Degree Requirements - 36 credit hours

Core Requirements — 15 credit hours

ED 550	Professional Growth and Development	3
ED 551	Social and Cultural Foundations	3
ED 555	Teacher as Researcher	3
ED 558	Educational Research for Improved Student Learning	3
ED 598	MED Capstone Project	3

The core courses address the Teacher Leader Model Standards.

M.Ed. Specialty Requirements - 21 credit hours

Reading Intervention Endorsement Requirements (on campus) - 21 credit hours

ED 564	Reading Practicum P-12	3
ED 580	Elements of Reading P-12	3
ED 581	Language, Literacy & Culture	3

ED 582	Content Area Literacy	3
ED 583	Diagnosis and Instruction for Literacy Achievement P-12	3
ED 584	Administration and Evaluation of Reading Programs	3
ED 5XX	Elective	3

The reading intervention endorsement courses address the TSPC standards for the Oregon licensure reading intervention endorsement (OAR 584-420-0440) and the International Literacy Association standards.

Special Education Generalist Endorsement Requirements (on campus) - 21 credit hours

ED 503	Language Acquisition and Development: Assessment, Intervention and Strategies	3
ED 504	School, Parent, and Community Relations	3
ED 505	Behavior Support: Consultative and Collaborative	3
ED 506	Academic Assessments: Curriculum and Instruction for Diverse Learners	3
ED 508	Functional Assessment: Curriculum and Instruction for Diverse Learners	3
ED 568	Special Education Practicum P-12	3
ED 5XX	Elective	3

The special education generalist endorsement courses address the TSPC standards for the Oregon licensure special education generalist endorsement (OAR 584-420-0460) and the Council for Exceptional Children standards.

Educational Leadership Requirements (on and off campus) - 21 credit hours

ED 570	Curriculum Development and Implementation	3
ED 571	Enhancing Classroom Relationships	3
ED 573	Quality Teaching and Peer Consultation	3
ED 574	Models of Leadership	3
ED 575	Transforming Schools and Systemic Change	3
ED 578	Improving the Instructional Process	3
ED 5XX	Elective	3

The educational leadership courses address the Teacher Leader Model Standards.

English for Speakers of Other Languages (ESOL) Endorsement Requirements (on campus) - 21 credit hours

ED 504	School, Parent, and Community Relations	3
ED 507	Dual Language Education	3
ED 509	Methods and Materials for Teaching ESOL	3
ED 510	Linguistics	3
ED 569	ESOL Practicum P-12	3

ED 581	Language, Literacy & Culture	3
ED 5XX	Elective	3

The ESOL endorsement courses address the TSPC standards for the Oregon licensure ESOL endorsement (OAR 584-420-0360) and the Teaching English to Speakers of Other Languages International Association standards.

Preliminary Administrator License Requirements (on campus) - 21 credit hours

ED 544	Human Resource Development and Management	3
ED 545	Leadership and Organizational Change	3
ED 546	Policy, Ethics, and the Law	3
ED 547	Resource Allocation, Finance, and Management	3
ED 548	Supervision for Instructional Improvement	3
ED 549	Preliminary Administrator License (Pre-AL) Leadership Practicum	3
ED 5XX	Elective	3

The Preliminary Administrator License courses address the Oregon Educational Leader/Administrator standards, which are based on the Interstate School Leaders Licensure Consortium standards.

Neuroeducation (on-campus) - 21 credit hours

ED 585	Foundations of Cognitive Processes in Learning	3
ED 586	Neuroscience and Learning	3
ED 587	Neurobiological Aspects of Learning	3
ED 588	Neuroeducation: A Cultural-Linguistic Translation	3
ED 589	Translational Studies and Research in Neuroeducation	3
ED 593	Readings and Topics in Neuroscience and Education	3
ED 5XX	Elective	3

Note: Students may only enroll in ED 589 after all other neuroeducation courses have been completed.

Master of Arts (M.A.)

This program is an academic degree preparing candidates for work beyond the master's level. Applicants for this degree are assigned to an academic advisor who assists in selecting the specific program of courses. The program of study is normally arranged at the beginning of the first semester of study.

Requirements for this degree include 15-18 semester hours of M.A. core courses and 18-21 semester hours of elective coursework in education and other approved graduate disciplines, for a total of 36 semester hours.

The M.A. program has two options: Option A is for candidates who wish to complete a thesis. Option B is for candidates who seek professional development and select to complete a non-thesis capstone project. Candidates who choose Option A complete 18 semester hours of M.A. core courses and 18 semester hours of elective coursework. Candidates who choose Option B complete 15 semester hours of M.A. core courses and 21 semester hours of elective coursework.

M.A. Learning Outcomes

Candidates in the M.A. program will be able to meet outcomes of the School of Education shared values. Additionally, the core courses in the M.A. program address the following Teacher Leader Model Standards:

Domain 1: Fostering a Collaborative Culture to Support Educator Development and Student Learning – The teacher leader is well versed in adult learning theory and uses that knowledge to create a community of collective responsibility within his or her school. In promoting this collaborative culture among fellow teachers, administrators, and other school leaders, the teacher leader ensures improvement in educator instruction and, consequently, student learning.

Domain 2: Accessing and Using Research to Improve Practice and Student Learning – The teacher leader keeps abreast of the latest research about teaching effectiveness and student learning, and implements best practices where appropriate. He or she models the use of systematic inquiry as a critical component of teachers' ongoing learning and development.

Domain 3: Promoting Professional Learning for Continuous Improvement – The teacher leader understands that the processes of teaching and learning are constantly evolving. The teacher leader designs and facilitates job-embedded professional development opportunities that are aligned with school improvement goals.

Domain 4: Facilitating Improvements in Instruction and Student Learning – The teacher leader possesses a deep understanding of teaching and learning, and models an attitude of continuous learning and reflective practice for colleagues. The teacher leader works collaboratively with fellow teachers to constantly improve instructional practices.

Domain 5: Promoting the Use of Assessments and Data for School and District Improvement – The teacher leader is knowledgeable about the design of assessments, both formative and summative. He or she works with colleagues to analyze data and interpret results to inform goals and to improve student learning.

Domain 6: Improving Outreach and Collaboration with Families and Community – The teacher leader understands the impact that families, cultures, and communities have on student learning. As a result, the teacher leader seeks to promote a sense of partnership among these different groups toward the common goal of excellent education.

Domain 7: Advocating for Student Learning and the Profession – The teacher leader understands the landscape of education policy and can identify key players at the local, state, and national levels. The teacher leader advocates for the teaching profession and for policies that benefit student learning.

M.A. Admission Requirements

1. M.A. in Education Statement of Goals.
2. Current resume.
3. Two Graduate Recommendation Forms and letters.
4. Official transcripts (from all previously attended academic institutions).
5. Official GRE test score.
6. A bachelor's degree or its equivalent from an accredited college or university recognized by the University of Portland.
7. An undergraduate G.P.A. of 3.0 or higher (on a 4.0 scale).
8. International Applicants:
 - a. All foreign transcripts will be evaluated by International Student Services prior to an admission decision.
 - b. Proof of financial support will be required to attend the University of Portland, but is not required for application review.
 - c. In addition to the GRE, an official score from the TOEFL (minimum score of 88), IELTS (minimum score of 7.0), or Duolingo (minimum score of 110) exam is required.

M.A. Degree Requirements — 36 credit hours

M.A. Core Requirements — 15-18 credit hours

ED 550	Professional Growth and Development	3
ED 551	Social and Cultural Foundations	3
ED 555	Teacher as Researcher	3

ED 558	Educational Research for Improved Student Learning	3
ED 563	Master of Arts Capstone Project	3
	Or	
ED 599	Thesis	Variable

Note: Candidates who select to complete a Thesis must enroll in ED 599: Thesis for 6 credit hours.

M.A. Emphasis Requirements — 18-21 credit hours

Emphasis option programs are constructed with the assistance of the academic advisor. The option program may include courses in education and other approved graduate disciplines.

Master of Arts in Higher Education and Student Affairs

The master of arts in higher education and student affairs (M.A. H.E.S.A.) program provides professionals an opportunity to advance their career goals as an effective administrator, educator, and leader in higher education. The courses are designed to prepare candidates to be impactful higher education practitioners through professional skill development, practical experiences, program development, evaluation, and assessment based on best practices. M.A. H.E.S.A. candidates complete 24 semester hours of administration-leadership, student affairs, and program evaluation coursework plus a 6- semester hour culminating project or practicum for a total of 30 semester hours.

M.A. H.E.S.A. Learning Outcomes

1. The H.E.S.A. professional has knowledge, skills, and attitudes related to providing counseling and advising support, direction, feedback, critique, referral, and guidance to individuals and groups.
2. The H.E.S.A. professional has the ability to use, design, conduct, and critique qualitative and quantitative Assessment, Evaluation and Research (AER) analyses; to manage organizations using AER processes and the results obtained from them; and to shape the political and ethical climate surrounding AER processes and uses on campus.
3. The H.E.S.A. professional has the knowledge, skills, and attitudes needed to create learning environments that are enriched with diverse views and people and to create an institutional ethos that accepts and celebrates differences among people, helping to free them of any misconceptions and prejudices.
4. The H.E.S.A. professional has the knowledge, skills, and attitudes needed to understand and apply ethical standards to one's work, specifically the integration of ethics into all aspects of self and professional practice.
5. The H.E.S.A. professional has the knowledge, skills, and attitudes needed to connect the history, philosophy, and values of the profession to one's current professional practice.
6. The H.E.S.A. professional has the knowledge, skills, and attitudes used in the selection, supervision, motivation, and formal evaluation of staff; conflict resolution; management of the politics of organizational discourse; and the effective application of strategies and techniques associated with financial resources, facilities management, fundraising, technology use, crisis management, risk management, and sustainable resources.
7. The H.E.S.A. professional has knowledge, skills, and attitudes relating to policy development processes used in various contexts, the application of legal constructs, and the understanding of governance structures and their effect on one's professional practice.
8. The H.E.S.A. professional has the knowledge, skills, and attitudes required of a leader, whether it be a positional leader or a member of the staff, in both an individual capacity and within a process of how individuals work together effectively to envision, plan, effect change in organizations, and respond to internal and external constituencies and issues.
9. The H.E.S.A. professional has the knowledge, skills, and attitudes to maintain emotional, physical, social, environmental, relational, spiritual, and intellectual wellness; be self-directed and self-reflective; maintain excellence and integrity in work; be comfortable with ambiguity; be aware of one's own areas of strength and growth; have a passion for work; and remain curious.
10. The H.E.S.A. professional has the ability to apply theory to improve and inform student affairs practice, as well as understanding teaching and training theory and practice.

Source: American College Personnel Association/National Association of Student Personnel Administrators Professional Competencies.

M.A. H.E.S.A. Admission Requirements

1. M.A. H.E.S.A Statement of Goals.
2. Current resume.
3. Official transcripts (from all previously attended academic institutions).
4. A bachelor's degree or its equivalent from an accredited college or university recognized by the University of Portland.
5. An undergraduate G.P.A. of 3.0 or higher (on a 4.0 scale).
6. International Applicants:
 - a. All foreign transcripts will be evaluated by International Student Services prior to an admission decision.
 - b. Proof of financial support will be required to attend the University of Portland, but is not required for application review.
 - c. An official score from the TOEFL (minimum score of 88), IELTS (minimum score of 7.0), or Duolingo (minimum score of 110) exam is required.

M.A. H.E.S.A. Degree Requirements – 30 credit hours

BUS 512	Leadership and Higher Level Management	3
ED 520	History, Organization, and Student Personnel in Higher Education	3
ED 521	Student Career Development and Planning	3
ED 522	Legal Issues in Higher Education	3
ED 523	Developmental Theory, Identity & College Population	3
ED 527	Applied Studies in Higher Education and Student Affairs	Variable
ED 528	Foundations of Counseling and Student Affairs	3
ED 555	Teacher as Researcher	3
	Or	
ED 558	Educational Research for Improved Student Learning	3
BUS 515	Social Venture Management	3
	Or	
BUS 541	Human Resource Management	3
	Or	
BUS 571	New Venture Creation	3

Note: ED 527 may be taken once for 3 credit hours, once for 6 credit hours, or twice for 3 credit hours each. If ED 527 is taken once for 3 credit hours, an additional 3 credit hours of coursework is required to meet the total credit hours required for the M.A. H.E.S.A. degree.

Doctor of Education Ed.D.

The doctor of education in learning and leading (Ed.D.) program prepares the next generation of leaders through innovative coursework with a focus on applied research and best practices. The Ed.D. is a 51 semester hour program with four area of concentration options: School Leadership and Development, Organizational Leadership and Development, Neuroeducation, and Higher Education and Student Affairs. *Note: Only the Organizational Leadership and Development area of concentration is offered off-campus.* Completion of a master's degree in education or a related field is required for admission to the program. Candidates admitted to the Ed.D. program participate in a rigorous program with support from faculty and staff. For candidates who are able to complete the coursework portion of the Ed.D. program but are not recommended to advance to dissertation candidacy, or those who advance to candidacy but do not complete the dissertation and final defense, an Educational Specialist (Ed.S.) degree may be proposed as a completion alternative.

Ed.D. Core Principles and Learning Outcomes

The professional doctorate in education:

1. Is framed around questions of equity, ethics, and social justice to bring about solutions to complex problems of practice.
2. Prepares leaders who can construct and apply knowledge to make a positive difference in the lives of individuals, families, organizations, and communities.
3. Provides opportunities for candidates to develop and demonstrate collaboration and communication skills to work with diverse communities and to build partnerships.
4. Is grounded in and develops a professional knowledge base that integrates both practical and research knowledge, and that links theory with systemic and systematic inquiry.
5. Emphasizes the generation, transformation, and use of professional knowledge and practice.

Source: The Carnegie Project on the Educational Doctorate, which aligns with the Canadian Degree Qualifications Framework.

School Leadership and Development Concentration Learning Outcomes

1. An education leader integrates principles of cultural competency and equitable practice and promotes the success of every student by sustaining a positive school culture and instructional program conducive to student learning and staff professional growth.
2. An education leader integrates principles of cultural competency and equitable practice and promotes the success of every student by ensuring management of the organization, operation and resources for a safe, efficient, and effective learning environment.
3. An education leader integrates principles of cultural competency and equitable practice and promotes the success of every student by collaborating with faculty and community members, responding to diverse community interests and needs, and mobilizing community resources in order to demonstrate and promote ethical standards of democracy, equity, diversity, and excellence, and to promote communication among diverse groups.
4. An education leader integrates principles of cultural competency and equitable practice and promotes the success of every student by acting with integrity, fairness, and in an ethical manner.
5. An education leader integrates principles of cultural competency and equitable practice and promotes the success of every student by understanding, responding to, and influencing the larger political, social, economic, legal, and cultural context.

Source: Oregon Educational Leader/Administrator Standards and Interstate School Leaders Licensure Consortium Standards.

Organizational Leadership and Development Concentration Learning Outcomes

1. An education leader integrates principles of cultural competency and equitable practice and promotes the success of every student by sustaining a positive school culture and instructional program conducive to student learning and staff professional growth.
2. An education leader integrates principles of cultural competency and equitable practice and promotes the success of every student by ensuring management of the organization, operation and resources for a safe, efficient, and effective learning environment.
3. An education leader integrates principles of cultural competency and equitable practice and promotes the success of every student by collaborating with faculty and community members, responding to diverse community interests and needs, and

mobilizing community resources in order to demonstrate and promote ethical standards of democracy, equity, diversity, and excellence, and to promote communication among diverse groups.

4. An education leader integrates principles of cultural competency and equitable practice and promotes the success of every student by acting with integrity, fairness, and in an ethical manner.
5. An education leader integrates principles of cultural competency and equitable practice and promotes the success of every student by understanding, responding to, and influencing the larger political, social, economic, legal, and cultural context.

Source: Oregon Educational Leader/Administrator Standards, which are based on the Interstate School Leaders Licensure Consortium Standards and align with the Alberta Principal Quality Practice Dimensions.

Neuroeducation Concentration Learning Outcomes

1. Identify the core anatomy and physiology of the brain including cellular systems and structures of the central nervous system including the sensory and perceptual systems of integration, inhibition, and feedback.
2. Identify and apply brain based interventions using various theoretical frameworks including the bio-physical model (nutrition, genetics, environment interaction); the biological model (brain differences in anatomy and function); the neuro-semantic model (meaning of the neuroanatomy and the outcomes); and social-construct model (assigning meaning physically and neurobiologically).
3. Develop an educational infrastructure for application of brain-based models of learning including learning models based on the biological framework of the brain and apply to the learning differences in various populations including autism spectrum disorders, attention deficit disorders, mood disorders, conduct disorders, both DSM and IDEA definitions.
4. Define the cultural and linguistic assumptions used to interpret, analyze, and evaluate neuroscience research applied to education (e.g., contextual or field sensitive cultures verses non-contextual, non-sensitive cultures).
5. Describe and apply core cognitive psychological processes related to neuroscience foundations such as an explanation of the competing memory systems; the processes of decision making related to brain functions; and the development of motivation related to limbic system function.

Higher Education and Student Affairs Concentration Learning Outcomes

1. The H.E.S.A. professional has knowledge, skills, and attitudes related to providing counseling and advising support, direction, feedback, critique, referral, and guidance to individuals and groups.
2. The H.E.S.A. professional has the ability to use, design, conduct, and critique qualitative and quantitative Assessment, Evaluation and Research (AER) analyses; to manage organizations using AER processes and the results obtained from them; and to shape the political and ethical climate surrounding AER processes and uses on campus.
3. The H.E.S.A. professional has the knowledge, skills, and attitudes needed to create learning environments that are enriched with diverse views and people and to create an institutional ethos that accepts and celebrates differences among people, helping to free them of any misconceptions and prejudices.
4. The H.E.S.A. professional has the knowledge, skills, and attitudes needed to understand and apply ethical standards to one's work, specifically the integration of ethics into all aspects of self and professional practice.
5. The H.E.S.A. professional has the knowledge, skills, and attitudes needed to connect the history, philosophy, and values of the profession to one's current professional practice.
6. The H.E.S.A. professional has the knowledge, skills, and attitudes used in the selection, supervision, motivation, and formal evaluation of staff; conflict resolution; management of the politics of organizational discourse; and the effective application of strategies and techniques associated with financial resources, facilities management, fundraising, technology use, crisis management, risk management, and sustainable resources.
7. The H.E.S.A. professional has knowledge, skills, and attitudes relating to policy development processes used in various contexts, the application of legal constructs, and the understanding of governance structures and their effect on one's professional practice.
8. The H.E.S.A. professional has the knowledge, skills, and attitudes required of a leader, whether it be a positional leader or a member of the staff, in both an individual capacity and within a process of how individuals work together effectively to envision, plan, effect change in organizations, and respond to internal and external constituencies and issues.

9. The H.E.S.A. professional has the knowledge, skills, and attitudes to maintain emotional, physical, social, environmental, relational, spiritual, and intellectual wellness; be self-directed and self-reflective; maintain excellence and integrity in work; be comfortable with ambiguity; be aware of one's own areas of strength and growth; have a passion for work; and remain curious.
10. The H.E.S.A. professional has the ability to apply theory to improve and inform student affairs practice, as well as understanding teaching and training theory and practice.

Source: American College Personnel Association/National Association of Student Personnel Administrators Professional Competencies.

Ed.D. Admission Requirements

1. Doctor of Education essays.
2. Current resume.
3. Two Doctor of Education Recommendation Forms and letters.
4. Official transcripts (from all previously attended academic institutions).
5. A master's degree or its equivalent in education or related field from an accredited college or university recognized by the University of Portland.
6. International Applicants:
 - a. All foreign transcripts will be evaluated by International Student Services prior to an admission decision.
 - b. Proof of financial support will be required to attend the University of Portland, but is not required for application review.
 - c. An official score from the TOEFL (minimum score of 88), IELTS (minimum score of 7.0), or Duolingo (minimum score of 110) exam is required.

Edmonton Ed.D. Cohort Program Approval in Alberta:

The Ed.D. in Learning and Leading program in Edmonton, Alberta, Canada is offered pursuant to the written approval of the Minister of Innovation and Advanced Education, effective July 2015, having undergone a quality assessment process and been found to meet the criteria established by the Minister. Nevertheless, prospective students are responsible for satisfying themselves that the program and the degree will be appropriate to their needs (for example, acceptable to potential employers, professional licensing bodies, or other educational institutions).

Ed.D. Degree Requirements - 51 credit hours

Core Requirements—21 credit hours

ED 600	Introduction to Doctoral Research	3
ED 601	Advanced Qualitative Research	3
ED 602	Advanced Quantitative Research	3
ED 603	Research for Evaluation and Action	3
ED 610	Cultural and Institutional Perspectives on Education: Individual, Community, and Society	3
ED 611	Essential Ideas in Education: History, Philosophy and Change	3
ED 614	Adult Learning, Group, and Organizational Dynamics	3

Concentration Area Requirements—15 credit hours***School Leadership and Development Concentration Requirements***

ED 544	Human Resource Development and Management	3
ED 545	Leadership and Organizational Change	3
ED 546	Policy, Ethics, and the Law	3
ED 547	Resource Allocation, Finance, and Management	3
ED 548	Supervision for Instructional Improvement	3

Organizational Leadership and Development (On-Campus) Concentration Requirements

ED 552	Leadership for Sustaining the Vision	3
ED 553	Leadership for Instructional Improvement	3
ED 554	Leadership for Effective Data Driven Decision Making	3
ED 556	Effective Leadership and Management in the Socio-Political Context	3
ED 557	Ethical Leadership and Moral Imperative for Inclusive Practice	3

Organizational Leadership and Development (Off-Campus) Concentration Requirements

ED 545	Leadership and Organizational Change	3
ED 552	Leadership for Sustaining the Vision	3
ED 553	Leadership for Instructional Improvement	3
ED 554	Leadership for Effective Data Driven Decision Making	3
ED 585	Foundations of Cognitive Processes in Learning	3

Neuroeducation Concentration Requirements

ED 585	Foundations of Cognitive Processes in Learning	3
ED 586	Neuroscience and Learning	3
ED 587	Neurobiological Aspects of Learning	3
ED 588	Neuroeducation: A Cultural-Linguistic Translation	3
ED 593	Readings and Topics in Neuroscience and Education	3

Higher Education and Student Affairs Concentration Requirements

ED 520	History, Organization, and Student Personnel in Higher Education	3
ED 521	Student Career Development and Planning	3

ED 522	Legal Issues in Higher Education	3
ED 523	Developmental Theory, Identity & College Population	3
ED 528	Foundations of Counseling and Student Affairs	3

Prospectus and Dissertation Requirements—15 credit hours

ED 622 and ED 699 require two semesters each.

ED 621	Dissertation Prospectus	5
ED 622	Dissertation Seminar	2
ED 698	Dissertation Defense	0
ED 699	Dissertation Research	3

Post Baccalaureate and Post Master's Certificate Options

The School of Education offers advanced preparation for licensed teachers who hold either a bachelor's or master's degree in education. Baccalaureate-prepared candidates may complete an 18 semester hour Post Baccalaureate Certificate in any of the following areas: Reading Intervention, Special Education Generalist or English for Speakers of Other Languages (ESOL). Master's-prepared candidates may complete a Post Master's Certificate in any of the following areas: Reading Intervention, Special Education Generalist, ESOL, Preliminary Administrator License, Professional Administrator license, Neuroeducation or Higher Education and Student Affairs. Post Master's Certificate programs require 12-18 semester hours. All Post Baccalaureate and Post Master's Certificate courses conform to the academic regulations of the Graduate School.

Post Baccalaureate Certificate Admission Requirements

1. Post Baccalaureate Certificate Statement of Goals.
2. Current resume.
3. Two Graduate Recommendation Forms and letters.
4. Copy of United States issued teaching license (must be current and valid).
5. Official transcripts (from all previously attended academic institutions).
6. A bachelor's degree or its equivalent in education from an accredited college or university recognized by the University of Portland.

Post Master's Certificate Admission Requirements

1. Post Master Certificate Statement of Goals.
2. Current resume.
3. Two Graduate Recommendation Forms and letters.
 - Note: Letters of recommendation are not required for the higher education and student affairs specialty option.
4. Copy of United States issued teaching license (must be current and valid).
 - Note: The Preliminary Administrator License specialty option requires a minimum of 3 years of in-school experience as a licensed educator for admission.
 - Note: The Professional Administrator License specialty option also requires a current and valid Preliminary Administrator License for admission.
 - Note: A teaching license is not required for the neuroeducator or higher education and student affairs specialty options.
5. Official transcripts (from all previously attended academic institutions).
6. A master's degree or its equivalent from an accredited college or university recognized by the University of Portland.

Post Baccalaureate and Post Master's Reading Intervention Endorsement Certificate

The post baccalaureate and post master's reading intervention endorsement certificates advance teachers' abilities to provide reading instruction and to diagnose and remediate reading problems in diverse instructional settings. Successful completion of the certificate program will be noted on the candidate's transcript. Coursework and passage of the required Oregon Teacher Standards and Practices Commission (TSPC) test lead to the Oregon licensure Reading Intervention endorsement.

Post Baccalaureate and Post Master's Reading Intervention Endorsement Certificate Learning Outcomes

Reading intervention endorsement certificate program coursework and clinical experiences have been designed for candidates to demonstrate competencies listed in the TSPC standards for the Oregon licensure reading intervention endorsement (OAR 584-420-0440).

1. **Foundational Knowledge and Professional Dispositions** - Understand the theoretical and evidence-based foundations of reading and writing processes and instruction.
2. **Instructional Strategies and Curriculum Materials** - Use instructional approaches, materials, and an integrated, comprehensive, balanced curriculum to support student learning in reading and writing. Create and engage their students in literacy practices that develop awareness, understanding, respect and a valuing of differences in our society.
3. **Assessment, Diagnosis and Evaluation** - Use a variety of assessment tools and practices to plan and evaluate effective reading and writing instruction.
4. **Creating a Literate Environment** - Create a literate environment that fosters reading and writing by integrating foundational knowledge, use of instructional practices, approaches and methods, curriculum materials, and the appropriate use of assessments.
5. **Professional Development** - View professional learning and leadership as a career-long effort and responsibility.
6. **Leadership: Guidance and Supervision of Paraprofessionals** - Demonstrate positive dispositions, individual and collaborative learning, the ability to design and evaluate professional learning experiences, the importance of advocacy, and a need for knowledge about adult learning and school leadership. Learning is often collaborative and occurs in the workplace through grade-level meetings, academic team meetings, workshops, study groups, and so forth.

Oregon reading intervention endorsement standards model the International Literacy Association (ILA) standards.

Post Baccalaureate and Post Master's Reading Intervention Endorsement Certificate Program Requirements — 18 credit hours

ED 564	Reading Practicum P-12	3
ED 580	Elements of Reading P-12	3
ED 581	Language, Literacy & Culture	3
ED 582	Content Area Literacy	3
ED 583	Diagnosis and Instruction for Literacy Achievement P-12	3
ED 584	Administration and Evaluation of Reading Programs	3

Post Baccalaureate and Post Master's Special Education Endorsement Generalist Certificate

The post baccalaureate and post master's special education generalist endorsement certificate program advances teachers' abilities to assess special needs children and develop and design appropriate instruction support for these children. Successful completion of the certificate program will be noted on the candidate's transcript. Coursework and passage of the required Oregon Teacher Standards and Practices Commission (TSPC) test lead to an Oregon licensure Special Education Generalist endorsement.

Post Baccalaureate and Post Master's Special Education Generalist Endorsement Certificate Program Learning Outcomes

Special education generalist endorsement certificate program coursework and clinical experiences have been designed for candidates to demonstrate competencies listed in the Oregon TSPC standards for the special education generalist endorsement (OAR 584-420-0460).

1. **Learner Development:** Understand how exceptionalities may interact with development and learning and use this knowledge to provide meaningful and challenging learning experiences for individuals with exceptionalities.
2. **Learning Environments:** Ability to create safe, inclusive, culturally responsive learning environments so that individuals with exceptionalities become active and effective learners and develop emotional well-being, positive social interactions, and self-determination.
3. **Curricular Content Knowledge:** Ability to use knowledge of general and specialized curricula to individualize learning for individuals with exceptionalities.
4. **Assessment:** Ability to use multiple methods of assessment and data-sources in making educational decisions.
5. **Instructional Planning and Strategies:** Ability to select, adapt, and use a repertoire of evidence-based instructional strategies to advance learning of individuals with exceptionalities.
6. **Professional Learning and Ethical Practice:** Ability to use foundational knowledge of the field and the professional Ethical Principles and Practice Standards to inform special education practice, to engage in lifelong learning, and to advance the profession.
7. **Collaboration:** Ability to collaborate with families, other educators, related service providers, individuals with exceptionalities, and personnel from community agencies in culturally responsive ways to address the needs of individuals with exceptionalities across a range of learning experiences.

Oregon special education generalist endorsement standards model the Council for Exceptional Children (CEC) standards.

Post Baccalaureate and Post Master's Special Education Generalist Endorsement Certificate Program Requirements — 18 credit hours

ED 503	Language Acquisition and Development: Assessment, Intervention and Strategies	3
ED 504	School, Parent, and Community Relations	3
ED 505	Behavior Support: Consultative and Collaborative	3
ED 506	Academic Assessments: Curriculum and Instruction for Diverse Learners	3
ED 508	Functional Assessment: Curriculum and Instruction for Diverse Learners	3
ED 568	Special Education Practicum P-12	3

Post Baccalaureate and Post Master's English for Speakers of Other Languages Endorsement Certificate

The post baccalaureate and post master's English for speakers of other languages (ESOL) endorsement certificate program advances teachers' abilities to provide assessment, instruction, and evaluation of English language learners. Successful completion of the certificate program will be noted on the candidate's transcript. Coursework and passage of the required Oregon Teacher Standards and Practices Commission (TSPC) test lead to an Oregon licensure ESOL endorsement.

Post Baccalaureate and Post Master's ESOL Endorsement Certificate Program Learning Outcomes

ESOL endorsement certificate program coursework and clinical experiences have been designed for candidates to demonstrate competencies listed in the Oregon TSPC standards for the Oregon licensure ESOL endorsement (OAR 584-420-0360).

1. **Language:** Know, understand, and use the major concepts, theories, and research related to the nature and acquisition of language to construct learning environments that support English speakers of other languages (ESOL) and bilingual students' language and literacy development and content area achievement.
2. **Culture:** Know, understand, and use the major concepts, principles, theories, and research related to the nature and role of culture and cultural groups to construct learning environments that support ESOL and bilingual students' cultural identities, language and literacy development, and content area achievement.
3. **Planning, Implementing, and Managing Instruction:** Know, understand, and use standards-based practices and strategies related to planning, implementing, and managing ESOL and content instruction, including classroom organization, teaching strategies for developing and integrating language skills, and choosing and adapting classroom resource.
4. **Assessment:** Understand issues of assessment and use standards-based assessment measures with ESOL and bilingual students.
5. **Professionalism:** Demonstrate knowledge of the history of ESOL teaching. Candidates keep current with new instructional techniques, research results, advances in the ESOL field, and public policy issues. Candidates use such information to reflect upon and improve their instructional practices. Candidates provide support and advocate for ESOL and bilingual students and their families and work collaboratively to improve the learning environment.
6. **Technology:** Use information technology to enhance learning and to enhance personal and professional productivity.

Oregon ESOL endorsement standards model the Teaching English Speakers of Other Languages (TESOL) International Association standards.

Post Baccalaureate and Post Master's ESOL Endorsement Certificate Program Requirements — 18 credit hours

ED 504	School, Parent, and Community Relations	3
ED 507	Dual Language Education	3
ED 509	Methods and Materials for Teaching ESOL	3
ED 510	Linguistics	3
ED 581	Language, Literacy & Culture	3
ED 569	ESOL Practicum P-12	3

Post Master's Preliminary Administrator License Certificate

The post master's preliminary administrator license certificate program provides teachers with experiences in addressing the leadership and management needs of contemporary schools. Successful completion of the certificate program leads to preliminary administrator licensure in Oregon and will be noted on the candidate's transcript.

Post Master's Preliminary Administrator License Certificate Program Learning Outcomes

1. A school administrator integrates principles of cultural competency and equitable practice and promotes the success of every student by facilitating the development, articulation, implementation, and stewardship of a vision of learning that is shared and supported by stakeholders.
2. A school administrator integrates principles of cultural competency and equitable practice and promotes the success of every student by sustaining a positive school culture and instructional program conducive to student learning and staff professional growth.
3. A school administrator integrates principles of cultural competency and equitable practice and promotes the success of every student by ensuring management of the organization, operation and resources for a safe, efficient, and effective learning environment.
4. A school administrator integrates principles of cultural competency and equitable practice and promotes the success of every student by collaborating with faculty and community members, responding to diverse community interests and needs, and mobilizing community resources in order to demonstrate and promote ethical standards of democracy, equity, diversity, and excellence, and to promote communication among diverse groups.

5. A school administrator integrates principles of cultural competency and equitable practice and promotes the success of every student by acting with integrity, fairness, and in an ethical manner.
6. A school administrator integrates principles of cultural competency and equitable practice and promotes the success of every student by understanding, responding to, and influencing the larger political, social, economic, legal, and cultural context.

Source: Oregon Educational Leader/Administrator standards, which are based on the Interstate School Leaders Licensure Consortium (ISLLC) standards.

Post Master's Preliminary Administrator License Certificate Program Requirements —18 credit hours

ED 544	Human Resource Development and Management	3
ED 545	Leadership and Organizational Change	3
ED 546	Policy, Ethics, and the Law	3
ED 547	Resource Allocation, Finance, and Management	3
ED 548	Supervision for Instructional Improvement	3
ED 549	Preliminary Administrator License (Pre-AL) Leadership Practicum	3

Post Master's Professional Administrator License Certificate

The post master's professional administrator license certificate program provides administrators with experiences in developing abilities and skills in leadership and management of school districts. Successful completion of the certificate program leads to professional administrator licensure in Oregon and will be noted on the candidate's transcript.

Post Master's Professional Administrator License Certificate Program Learning Outcomes

1. An education leader integrates principles of cultural competency and equitable practice and promotes the success of every student by facilitating the development, articulation, implementation, and stewardship of a vision of learning that is shared and supported by stakeholders.
2. An education leader integrates principles of cultural competency and equitable practice and promotes the success of every student by sustaining a positive school culture and instructional program conducive to student learning and staff professional growth.
3. An education leader integrates principles of cultural competency and equitable practice and promotes the success of every student by ensuring management of the organization, operation and resources for a safe, efficient, and effective learning environment.
4. An education leader integrates principles of cultural competency and equitable practice and promotes the success of every student by collaborating with faculty and community members, responding to diverse community interests and needs, and mobilizing community resources in order to demonstrate and promote ethical standards of democracy, equity, diversity, and excellence, and to promote communication among diverse groups.
5. An education leader integrates principles of cultural competency and equitable practice and promotes the success of every student by acting with integrity, fairness, and in an ethical manner.
6. An education leader integrates principles of cultural competency and equitable practice and promotes the success of every student by understanding, responding to, and influencing the larger political, social, economic, legal, and cultural context.

Source: Oregon Educational Leader/Administrator standards, which are based on the Interstate School Leaders Licensure Consortium (ISLLC) standards.

Post Master's Professional Administrator License Certificate Program Requirements — 18 credit hours

ED 552	Leadership for Sustaining the Vision	3
ED 553	Leadership for Instructional Improvement	3
ED 554	Leadership for Effective Data Driven Decision Making	3
ED 556	Effective Leadership and Management in the Socio-Political Context	3
ED 557	Ethical Leadership and Moral Imperative for Inclusive Practice	3
ED 559	Professional Administrator License (Pro-AL) Leadership Practicum	3

Post Master's Neuroeducator Certificate

The post master's neuroeducator certificate program provides professionals an opportunity to study the relationship between the brain, the mind, and translational applications. Any professionals involved in human interaction, teaching, and learning, such as business executives, nurses, counselors, educators, speech-language pathologists, and psychologists, will find the information useful to their respective practices. Successful completion of the certificate program will be noted on the candidate's transcript.

Post Master's Neuroeducator Certificate Program Learning Outcomes

1. Identify the core anatomy and physiology of the brain including cellular systems and structures of the central nervous system including the sensory and perceptual systems of integration, inhibition, and feedback.
2. Identify and apply brain based interventions using various theoretical frameworks including the bio-physical model (nutrition, genetics, environment interaction); the biological model (brain differences in anatomy and function); the neuro-semantic model (meaning of the neuroanatomy and the outcomes); and social-construct model (assigning meaning physically and neurobiologically).
3. Develop an educational infrastructure for application of brain-based models of learning including learning models based on the biological framework of the brain and apply to the learning differences in various populations including autism spectrum disorders, attention deficit disorders, mood disorders, conduct disorders, both DSM and IDEA definitions.
4. Define the cultural and linguistic assumptions used to interpret, analyze, and evaluate neuroscience research applied to education (e.g., contextual or field sensitive cultures verses non-contextual, non-sensitive cultures).
5. Describe and apply core cognitive psychological processes related to neuroscience foundations such as an explanation of the competing memory systems; the processes of decision making related to brain functions; and the development of motivation related to limbic system function.

Post Master's Neuroeducator Certificate Program Requirements - 12-18 credit hours

ED 585	Foundations of Cognitive Processes in Learning	3
ED 586	Neuroscience and Learning	3
ED 587	Neurobiological Aspects of Learning	3
ED 588	Neuroeducation: A Cultural-Linguistic Translation	3
ED 589	Translational Studies and Research in Neuroeducation	3
ED 593	Readings and Topics in Neuroscience and Education	3

Note: Students must complete at least four of the following courses for the neuroeducator certificate: ED 585, ED 586, ED 587, ED 588 or ED 593. Students may complete more than four courses (up to 18 semester credit hours), if desired. Students may only enroll in ED 589 if all other neuroeducator courses have been completed.

Post Master's Higher Education and Student Affairs Certificate

The post master's higher education and student affairs (H.E.S.A.) certificate program provides professionals an opportunity to advance their career goals as an effective administrator, educator, and leader in higher education. The courses are designed to prepare students to be impactful higher education practitioners through professional skill development, practical experiences, program development, evaluation, and assessment based on best practices. Successful completion of the certificate program will be noted on the candidate's transcript.

Post Master's H.E.S.A. Certificate Learning Outcomes

1. The H.E.S.A. professional has knowledge, skills, and attitudes related to providing counseling and advising support, direction, feedback, critique, referral, and guidance to individuals and groups.
2. The H.E.S.A. professional has the ability to use, design, conduct, and critique qualitative and quantitative Assessment, Evaluation and Research (AER) analyses; to manage organizations using AER processes and the results obtained from them; and to shape the political and ethical climate surrounding AER processes and uses on campus.
3. The H.E.S.A. professional has the knowledge, skills, and attitudes needed to create learning environments that are enriched with diverse views and people and to create an institutional ethos that accepts and celebrates differences among people, helping to free them of any misconceptions and prejudices.
4. The H.E.S.A. professional has the knowledge, skills, and attitudes needed to understand and apply ethical standards to one's work, specifically the integration of ethics into all aspects of self and professional practice.
5. The H.E.S.A. professional has the knowledge, skills, and attitudes needed to connect the history, philosophy, and values of the profession to one's current professional practice.
6. The H.E.S.A. professional has the knowledge, skills, and attitudes used in the selection, supervision, motivation, and formal evaluation of staff; conflict resolution; management of the politics of organizational discourse; and the effective application of strategies and techniques associated with financial resources, facilities management, fundraising, technology use, crisis management, risk management, and sustainable resources.
7. The H.E.S.A. professional has knowledge, skills, and attitudes relating to policy development processes used in various contexts, the application of legal constructs, and the understanding of governance structures and their effect on one's professional practice.
8. The H.E.S.A. professional has the knowledge, skills, and attitudes required of a leader, whether it be a positional leader or a member of the staff, in both an individual capacity and within a process of how individuals work together effectively to envision, plan, effect change in organizations, and respond to internal and external constituencies and issues.
9. The H.E.S.A. professional has the knowledge, skills, and attitudes to maintain emotional, physical, social, environmental, relational, spiritual, and intellectual wellness; be self-directed and self-reflective; maintain excellence and integrity in work; be comfortable with ambiguity; be aware of one's own areas of strength and growth; have a passion for work; and remain curious.
10. The H.E.S.A. professional has the ability to apply theory to improve and inform student affairs practice, as well as understanding teaching and training theory and practice.

Source: American College Personnel Association/National Association of Student Personnel Administrators Professional Competencies.

Post Master's H.E.S.A. Certificate Program Requirements - 18 credit hours

Program Option #1

In this program option, ED 527 is taken once for 3 credit hours.

ED 520	History, Organization, and Student Personnel in Higher Education	3
ED 527	Applied Studies in Higher Education and	Variable

	Student Affairs	
	Select four courses from the following:	
BUS 512	Leadership and Higher Level Management	3
ED 521	Student Career Development and Planning	3
ED 522	Legal Issues in Higher Education	3
ED 523	Developmental Theory, Identity & College Population	3
ED 555	Teacher as Researcher	3
	Or	
ED 558	Educational Research for Improved Student Learning	3
ED 528	Foundations of Counseling and Student Affairs	3

Program Option #2

In this program option, ED 527 is taken either once for 6 credit hours or twice for 3 credit hours each time.

ED 520	History, Organization, and Student Personnel in Higher Education	3
ED 527	Applied Studies in Higher Education and Student Affairs	Variable
	Select three courses from the following:	
BUS 512	Leadership and Higher Level Management	3
ED 521	Student Career Development and Planning	3
ED 522	Legal Issues in Higher Education	3
ED 523	Developmental Theory, Identity & College Population	3
ED 555	Teacher as Researcher	3
	Or	
ED 558	Educational Research for Improved Student Learning	3
ED 528	Foundations of Counseling and Student Affairs	3

Engineering

Shazib Vijlee, Ph.D., director

Faculty: Abbasi, Bieryla, Cenek, Doughty, Egbo, Fabien, Farina, Hoffbeck, A. Inan, Ivler, Kennedy, Kuhn, Lulay, Mansouri, Moss, Murty, Nuxoll, Poor, Takallou, Tribelhorn, VanDeGrift, Vegdahl, Vijlee, Wolfand

The Donald P. Shiley School of Engineering offers graduate programs leading to a master of engineering (M.Eng.) degree and a master of biomedical engineering (M.BME) degree. These programs capitalize on the strengths of both the Donald P. Shiley School of Engineering and the Dr. Robert B. Pamplin Jr. School of Business Administration.

Mission

The mission of Shiley School of Engineering is to provide the best possible education to its students, thus enabling them to become competent, practicing engineers and computer scientists. The programs also provide a base for both graduate study and lifelong learning in support of evolving career objectives. These objectives include being informed, effective, and responsible participants in the engineering profession and society. The Shiley School endeavors to develop qualities that are essential for the practice of engineering and computer science and its beneficial service to the community. These qualities include knowledge of engineering principles, the ability to apply those principles to solve problems, and the development of professional, personal, and social values.

Master of Engineering

The Donald P. Shiley School of Engineering offers a graduate program leading to a master of engineering (M.Eng.) degree. Students in this program can take courses in engineering and up to nine credits in an area related to their concentration. This program capitalizes on the strengths of the Donald P. Shiley School of Engineering and caters to the individual needs of the graduate student. Courses in engineering are selected from biomedical, civil, electrical, and mechanical engineering, as well as computer science.

Student Outcomes

Students will be able to:

- Apply advanced knowledge of mathematics, science, computing, and engineering to solve technical and real-world problems.
- Develop a project plan, scope, and timeline for solving open-ended problems.
- Demonstrate advanced understanding of professional and ethical responsibility.
- Effectively communicate complex concepts to a multi-discipline audience.
- Understand and apply concepts related to a selected technical concentration area.

Admission Requirements

Applications are encouraged from those who want to get an advanced engineering degree in a concentration area, allowing them to progress in their chosen profession. These may include recent graduates and practicing professionals with degrees in engineering or other fields related to their selected engineering concentration.

Prerequisites:

- Bachelor's degree in engineering, physics, or computer science, OR
- Bachelor's degree and the following courses or their equivalents:
- Math and Science: Calculus I, Calculus II, Ordinary Differential Equations or Discrete Structures, General Physics & Laboratory I and II (calculus-based), Chemistry I
- Engineering: A minimum of four of the following courses or their equivalents --- Statics, Dynamics, Strength of Materials, Material Science, Thermodynamics, Fluid Mechanics, Electrical Circuits, Signals and Systems, Logic Design, Digital Systems Design, Electronic Circuits, Introduction to Computer Science, Object-oriented Design, Data Structures

1. Statement of Goals.
2. Current resume.
3. Two recommendation forms and letters.
4. Official transcripts from all previously attended academic institutions.
5. A bachelor's degree or its equivalent from an accredited college or university recognized by the University of Portland.
6. Official GRE score (waived for students who completed a bachelor's degree at a US institution).
7. International Applicants: All foreign transcripts will be evaluated by International Student Services prior to an admission decision.
8. International Applicants: An official score from the TOEFL (minimum score of 80), IELTS (minimum score of 7.0), or Duolingo (minimum score of 110) exam is required.
9. International Applicants: Proof of financial support will be required to attend the University of Portland, but is not required for application review.

Degree Requirements - 30 credit hours

Professionalism and ethics foundation - 3 credit hours

Select from the following:

BUS 513	Social Responsibility in Organizations	3
CST 511	Communication Across Barriers	3
CST 531	Intercultural Communication and Identity	3
CST 533	Critical Perspectives on Work, Labor, and Organizing	3

Analytical and computing foundation - 3 credit hours

Select from the following:

CE 501	Computational Methods in Civil Engineering	3
EGR 551/MTH 451	Mathematical and Numerical Methods for Engineers	3
EGR 555	Design of Engineering Experiments	3
EGR 564	Instrumentation and Computer Interfaces	3
CS 5XX	Any CS Graduate Course	3

Electives: additional graduate coursework - 24 credit hours

- Up to 9 credit hours of graduate coursework may be taken outside of Engineering and Computer Science relevant to the student's chosen concentration and career interests. The 9-credit limit includes the Professionalism and Ethics Foundation courses.
- Any undergraduate courses taken as prerequisites do not count towards the 30 credit hours.
- A thesis is not required. A combined maximum of 6 credit hours of graduate coursework is allowed for variable credit courses (CE/CS/EE/ME/EGR 590 – Directed Project, CE/CS/EE/ME/EGR 593 – Research, and/or CE/CS/EE/ME/EGR 599 – Thesis).
- Exceptions to the foundation courses may be approved by the Graduate Program Director on a case-by-case basis.

Master of Biomedical Engineering

The Donald P. Shiley School of Engineering offers a graduate program leading to a master of biomedical engineering (M.BME) degree. The interdisciplinary field of biomedical engineering involves the continuous development of new technologies that span the broad field of healthcare and directly impacts the quality of human life. By necessity, this field requires engineering professionals who are innovative, ethical, and sensitive to the business of healthcare delivery. The graduate program is offered as a stand-alone degree and encourages applications from students at the University of Portland and at other institutions. The program can normally be completed in one year.

Student Outcomes

Outcomes for the graduate program in biomedical engineering have been established so that students:

- Practice real-world experiential learning.
- Are skilled in the broad technical field of biomedical engineering including biomechanics and bioinstrumentation.
- Understand the business and patient care aspects of the healthcare industry.
- Can holistically analyze complex biomedical engineering issues.
- Demonstrate excellent communication skills across a variety of media.

Admission Requirements

1. Statement of Goals.
2. Current resume.
3. Two recommendation forms and letters.
4. A bachelor's degree or its equivalent from an accredited college or university recognized by the University of Portland.
5. A bachelor's degree in engineering, mathematics, physical science, or life sciences.
6. Official transcripts from all current and previously attended academic institutions.
7. Official GRE scores (waived for students who completed a bachelor's degree at a US institution).
8. International Applicants: All foreign transcripts will be evaluated by International Student Services prior to an admissions decision.
9. International Applicants: an official score from the TOEFL (minimum score of 80), IELTS (minimum score of 7.0), or Duolingo (minimum score of 110) exam is required.
10. International Applicants: Proof of financial support will be required to attend the University of Portland, but is not required for application review.
11. Confirmation of completed prerequisites (see below).

* The biomedical engineering program does not have specific minimum acceptance standards for GPA and GRE. All application materials are viewed in aggregate.

Prerequisites

To complete the biomedical engineering program, the prerequisites listed below (or their equivalents) are required at matriculation. Students who do not have all the prerequisites may apply to be conditionally accepted to the program. However, they cannot start with the graduate cohort until the necessary prerequisites are completed. These prerequisites must be completed within one year of acceptance or a new application will need to be submitted for review.

The prerequisites for the master of biomedical engineering degree include the following courses at the University of Portland or their approved equivalents at the University of Portland or other institutions. All prerequisites must be completed with a grade of C- or better.

MTH 201	Calculus I	4
MTH 202	Calculus II	4
MTH 321	Ordinary Differential Equations	3

	Statistics course	
BIO 207	Introduction to Molecular and Cellular Biology	3
BIO 277	Introduction to Molecular and Cellular Biology Lab	1
CHM 207	General Chemistry I	3
CHM 277	General Chemistry I Lab	1
PHY 204	General Physics I	3
PHY 274	General Physics Lab I	1
	Computer programming course	
EGR 211	Engineering Mechanics-Statics	3
EE 261	Electrical Circuits	3
EE 271	Electrical Circuits Laboratory	1
EE 262	Signals and Systems	3

Degree Requirements - 30 credit hours

Thirty credit hours of graduate coursework are required. Any undergraduate courses taken to make up deficiencies do not count towards these credit hours. The curriculum includes 24 credit hours of required coursework and 6 credit hours of a graduate level electives. Of the 6 credit hours of graduate-level electives, a minimum of 3 credit hours must come from courses offered by the Shiley School of Engineering.

BME 550	Physiology for Biomedical Engineers	3
BME 562	Biomechanics	3
BME 563	Digital Signal Processing	3
BME 578	Management of Technology for Medical Devices	3
BME 583	Biomedical Device Planning and Design	3
BME 584	Biomedical Device Optimization	3
EGR 555	Design of Engineering Experiments	3
EGR 564	Instrumentation and Computer Interfaces	3
	Graduate level electives	6
BME 597	Biomedical Engineering Applied Internships	0

BME 583, BME 584, and BME 578 must be taken in the same academic year.

Applied Internship

All students must also secure, complete, and report on a zero credit applied internship experience. The internship requirement of a minimum of 110 hours may be met in the following ways: a) between junior and senior years, b) before the graduate program starts or c) at the end of program. To meet the requirement, the internship must follow the University's documentation rules for internships and be approved by the instructor.

Other

If a student has completed any of the required courses prior to matriculation, the student must complete the equivalent number of credit hours with graduate level elective courses.

Nursing

The School of Nursing offers an innovative doctor of nursing practice (D.N.P.) program with a focus on primary care, developing a sustained partnership with patients, and providing integrated, accessible health care services, in the primary care setting. Students enrolled in the D.N.P. program are admitted to one of the following tracks: family nurse practitioner (F.N.P.), adult gerontology primary care nurse practitioner (A.G.P.C.N.P.), or N.P. to D.N.P. Students admitted to the F.N.P. or A.G.P.C.N.P. track are registered nurses who hold a bachelor of science degree in nursing or a master's degree in nursing and become primary care N.P.s in the corresponding population focus and earn the D.N.P. degree. Students admitted to the N.P. to D.N.P. track are master's-prepared, licensed, and employed N.P.s who retain their N.P. specialty and earn the D.N.P. degree. The School of Nursing D.N.P. program is accredited by the Commission on Collegiate Nursing Education and is approved by the Oregon State Board of Nursing.

Please see the Pamplin School of Business Graduate School Programs²⁵² section for information about the Post-Baccalaureate and Post-Graduate Certificates in Healthcare Management.

D.N.P. Degree Requirements

To qualify for the D.N.P. degree, students must:

1. Complete all required semester credit hours for the track selected.
2. Maintain a cumulative grade point average (G.P.A.) of 3.0 on a 4.0 scale.
3. Earn a grade of B or above or Pass in all courses.
4. Meet the D.N.P. program outcomes.
5. Successfully complete the scholarly project and directed clinical.
6. Submit the final scholarly project manuscript to Pilots Scholars.
7. Complete a portfolio.

Doctor of Nursing Practice (D.N.P.)

The doctor of nursing practice (D.N.P.) degree program prepares nurses to provide health services at the highest level of clinical nursing practice. The curriculum is designed to develop leaders able to expand their impact on the health of society by improving quality of care, patient outcomes, and health policy. The program features curricular threads including leadership, inquiry, social justice and ethics, and integrative health. Graduates are prepared as holistic practitioners who understand many different healing methodologies and who practice collaboratively with those who seek care. There is also an emphasis on caring for disadvantaged populations and using evidence-based interventions in care to advance health equality.

In the preparation of the curriculum and evaluation of outcomes, the D.N.P. program incorporates professional standards and guidelines from the Oregon State Board of Nursing, *The Essentials of Doctoral Education for Advanced Nursing Practice* (AACN, 2006), the *Criteria for Evaluation of Nurse Practitioner Programs* (NTF, 2016), the *Nurse Practitioner Core Competencies* (NONPF, 2017), the *Graduate Competencies and Recommendations for Educating Nursing Students* (AACN, 2019), the *National Center for Integrative Primary Health Care Competencies*, the *Population-Focused Nurse Practitioner Family Competencies: Family/Across the Lifespan* (NONPF, 2013) for students in the F.N.P. track, and the *Adult-Gerontology Primary Care Nurse Practitioner Competencies* (NONPF, 2016) for students in the A.G.P.C.N.P. track.

All Students complete a D.N.P. scholarly project related to advanced nursing practice in NRS 665 *DNP Scholarly Project*. Additionally, students in the F.N.P. and A.G.P.C.N.P. tracks complete NRS 675 *Directed D.N.P. Clinical* and students in the N.P. to D.N.P. track complete NRS 685 *Directed DNP Clinical for Post Master's N.P. Students I* and NRS 686 *Directed DNP Clinical for Post Master's N.P. Students II*. These directed clinical courses are designed for students to demonstrate synthesis of knowledge and use evidence to improve practice or patient outcomes for specific program competencies.

Graduates of the F.N.P. track are eligible for F.N.P. national certification through the American Association of Nurse Practitioners or American Nurses Credentialing Center. Graduates of the A.G.P.C.N.P. track are eligible for A.G.P.C.N.P. national certification through the American Association of Nurse Practitioners or American Nurses Credentialing Center. The A.G.P.C.N.P. track also prepares graduates for the *Advanced Certified Hospice and Palliative Nurse* exam if they wish to be distinguished as palliative care experts and complete the required clinical hours and experiences. Graduates of the F.N.P. and N.P. to D.N.P. tracks who complete NRS 654: *Primary & Specialty Palliative Care* and the required clinical hours and

experiences during their program may also take the *Advanced Certified Hospice and Palliative Nurse* exam if they wish to be distinguished as palliative care experts.

D.N.P. Program Outcomes

The D.N.P. program prepares competent, entry-level primary care nurse practitioners and experienced nurse practitioners who:

1. Practice independently in a variety of primary care health environments, translate best evidence into practice, employ a population focus, incorporate an integrative and/or palliative health care perspective, and collaborate with multiple disciplines with the goal of providing effective, comprehensive health care;
2. Demonstrate leadership in macro and micro health care system change and personal practice improvement; and
3. Proactively strive for social justice, actively address health disparities and function as culturally competent practitioners who relate effectively with diverse and under-served individuals, families, and populations.

D.N.P. - F.N.P. and A.G.P.C.N.P. Admission Requirements

1. D.N.P. writing sample.
2. Current resume.
3. Three letters of recommendation. Applicants provide email addresses for three references in the online application. A request will be sent directly to the references who will be able to upload a letter in Word or as a PDF. References may also return recommendation forms as signed attachments by email to the Graduate School at gradschl@up.edu or by mail to the University of Portland, ATTN: Graduate School, 5000 N. Willamette Blvd., Portland, Oregon 97203.
4. Official transcripts from all previously attended academic institutions must be submitted directly from the institution either by email to gradschl@up.edu or by mail to the University of Portland, ATTN: Graduate School, 5000 N. Willamette Blvd., Portland, OR, 97203.
5. A bachelor's or master's degree in nursing from a school of nursing accredited by an appropriate national nursing accrediting body.
6. Current unencumbered registered nurse (R.N). license to practice nursing in state of residence. R.N. licensure in Oregon is recommended. R.N. licensure in the state in which a student completes clinical hours is required. Additional costs may be incurred for clinical placements outside of Oregon.
7. Cumulative GPA of 3.0 or higher (on a 4.0 scale) in the most recently completed nursing program.
8. Preference is given to Oregon and Washington applicants with at least two years of experience as an R.N.
9. International Applicants: an official score from the TOEFL (minimum score of 100), IELTS (minimum score of 7.5), or Duolingo (minimum score of 120) exam is required.
10. International Applicants: Proof of financial support will be required to attend the University of Portland, but is not required for application review.
11. An admission interview upon request of the School of Nursing.

N.P. to D.N.P. Admission Requirements:

1. D.N.P. writing sample.
2. Current resume.
3. Three letters of recommendation. Applicants provide email addresses for three references in the online application. A request will be sent directly to the references who will be able to upload a letter in Word or as a PDF. References may also return recommendation forms as signed attachments by email to the Graduate School at gradschl@up.edu or by mail to the University of Portland, ATTN: Graduate School, 5000 N. Willamette Blvd., Portland, Oregon 97203.
4. Official transcripts from all previously attended academic institutions must be submitted directly from the institution either by email to gradschl@up.edu or by mail to the University of Portland, ATTN: Graduate School, 5000 N. Willamette Blvd., Portland, OR, 97203.
5. A master's degree in nursing from a school of nursing accredited by an appropriate national nursing accrediting body.

6. Current unencumbered registered nurse (R.N.) license to practice nursing in state of residence.
7. Current nurse practitioner license in state of practice and currently employed as a nurse practitioner in a clinical setting.
8. Current national nurse practitioner certification.
9. Cumulative GPA of 3.0 or higher on a 4.0 scale in the most recently completed nursing program.
10. International Applicants: an official score from the TOEFL (minimum score of 100), IELTS (minimum score of 7.5), or Duolingo (minimum score of 120) exam is required.
11. International Applicants: Proof of financial support will be required to attend the University of Portland, but is not required for application review.
12. An admission interview upon request of the School of Nursing.

N.P. to D.N.P Degree Requirements

- Program of study includes 360 clinical hours.
- Courses are offered via hybrid method: greater than 50% face to face.
- Because nursing is a dynamic field, the nursing curriculum is subject to change at the School of Nursing's discretion.

To qualify for the N.P. to D.N.P. degree, students must:

1. Complete all 40 required semester credit hours for the N.P. to D.N.P. track.
2. Maintain a cumulative grade point average (G.P.A.) of 3.0 (on a 4.0 scale).
3. Earn a grade of B or above or Pass in all required courses.
4. Meet the D.N.P. program outcomes.
5. Successfully complete the scholarly project and directed clinical.
6. Submit the final scholarly project manuscript to Pilots Scholars.
7. Complete a portfolio.

Upon approval of the D.N.P. program director, a maximum of nine semester credit hours may be accepted in transfer for graduate courses completed at a nationally accredited institution with a grade of B or better within five years of acceptance to the D.N.P. program.

Requirements

NRS 601	Professional Role Development for Advanced Practice Nursing	3
NRS 602	Leadership in a Complex Health care Environment	3
NRS 604	Nursing Science and Ethics for Advanced Practice	3
NRS 605	Analytical Methods for Practice Improvement	3
NRS 606	Quality Improvement Processes for Practice Improvement	3
NRS 614	Health Organization Systems & Resource Management	3
NRS 649	Policy and Politics for the Nurse Leader	2
NRS 650	Informatics in a Complex Health Care Environment	2
NRS 651	Epidemiology and Clinical Prevention in	3

	Population Health	
NRS 652	Translation Science	2
NRS 665	DNP Scholarly Project	1
NRS 685	Directed DNP Clinical for Post Master's NP Students I	3
NRS 686	Directed DNP Clinical for Post-Master's NP Students II	3

NRS 665: Students are required to take NRS 665 a minimum of three semesters and will continue to register for it every semester until successful completion and dissemination of the final project.

Focus Area Requirement - 4 credit hours

Select one of the following focus areas:

Integrative Health

NRS 609	Botanicals in Primary Care	1
NRS 676	Integrative Health: Adult Health Promotion and Acute Health Problems	3

Palliative Care

NRS 654	Primary and Specialty Palliative Care	4

NRS 654: Students who complete NRS 654 and plan to take the Advanced Certified Hospice and Palliative Nurse (ACHPN) exam upon graduation must complete 500 total clinical hours in palliative care in the 12 months prior to taking the exam.

Students may complete additional focus area courses as unrequired electives.

Total Credit Hours: 40

D.N.P.-F.N.P. Degree Requirements

- Program of study includes 960 clinical hours and a focus on integrative health.
- Courses are offered via hybrid method: greater than 50% face to face.
- Because nursing is a dynamic field, the nursing curriculum is subject to change at the School of Nursing's discretion.

To qualify for the D.N.P. - F.N.P. degree, students must:

1. Complete all 76 required semester credit hours for the D.N.P. - F.N.P. track.
2. Maintain a cumulative grade point average (G.P.A.) of 3.0 (on a 4.0 scale).
3. Earn a grade of B or above or Pass in all required courses.
4. Meet the D.N.P. program outcomes.
5. Successfully complete the scholarly project and directed clinical.
6. Submit the final scholarly project manuscript to Pilots Scholars.
7. Complete a portfolio.

For applicants with a master's degree in nursing who are not nurse practitioners: Upon approval of the D.N.P. program director, a maximum of nine semester credit hours may be accepted in transfer for graduate courses completed at a nationally accredited institution with a grade of B or better and within five years of acceptance to the D.N.P. program.

Requirements

NRS 601	Professional Role Development for Advanced Practice Nursing	3
NRS 602	Leadership in a Complex Health care	3

	Environment	
NRS 604	Nursing Science and Ethics for Advanced Practice	3
NRS 605	Analytical Methods for Practice Improvement	3
NRS 606	Quality Improvement Processes for Practice Improvement	3
NRS 607	Advanced Pathophysiology and Genetics	4
NRS 608	Advanced Pharmacotherapeutics	3
NRS 609	Botanicals in Primary Care	1
NRS 610	Advanced Health Assessment for Primary Care Nurse Practitioners	4
NRS 614	Health Organization Systems & Resource Management	3
NRS 630	FNP Clinical I	3
NRS 631	FNP Clinical II	2
NRS 633	FNP Clinical III	2
NRS 634	FNP Clinical IV	3
NRS 649	Policy and Politics for the Nurse Leader	2
NRS 650	Informatics in a Complex Health Care Environment	2
NRS 651	Epidemiology and Clinical Prevention in Population Health	3
NRS 652	Translation Science	2
NRS 665	DNP Scholarly Project	1
NRS 670	Management of Adults with Acute Conditions	3
NRS 672	Management of Common Mental Health Conditions in Primary Care	2
NRS 673	Management of Pediatric Patients in Primary Care	3
NRS 674	Management of Adults and Older Adults with Chronic Conditions	3
NRS 675	Directed DNP Clinical	6
NRS 676	Integrative Health: Adult Health Promotion and Acute Health Problems	3
NRS 681	Management of Common Gender Specific & Adolescent Health Conditions	4

NRS 665: Students are required to take NRS 665 a minimum of three semesters and will continue to register for it every semester until successful completion and dissemination of the final project.

D.N.P.-F.N.P. students interested in palliative care may complete NRS 654 as an unrequired elective. Students who complete NRS 654 and plan to take the Advanced Certified Hospice and Palliative Nurse (ACHPN) exam upon graduation must complete 500 total clinical hours in palliative care in the 12 months prior to taking the exam.

Total Credit Hours: 76

D.N.P. - A.G.P.C.N.P. Degree Requirements

- Program of study includes 960 clinical hours and a focus on palliative care.
- Courses are offered via hybrid method: greater than 50% face to face.
- Because nursing is a dynamic field, the nursing curriculum is subject to change at the School of Nursing's discretion.

To qualify for the D.N.P. - A.G.P.C.N.P. degree, students must:

1. Complete all 76 required semester credit hours for the D.N.P. - A.G.P.C.N.P. track.
2. Maintain a cumulative grade point average (G.P.A.) of 3.0 (on a 4.0 scale).
3. Earn a grade of B or above or Pass in all required courses.
4. Meet the D.N.P. program outcomes.
5. Successfully complete the scholarly project and directed clinical.
6. Submit the final scholarly project manuscript to Pilots Scholars.
7. Complete a portfolio.

For applicants with a master's degree in nursing: Upon approval of the D.N.P. program director, a maximum of nine semester hours may be accepted in transfer for graduate courses completed at a nationally accredited institution with a grade of B or better and within five years of acceptance to the program.

Requirements

NRS 601	Professional Role Development for Advanced Practice Nursing	3
NRS 602	Leadership in a Complex Health care Environment	3
NRS 604	Nursing Science and Ethics for Advanced Practice	3
NRS 605	Analytical Methods for Practice Improvement	3
NRS 606	Quality Improvement Processes for Practice Improvement	3
NRS 607	Advanced Pathophysiology and Genetics	4
NRS 608	Advanced Pharmacotherapeutics	3
NRS 610	Advanced Health Assessment for Primary Care Nurse Practitioners	4
NRS 614	Health Organization Systems & Resource Management	3
NRS 620	AGPCNP Clinical I	3
NRS 621	AGPCNP Clinical II	2
NRS 623	AGPCNP Clinical III	2
NRS 624	AGPCNP Clinical IV	3
NRS 649	Policy and Politics for the Nurse Leader	2

NRS 650	Informatics in a Complex Health Care Environment	2
NRS 651	Epidemiology and Clinical Prevention in Population Health	3
NRS 652	Translation Science	2
NRS 654	Primary and Specialty Palliative Care	4
NRS 665	DNP Scholarly Project	1
NRS 670	Management of Adults with Acute Conditions	3
NRS 672	Management of Common Mental Health Conditions in Primary Care	2
NRS 673	Management of Pediatric Patients in Primary Care	3
NRS 674	Management of Adults and Older Adults with Chronic Conditions	3
NRS 675	Directed DNP Clinical	6
NRS 681	Management of Common Gender Specific & Adolescent Health Conditions	4
NRS 683	Management of Geriatric Patients in Primary Care	3

NRS 665: Students are required to take NRS 665 a minimum of three semesters and will continue to register for it every semester until successful completion and dissemination of the final project.

Students who plan to take the Advanced Certified Hospice and Palliative Nurse exam upon graduation must complete 500 total clinical hours in palliative care in the 12 months prior to taking the exam..

D.N.P.-A.G.P.C.N.P. students interested in integrative health may complete NRS 609 and/or NRS 676 as unrequired electives.

Total Credit Hours: 76

UNIVERSITY SERVICES

Admissions

Gerardo Cifuentes, M.S., associate provost of admissions

The University welcomes applicants for admission to any of our five undergraduate schools. Admission to the University of Portland is competitive. Students are selected on the basis of individual merit.

Applications for the 2022-2023 year may be submitted beginning September 1, 2021. The University encourages applicants to visit the campus and meet with an admissions counselor, members of the faculty, and students. To make an appointment call (503) 943-7147; toll free (888) 627-5601.

Documents

Official transcripts, sent directly from any institutions attended by the applicant to the Office of Admissions, University of Portland, and showing all high school and college work attempted, are required. Since all official transcripts that are submitted become property of the University of Portland and cannot be copied or returned to the student, students are encouraged to obtain unofficial copies of their transcripts for advising or personal purposes directly from the institutions they have attended.

Students who knowingly submit altered transcripts or falsified applications jeopardize their admission status and could have their acceptance canceled.

Entering First-Year Students

Students admitted as first-year students must graduate from high school before enrollment. Admission is determined by the University's estimate of the student's probable success in college-level work. This estimate is based upon the number of and the grades in high school academic subjects, together with the SAT 1 or ACT test scores (optional), recommendation(s), an essay, and the major the student plans to pursue. The best preparation for study at the University of Portland includes four years of English, three to four years of mathematics, three to four years of laboratory science, three to four years of social sciences/history, and two to four years of an international language.

To prepare for some majors, a more intensive background in certain academic areas is recommended. For example, one year of high school chemistry is required for students interested in the School of Nursing and one year of Pre-Calculus is the preferred minimum math requirement for the School of Engineering.

Candidates should complete the following procedures by November 15 for the recommended deadline. January 15 is the final deadline. However, additional admission decisions will be made to later applicants as space allows. In making an application for admission, candidates must complete the following procedures:

- **Application Form** Submit a University of Portland application to the Office of Admissions with a \$50.00 non-refundable processing fee. Please note: any incoming student interested in a major in Nursing must indicate this intent on the application.
- **Pre-College Testing (Optional)** Take the Scholastic Aptitude Test (SAT 1) or the American College Test (ACT) prior to February of the senior year in high school. Submit official or copies of your results to the Office of Admissions.

The University reserves the right to rescind an applicant's acceptance any time before the first day of classes for reasons including, but not limited to: grade performance, high school or transfer institution disciplinary charge and/or action, suspension and/or expulsion, arrest and/or conviction, falsification or withholding of pertinent application information, or any behavior that brings into question the applicant's honesty, maturity, or moral character.

Advanced Placement

With Credit In recognition of the strength of many advanced programs in secondary schools, college credits can be awarded on the basis of satisfactory scores on Advance Placement (AP) and International Baccalaureate (IB). Three or more semester hours' credit may be granted for each AP examination passed with a score of 4 or 5, and higher level IB examinations passed with a score of 5 or better. These tests measure competence in specific college-level academic areas.

There is no grade attached to advanced placement or international baccalaureate. Therefore, it is not included in the grade point average of the student.

Without Credit Those who do not qualify for advanced placement with credit according to the provisions mentioned above, may, nevertheless, be assigned to advanced first-year or sophomore sections of certain classes if, in the judgment of the dean of the college or school, the student's preparation is adequate. In the event of such advanced placement no credit is given for any preparatory classes bypassed.

International Students

Admission Requirements

All undergraduate international applicants must meet the regular admissions procedures as set forth by the office of Admissions, with the following exception. An international applicant who will complete high school outside the United States, or will complete less than 3 years of high school in the United States at the time of graduation is not required to take the Scholastic Aptitude Test (SAT 1) or the American College Test (ACT). An international applicant who will have completed 3 or more years of high school in the United States at the time of high school graduation will be required to submit scores from the SAT or ACT, but will not need to submit an English language proficiency exam to be considered for admission.

University of Portland reserves the right to request all transcripts of previously attended institutions, including language training programs, prior to finalizing an applicant's admission decision.

All graduate international applicants must meet the regular admissions procedures as set forth by the Graduate School.

English Language Proficiency: In addition to the regular admission procedures, applicants whose native language is not English must provide proof of English language competence through one of the following procedures: Test of English as a Foreign Language (TOEFL), the International English Language Testing System (IELTS), or Duolingo. A minimum composite score of 71 on the TOEFL iBT, 6.5 on IELTS, or 105 must be attained for acceptance as an undergraduate student. Performance on subsections will also be considered. A minimum of 79 on the TOEFL iBT, 7.0 on IELTS, or 110 on the Duolingo exam is required for acceptance as a graduate student, except for the master's programs in communication studies, music, and nursing. In communication studies, music, and nursing it is 100 on the TOEFL iBT, 7.5 on IELTS and 120 on Duolingo.

After the TOEFL, IELTS, or Duolingo requirements are met, it is required that undergraduate students take the English placement examination at the University of Portland before registering for classes. If the score on this test is not satisfactory, the student will be required to take and pass, with at least a grade of C, the English class or classes in line with the deficiency. Until English proficiency is judged satisfactory, the student must take a reduced load in the major area of study. Thus, it may take the student an extra semester or more to obtain an undergraduate degree.

An exception to the above may be made in the following cases:

- Applicants presenting GCE certificates in English language from the University of London, or GCE certificates from examining bodies recognized as equivalent to the University of London need not take the TOEFL, IELTS, or Duolingo test, but they will be required to take the University of Portland English placement examination with the conditions mentioned above.
- Applicants presenting a score of 550 or above on the Evidence-Based Reading and Writing section of the Scholastic Aptitude Test (SAT 1), need not take the TOEFL, IELTS, or Duolingo test.
- Applicants presenting a score of 20 or above on the English section of the American College Test (ACT), need not take the TOEFL, IELTS, or Duolingo test.
- Applicants presenting a score of 4 or above on the International Baccalaureate (IB) exams English A or English B, need not take the TOEFL, IELTS, or Duolingo test.
- Applicants presenting one year (two semesters or three quarters) of university-level coursework completed in the United States that includes one semester (or two quarters) of writing and composition with a final grade of 2.0 or better, need not take the TOEFL, IELTS, or Duolingo test.
- Undergraduate applicants presenting a CEFR (Common European Framework) for languages with a score B1 or above, need not take the TOEFL, IELTS, or Duolingo test.
- Undergraduate applicants presenting a GTEC (Global Test of English Communication) for university students with a score 1181 or above, need not take the TOEFL, IELTS, or Duolingo test.

- Undergraduate applicants presenting a PTE (Pearson Test of English) Academic exam with a score 58 or above, need not take the TOEFL, IELTS, or Duolingo test.

Non-immigrant Documents: In compliance with US immigration regulations, an I-20 or DS-2019 document will not be issued until the student is accepted at the University and has submitted proof of financial support for one academic year of anticipated educational and living expenses.

Transfer Students

The upper division programs of the University are the center of increasing attention from students transferring from other four-year institutions and community colleges. Applications of such students will be given the fullest individual attention by the University.

Students seeking admission with fewer than 26 semester hours or 39 quarter hours of acceptable transfer credit will be required to follow the same admission procedure as entering first-year students (except submitting a letter of recommendation), in addition to furnishing the University an official transcript from the colleges attended. Students planning to transfer 26 or more semester hours or 39 or more quarter hours may be considered for admission if they have an overall grade point average of 3.0 and are in good academic standing in the college most recently attended. Admission to the University is determined by the dean's evaluation of the student's academic record. Many academic programs require specific course work and a college grade point average above 3.0.

When students transfer from an accredited college or university, all acceptable credits are counted in determining the class rating. (Students are classified as a sophomore if they have obtained at least 30 semester hours of credit; as juniors, 60 hours; as seniors, 90 hours.) Students transferring into the University as sophomores, juniors, or seniors will complete the requirements in the curriculum in which they are enrolled.

With the approval of the dean, credits designated as transfer (100-level or above) with a grade of C (2.00) or higher, may be accepted from community colleges and baccalaureate degree granting institutions accredited by regional accrediting associations, as well as by professional accrediting agencies when appropriate, subject to the limitations imposed by the degree requirements of a student's specific major. Academic credit for other courses and advanced placement may also be given with approval of the dean.

Transfer Applicant Information In making application for admission, the candidate must complete the following procedures at least one month prior to the semester of enrollment.

Application Form Submit a University of Portland application to the Office of Admissions with a \$50.00 non-refundable processing fee. Please note: transfer students interested in a major in nursing must indicate this intent on the admission application, and must be prepared to enter the University as a junior (obtaining 60 or more semester hours with the appropriate prerequisites), and can only apply at designated times. Please see the admissions website for current timelines.

Transcripts Have official transcripts sent directly from all colleges attended to the Office of Admissions, University of Portland.

Essay Complete the essay as indicated on the application form. Submit with the application (for nursing majors.)

The University reserves the right to rescind an applicant's acceptance any time before the first day of classes for reasons including, but not limited to, grade performance, high school or transfer institution disciplinary charge and/or action, suspension and/or expulsion, arrest and/or conviction, falsification or withholding of pertinent application information, or any behavior that brings into question the applicant's honesty, maturity, or moral character.

Non-degree Seeking Students

Non-degree seeking students are students who apply for admission in order to register for credit but who are not seeking a degree at the University. Enrollment as a non-degree seeking student implies no commitment on the part of the University regarding regular admission at a later time. Credits earned while in the non-degree seeking student classification may but do not necessarily apply toward requirements for a degree should a student later be accepted into a degree program.

Admission as a non-degree seeking student requires that the student submit a non-degree seeking student application to the Registrar's Office if they do not have a bachelor's degree, or to the Graduate School if they do. A \$50.00 application fee is required, as well as relevant transcripts, and other requested documents prior to their initial registration. If a non-degree seeking student wishes to register for courses in business, nursing, engineering, education, or for upper-division courses in the College of Arts and Sciences, then evidence of adequate preparation for the desired courses will be required.

Non-degree seeking student status at the undergraduate level requires that the student reapply prior to each term. In no case is a student allowed to accumulate more than 15 semester hours or to be enrolled for more than two semesters, and, any such student who accumulates 15 semester hours or two semesters is required to seek regular admission to a degree program in keeping with procedures determined by the Office of Admissions.

Accumulation of more than 9 hours of graduate credit in the non-degree seeking graduate student status is not permitted, and any such student who accumulates 9 semester hours is required to seek regular admission to a degree program in keeping with procedures determined by the Graduate School.

Auditors

Students who wish to attend classes but who do not desire credit may enroll as auditors. Regularly matriculated students may audit courses with the approval of their respective deans. Auditors must furnish sufficient evidence of their ability to take the courses involved. They are not required to perform any of the work assigned in the course, nor may they take the examinations.

Registration for audit is done in the same manner as for credit. Those who audit courses are not eligible for credit by examination in such courses, nor may auditors register for credit after the last official day to add/drop a class. No changes to or from auditor status are permitted after the last day to add/drop a class. Courses taken by audit are entered on the student's permanent record and indicated with the symbol AD.

Veterans

Prospective students who are eligible for veterans educational benefits should contact the School Certifying Official in the Office of Financial Aid at the University at the time application for admission is made.

Any student receiving veterans educational benefits while attending University of Portland is required to obtain transcripts from all previously attended schools and submit them to the school for review of prior credit.

Benefit recipients are required to notify the School Certifying Official of any adds, drops, withdrawals, or changes of program of study.

The educational records of the students receiving benefits as well as other students not on benefits (for comparison), may be provided to authorized state and federal personnel without prior consent of the student under 45 CFR. Part 99.3 and Part 99.35 (Protection and the Right of Privacy of Parents and Students).

Information regarding the use of veterans benefits, including a handbook for veterans benefits at the University of Portland is available on the Office of Financial Aid website at up.edu/finaid/other-aid/veterans.

If additional guidance is needed, the School Certifying Official can be contacted by email at veterans@up.edu, by telephone at (503) 943-7311, or at the Office of Financial Aid in Waldschmidt Hall. The Federal Department of Veterans Affairs can be reached at (800) 827-1000.

Athletics/Intramurals

Scott R. Leykam, vice president for athletics

Athletic Department Mission

The Congregation of the Holy Cross is committed to the highest standards of excellence in developing the whole person – the mind, heart and hands. The Department of Athletics at the University of Portland is devoted to these ideals in developing men and women of character, intelligence, and leadership through achievement in athletics and recreation, academic excellence, and formative service to the campus and community.

In order to fulfill the mission of the Athletic Department and the University, the Athletic Department is focused on four key areas:

1. **Athletic Achievement** - Pilot varsity sports programs will consistently experience athletic success in the WCC and earn post-season opportunities led by coaches and staff devoted to teaching, learning, and personal development.
2. **Academic Excellence** - Student-athletes will be actively engaged in a meaningful educational experience on campus including classroom, experiential, and global learning opportunities that culminate in an undergraduate or graduate degree that prepares students for lifelong success.

3. **Community Impact** - Varsity athletics and recreation will establish a positive and lasting impact on the campus and community, provide formation and character development opportunities to all students, and create lifelong connections to the University through hosting games and events and campus and community outreach.
4. **Financial Responsibility** - The Department of Athletics will create a sustainable financial model for intercollegiate athletics and recreation that balances University support with aggressive and appropriate fundraising and revenue opportunities. **Programs:** The University of Portland sponsors 16 varsity sports: baseball, men's and women's basketball, men's and women's cross country, women's rowing, men's and women's soccer, men's and women's tennis, men's and women's indoor track and field, men's and women's outdoor track and field, women's volleyball, and women's beach volleyball.

The recreational services program offers fitness and wellness opportunities to the UP campus community including workout classes, sports leagues, outdoor trips, health workshops, informal workouts and skill sessions. The program works to meet the needs of students, faculty, and staff of all skill levels and reaches out to those who have not participated before. Intramural sports leagues often have two skill levels and many are co-ed. Flag football, basketball, volleyball, futsal, outdoor soccer, tennis, badminton, table tennis, bocce, ultimate Frisbee, and softball are among the sports offered. Outdoor Pursuits activities expand each year and include biking, camping, snow skiing, hiking, rock climbing, and snowshoeing. OPP also offers bike, camping equipment, and snowshoe rentals on a short-term basis.

Numerous fitness classes are offered for all experience levels including bootcamp, zumba, kick-boxing, yoga, indoor cycling, and more. The Beauchamp Recreation & Wellness Center has a climbing gym, indoor track, cardio, training and weight rooms, three fitness studios, three basketball/volleyball courts, and locker rooms.

For more information, go to www.up.edu/recservices or call (503) 943-8755.

Financial Aid

Janet Turner, director

The Office of Financial Aid serves students by recognizing that every student has unique financial needs. We help students invest in their futures to attain their educational goals by providing funding options through the financial aid packaging process.

The financial aid process begins in the admissions office, where various types of merit-based scholarships are determined. The Office of Financial Aid then reviews the information each student provides on the Free Application for Federal Student Aid (FAFSA) to determine eligibility for other aid options. This application is available at studentaid.gov. After reviewing FAFSA information for each student, financial aid counselors create individual financial aid packages based on applicant data. These financial aid packages can include grants, scholarships, loans, and work study.

Grants may be from federal, state, or institutional sources and are awarded based on need and fund availability to undergraduate students. Financial need is determined by the following formula: cost of attendance minus expected family contribution equals financial need.

Scholarships are a form of aid that help students pay for their education. Scholarships may come from federal, state, institutional or outside sources each with unique eligibility requirements. Some scholarships are reserved for students with special qualifications, such as academic, athletic, or artistic talent. Students are encouraged to apply to outside scholarships each academic year.

Educational loans are a form of financial aid that must be repaid with interest. Undergraduate loans are available from federal, institutional, and private sources. Graduate student loans are available from federal and private sources.

Work study is employment that provides students with an opportunity to work in a job that requires a small number of hours of work per week, making it easier to maintain a job while going to school. University of Portland also provides institutional student employment opportunities. Information about student employment can be found on the website at up.edu/studentemployment.

Detailed information covering eligibility, financial aid programs, application procedures and the financial aid satisfactory academic progress policy can be found within the Financial Aid Handbook located online at up.edu/finaid/resources.

Please visit our website at up.edu/finaid for more information.

Withdrawal/Refund Policies

For withdrawal and refund policies regarding federal, state, and institutional financial aid, please refer to the Financial Aid Handbook online at up.edu/finaid/resources. For information regarding tuition refund policies, please see the Student Accounts323 section of the Bulletin.

Contact Information: E-mail: finaid@up.edu. Telephone: 503-943-7311 or toll-free 800-227-4568.

Office of Student Accounts

Euriziel Gordon, director

2021 - 2022 Tuition and Fees

Tuition Per Semester

Undergraduate	
Undergraduate — per semester/12 credit hours or more*	\$ 24,712.00
Undergraduate — per credit hour/11 hours or fewer	\$ 1,548.00
Graduate	
College of Arts & Science	
Communication Studies - per credit hour	\$ 1,326.00
Master in Fine Arts - per credit hour	\$ 663.00
Master of Arts in Pastoral Ministry - per credit hour	\$ 663.00
School of Engineering	
Masters of Engineering - per credit hour	\$ 1,326.00
Masters of Biomedical Engineering - per credit hour	\$ 1,326.00
Post Baccalaureate Professional Degree in Computer Science - per credit hour	\$ 999.00
School of Business	
Master of Business Administration - per credit hour	\$ 1,376.00
Master of Science in Finance - per credit hour	\$ 1,376.00
Operations & Technology Management - per credit hour	\$ 1,376.00
Master of Business Administration in Nonprofit Management - per credit hour	\$ 688.00
School of Nursing	
Doctor of Nursing Practice - per credit hour	\$ 1,326.00
School of Education	
Master of Arts in Teaching - per credit hour	\$ 995.00
Educational Specialist - per credit hour	\$ 813.00
Doctor of Education - per credit hour	\$ 813.00
Master of Education - per credit hour	\$ 663.00
Master of Arts in Education - per credit hour	\$ 663.00
Education Post Master Specialist - per credit hour	\$ 663.00
Auditor — 50% of tuition if registered within the first two weeks of a semester, 100% of course fees	
Business, Computer Science, Economics, Education ‡, Engineering, Nursing courses per credit hour fee	\$ 50.00

*For foreign programs contact program director.

‡Graduate Education programs are exempt from professional fees unless noted under course descriptions.

A student who holds a degree from an accredited college or university is considered to be a graduate student for fee purposes.

Per Semester Fees

Health insurance—full-time undergraduate only unless waived before or during registration as explained under “Payment Schedule”	\$ 1,513.50
Student Activities Fee—Full-time undergraduate only	\$ 130.00

Health and Counseling Fee - Full-time undergraduate only	\$ 90.00
Music —Private lessons, per semester hour	\$ 400.00
Private lessons, half hour	\$ 280.00
Summer Session —Consult Summer Session Catalog tuition schedule and fees.	
Laboratory/Workshop Fees —See course listings.	

Residence Hall and Food Service Rates

The University offers the following on campus living options per semester:

All Residence Halls

Double or Triple Room with:	
Meal Plan 1	\$ 7,145.00
Meal Plan 2	\$ 7,304.00
Meal Plan 3	\$ 7,478.00
Meal Plan 4	\$ 7,678.00
Meal Plan 5	\$ 8,402.00
Single Room with:	
Meal Plan 1	\$ 7,832.00
Meal Plan 2	\$ 7,991.00
Meal Plan 3	\$ 8,165.00
Meal Plan 4	\$ 8,365.00
Meal Plan 5	\$ 9,089.00
Double Room as Single Occupancy with:	
Meal Plan 1	\$ 8,507.00
Meal Plan 2	\$ 8,666.00
Meal Plan 3	\$ 8,840.00
Meal Plan 4	\$ 9,040.00
Meal Plan 5	\$ 9,764.00
Haggerty/Tyson Amenities Fee	\$ 200.00

Meal Plans— Declining Balance

Meal Plan 1: 1,867 Dining Points

Meal Plan 2: 2,026 Dining Points

Meal Plan 3: 2,200 Dining Points

Meal Plan 4: 2,400 Dining Points

Meal Plan 5: 3,124 Dining Points

Residence hall damage deposit	\$100.00

Private Baths

1 person	\$200.00
2 people	\$100.00
3 people	\$66.00
4 people	\$50.00

Non-resident students may purchase a meal plan in the Office of Student Accounts.

Dining Points (non Meal Plan) is a prepaid individually funded account for food service purchases on campus. Dining points accounts may be established at any time throughout the year by any University of Portland student at the food service office in the Commons. Students are limited to adding up to \$200.00 at a time.

Housing/Food Service Contract Exclusions

Between fall and spring semesters, specifically during Christmas vacation, the residence halls are closed and food service is not available. All resident students must find accommodations off campus.

Entrance Fees/Deposits

Registration/Housing Deposit — \$400.00

A non-refundable registration/housing deposit is required of all students. Ordinarily, this amount will be applied as a credit to the student's account. However, for students residing in a University residence hall, \$100.00 of this deposit will be held as a room reservation deposit and, as such, will not appear as a credit on the student's account. This \$100.00 will be held in escrow as long as the student continues to reside on campus. Minor maintenance services and hall damages over and above the normal occupancy usage will be deducted from the deposit. When the student leaves the residence hall system, any unpaid charges on the student's account will be deducted from the room reservation deposit first, then any balance will be refunded to the student.

Incidental Fees

Student parking permit, full year	\$ 160.00
Student parking permit, one semester	\$ 80.00

The purchase of a parking permit doesn't guarantee a parking spot.

Tuition due date for fall semester is August 2, 2021.

Tuition due date for spring semester is January 3, 2022.

Student accounts not paid in full by Monday, August 16, 2021 and January 10, 2022 will be assessed a \$100.00 late payment fee. There will be a second late payment fee of \$100.00 September 3, 2021 and February 1, 2022. The third late fee of \$100 will be applied on October 29 2021 and March 1 2022.

Students that do not confirm their enrollment on the PilotsUP by the first day of each semester will be assessed a \$100.00 fee.

First lost or stolen ID card fee	\$ 10.00
Second lost or stolen ID card fee	\$ 20.00
Returned check fee	\$ 50.00
Reissue an Accounts Payable check	\$ 50.00
Reissue of a Payroll check	\$ 50.00
Thesis in progress fee	\$ 50.00
Credit by examination fee for special comprehensive examinations given to students who challenge a course — per semester credit hour (non-refundable)	\$ 50.00

Sample of Expenses

Per Semester 2021-2022 Full-Time Undergraduate Students:

Tuition	\$ 24,712.00
*Health Insurance	\$ 1,513.50
†Average Fees	\$ 550.00
†Average Books	\$ 375.00
Standard Room/M meal Plan 2	\$ 7,304.00
†Average Personal Expenses	\$ 522.00
†Average Transportation	\$ 375.00
Total	\$ 35,351.50

*see Health Insurance 325

†Amounts are estimated.

Payment Schedule

Payment in full for tuition, room, and board (where applicable), and any assessed fees are due on or before August 2, 2021 for the fall 2021 semester and January 3, 2022 for the spring 2022 semester.

Tuition is due at the time of registration for all registration activity that occurs after the published due date, including registration by academic exception. Student accounts are subject to late fees if there is a balance at any time after the due date.

The Student Accounts Office creates an account statement the first week of July for fall semester, in the later part of November for spring semester, and the first week of April for summer semester. The account statement reflects all current charges based on a student's registration at the time of invoicing for the new semester. Accounts statements are generated at the beginning of every month during the academic year and are e-mailed to the student at their up.edu email addresses.

The difference between charges and financial aid listed under References: Accepted by not paid portion of the account statement is due on or before the due date for each semester. Students may subtract expected loan funds before remitting payment only if all requirements were submitted prior to the Financial Aid Deadline.

Students must make financial arrangements for any unpaid portion of their bill with the Office of Student Accounts prior to the due date in order to be cleared for class. Payment for any special charges and adjustments incurred during the semester is due at the time of adjustment.

While the University of Portland does accept institutional payments (loans, scholarships) in excess of billed amounts in order to cover living and other expenses; it *does not* accept direct payments from parents or other non-institutional sources in excess of the billed amount. Any such amounts should be paid directly to the student.

Students assume full financial responsibility for all costs incurred as a result of enrollment at the University of Portland, regardless of who pays the bill on their behalf. It is the students' responsibility to be aware of their account balance and financial aid information, and to maintain current valid address information at all times to ensure receipt of all University correspondence in a timely manner. Students are responsible for all educational debt charged to their student account. Students should take the initiative to understand their rights and responsibilities as well as the deadlines associated with enrollment.

A student's account must be paid-in-full in order to register for upcoming classes. Accounts that are more than 90 days past due may be referred to an outside agency for collection. The student agrees to pay all of the University of Portland's collection fees, collection costs at a rate of 33 percent of the balance due, attorney's fees, legal costs and charges for the collections of any unpaid balance of their student account. Degrees and transcripts will not be issued to any student whose account has not been paid in full. If a past due account is paid by personal check, the degree and transcript will be released two weeks after the receipt of payment.

Expenses incurred because of damage to University property will be billed to the student who caused the damage.

The University is not responsible for any loss of, or damage to, the personal property of a student.

Health Insurance

Participation in the health insurance program is required of all full-time undergraduate students. Students who are already covered by a comparable health insurance program may have this requirement waived by submitting the online health waiver. The online waiver will be reviewed by the Director of the Health and Counseling Center to confirm a student's coverage will meet or exceed the University of Portland sponsored health insurance. If a student's health insurance is found inadequate or not meeting our requirements, the waiver will not be permitted. Students will need to obtain adequate insurance by the first day of the fall/spring semester or participate in the University of Portland sponsored health insurance program. You can find information about the health insurance waiver on the Student Account website www.up.edu/studentaccounts. Students can find more information about what is required to waive the insurance at www.up.edu/healthcenter/health/costs-and-insurance. When deciding whether to waive, families may want to compare coverage and premiums. A waiver is required for each academic year and must be received by the waiver deadline posted on the Student Account website. No refunds will be granted for late waiver submission. Any health waivers received after the deadline will not be accepted for the current semester.

Student Activities Fee

The student activities fee is used by the Associated Students of the University of Portland (ASUP) to fund student programs and activities.

Health and Counseling Fee

The Health and Counseling fee is used by the Health and Counseling Center to ensure a healthy and safe learning environment for all students.

Tuition and Fees Refund Policies

Students are admitted to the University of Portland with the understanding they will remain until the end of the semester. Students enrolled in off campus programs should refer to the program handbook.

When students register for classes, they incur charges and are responsible for payment of these charges whether or not they attend. The University of Portland, a non-profit institution of higher learning, in establishing any student account, extends credit to students solely for the purpose of financing their education. Any balance due is hereby acknowledged as a student loan and will be considered non-dischargeable under Chapter 13 and 7 of the federal and state laws governing bankruptcy. To have the charge removed, students must process a drop or withdrawal through the registrar's office within the refund period. If a student is dismissed or suspended, no part of the tuition and fees, including room and board, for the remainder of the semester will be refunded. If a student finds it necessary to withdraw completely or from specific courses, the following policies apply:

Fall and Spring Semesters Tuition and Fees

In all cases of complete withdrawal counting from the first day courses begin each semester, the following refund schedule applies:

During the first week — 100% of tuition and fees

During the second week — 75% of tuition

During the third week — 50% of tuition

During the fourth week — 25% of tuition

After the fourth week — No refund

Different refund rules apply if you are going from full-time to part-time.

Tuition refunds are effective from the date a completed application to withdraw or drop courses is received in the Office of the Registrar, not from the last day of attendance. If you must withdraw after the refund period due to unusual circumstances, you may contact the Office of Student Accounts to apply for an exception to the refund policy.

Confirmation of Enrollment

Students must verify their attendance by submitting a Confirmation of Enrollment each semester. Beginning approximately two weeks before each semester, students can confirm their enrollment by logging onto PilotsUP.

Hold Policy

Accounts with an outstanding balance will be encumbered. The hold will prevent registration changes, including section changes, release of transcripts, and diplomas. The hold will remain on the student account until the balance has been paid in full. A student that has a hold placed on their account is encouraged to contact the Office of Student Accounts.

Paying by Check

There is a two week holding period on refunds from an overpayment by a check or on-line payment of any kind.

Credit Balances

Credit balances under \$1.00 will not be refunded unless requested, and will be written off if they are over one year old.

Direct Deposit

All students are expected to establish a direct deposit bank account to receive payments from the University for loan disbursements, student account refunds, paychecks, and student club reimbursements. This promotes sustainability on campus; eliminates the possibility of lost checks; and enables faster, more secure deposits while reducing the possibility of theft and fraud. Any domestic bank is acceptable and students can establish their direct deposit bank account through Self-Serve Banner under Personal Information.

There are situations when arranging for direct deposit is not possible. In these cases, the student should follow the Direct Deposit opt-out form process outlined on the web page for the Office of the Controller at up.edu/controller under "Direct Deposit." Instructions and help for creating and managing direct deposit bank account can also be found there.

Summer Session

See current Summer Session Catalog for refund policy and enrollment status definitions for tuition and financial aid purposes.

Room Refund

All students residing on campus are required to complete a residence hall and food service contract. This legal contract describes both University and student obligations and is for the entire academic year. Release from this contract will be granted only in the event of December graduation.

Food Service

Meal plan charges may be prorated if a student withdraws from the University or is released from the residence hall and food service contract due to a medical condition approved by the University Health Center.

DIVISION OF STUDENT AFFAIRS

Rev. John Donato, C.S.C., Ed.D., vice president for student affairs

The Division of Student Affairs is charged with developing and maintaining a quality of student life consistent with the University's mission and Catholic identity, a quality that enhances the development and formation of the whole person and fosters an environment in which students learn from interactions with the University community and the larger world.

Policies and Regulations

The University community has developed regulations which describe the expectations and limitations of student behavior consistent with the objectives and purpose of the University. It is the responsibility of each student to be familiar with these regulations, which are published annually in *Life on the Bluff*, the official student handbook.

The vice president for student affairs has full and direct responsibility for implementing student life policies for all students. The policies have been established by the president and the regents of the University. For details contact the vice president for student affairs at (503) 943-8532 or studentaffairs@up.edu.

Campus Ministry

Rev. James T. Gallagher, C.S.C., director

Campus Ministry anchors the life of the University of Portland community in the knowledge of God's presence. Our concern for the dignity of every human being as God's cherished child directs us to assist all members of the University community to discover the deepest longing in their lives. Formed in the tradition of the Congregation of Holy Cross, we share in the University's central goal of educating the heart and mind. Rooted in the Roman Catholic tradition, we respect and seek to nurture the faith development of Catholics, other Christians and all who seek God with a sincere heart.

This mission is brought to life through a rich array of liturgies, retreats, faith-sharing groups, sacramental preparation, pastoral counseling and student leadership opportunities.

Campus Ministry's main offices are in St. Mary's Student Center. There is also a Campus Ministry office on the first floor of Franz Hall and on the second floor of the Chapel of Christ the Teacher.

Chapel of Christ the Teacher

The Chapel of Christ the Teacher is the principle place for worship on campus and is open for prayer and meditation to all members of the University community every day of the year.

Eucharist is celebrated every Sunday at 10:30 a.m., as well as 8:00 p.m. when classes are in session. Mass is also celebrated Monday-Friday at 12:05 p.m. Throughout the Church year, and especially in the privileged seasons of Advent, Lent, and Easter, appropriate liturgical services are planned to enhance the spiritual life of the University community.

Prayer and worship are the heartbeat of University life and students, faculty, and staff are encouraged to participate. Student musicians, singers, readers, and Eucharistic ministers are always needed in order for Campus Ministry to offer well-planned and prayerful liturgies, prayer services, and other worship activities.

Care Team Program

Ali Dunham, L.C.S.W., co-chair, Care Team Lead

Brenda Greiner, M.A., co-chair

Ian Robins, M.A., co-chair, Residence Life Lead

The Care Team Program supports undergraduate and graduate students manifesting academic struggles and acute medical or mental health issues. The Care Team Program is accessed primarily by faculty and staff, but also by students and parents. While most students at the University experience success in their academic and social experiences, the University is committed to helping all students holistically reach their potential. When students are referred to the Care Team Program, Care Team

personnel will contact the student and other University professionals who assist students with the reported concern. The Care Team Program ensures good communication with the students and their professors. Assistance includes inviting students to be engaged in the process of finding the support and resources that will benefit their academic success and personal health. The main function of the Care Team Program is to refer students to one of many support personnel on campus, such as Campus Ministry, counseling, medical, Shepard Academic Resource Center, academic centers, in order to activate the appropriate support. To report a Care Team concern, please visit the Care Team webpage.

Health and Counseling Center

Carol Dell'Oliver, Ph.D., director

The dedicated staff at the University Health and Counseling Center (HCC) are here to help students stay healthy and address their physical and mental health needs during college. The HCC provides confidential medical and mental health services to all full-time and part-time students. Visits with all providers are free, with nominal charges for tangible items such as medications.

The HCC is open Monday through Friday from 8:30 am to 4:30 pm in Orrico Hall. You can schedule an appointment or request information by calling (503) 943-7134.

What the Health and Counseling Center provides:

- General medical care, including evaluation and treatment of illness, injury and preventative care (e.g. physical examinations)
- Laboratory services
- Health and counseling consultation services for students
- Health and wellness education for students
- Short term counseling services for students
- Students requesting weekly/ongoing counseling sessions will be assisted with referrals to an off campus provider
- After hours mental health consultative and crisis support for students
- After hours nurse advice line or a live video visit with a licensed health care provider through the Providence health care system
- Referral services to community providers
- Consultative services are available to faculty, parents, and staff regarding the health and safety of a student. However, confidential information cannot be discussed without a release of information from the student.

Planning for chronic or ongoing medical or mental health concerns:

- If a student has a chronic medical or psychiatric condition for which they are seeing a specialist at home, it is highly suggested the student find a specialist in the Portland area to consult with upon arrival to Portland. Scheduling an appointment with a specialist can take 4-6 weeks. We advise scheduling this appointment in advance of arrival to campus. Please contact the Health and Counseling Center for referrals.
- If a student is on a controlled medicine for a diagnosis (e.g. ADHD, chronic pain), they will need to find a provider in the Portland area to prescribe these medications. The Health and Counseling Center does not prescribe controlled medications. Health insurance is not required to see a professional at the Health and Counseling Center. However, the University believes that a solid health plan providing for urgent and non-urgent care is vital to the well-being of our students. As such, all full time undergraduate students are required to carry health insurance. If your personal health insurance does not cover you for non-emergency care in the Portland area, you will automatically be enrolled in the Student Insurance Plan. Benefit details of the Student Insurance Plan can be found on the Health and Counseling Center and Student Accounts websites.

Regardless of insurance status, all students are welcome in the Health and Counseling Center.

According to Oregon state law, students are required to show proof of receiving two doses of the MMR (measles, mumps, and rubella) vaccine. These vaccines must have been administered at least 28 days apart and after the student is 12 months of age. Every incoming student born on or after January 1, 1957 must provide these dates or other acceptable proof of immunity. To

enter MMR vaccine dates, go to the University of Portland's Patient Portal and sign in using your University of Portland log-in information.

International Student Services

Michael J. Pelley, M.S., director

The Office of International Student Services provides services to more than 130 international students, scholars, and faculty from more than 40 sovereign nations and territories. The director serves as liaison to The Department of Homeland Security, The Department of State, NAFSA: Association of International Educators, the Institute of International Education, and other local, state, national, and international programs and agencies.

The office advises international students and student groups, evaluates foreign transcripts, provides international students orientation, administers the international scholarship program, and sponsors a variety of programs including International Education Week, International Night, and the Campus Connector Program. Further information regarding international admissions and student advising contact University of Portland, 5000 N. Willamette Blvd., Portland, Oregon 97203-5798. Contact the office by telephone at (503) 943-7367, toll free at (800) 227-4568, by e-mail at iss@up.edu, intl-adm@up.edu, or on the web at up.edu/iss/.

Moreau Center for Service and Justice

Laurie Laird, B.S., M.A., director

In partnership with local and global communities, the Moreau Center for Service and Justice engages critical human and environmental concerns through active learning, mutually beneficial service, and experience-based leadership development rooted in Catholic social teaching.

We strive to fulfill this mission by offering opportunities to:

- **Engage in service** through one-time and on-going opportunities in the Portland Metro area.
- **Experience immersion** locally, nationally, or internationally during academic breaks.
- **Explore leadership** through student leadership opportunities in the Moreau Center's programs.

Additionally the office supports the Community Service Work Study program which provides students who are eligible for federal work study the opportunity to work with local non-profit organizations.

More information about the Moreau Center's programs can be found online at up.edu/moreaucenter, or by phone at (503) 943-7132.

Campus Safety

Sara Westbrook, B.A. director

The Department of Campus Safety provides effective safety and security service to the community 24-hours a day, 365 days-a-year. Campus Safety officers patrol the 108-acre campus by foot, bicycle, and vehicle and work closely with the Portland Police Bureau and Portland Fire & Rescue.

The Department of Campus Safety's mission is to enhance the living, learning, and working experience of the community by protecting life, maintaining order, and safeguarding property. It works to identify and resolve safety and security concerns in a professional, equitable, and courteous manner. Campus Safety seeks to take advantage of enforcement interactions and use them as teachable moments to nurture the personal growth of students. The Department encourages members of the community to share in the responsibility of reducing the opportunity for criminal activity.

Parking permits are issued by Campus Safety. Parking space is limited on campus as there are more parking permits issued than parking spaces; a parking permit does not guarantee a parking space. The University restricts parking in certain neighborhood areas by all members of the University community. Parking permits are mandatory during fall and spring semesters, Monday through Friday, from 8 a.m. to 4 p.m. With a permit, students can park in "general" parking areas. Students are never allowed to park in the lot around Waldschmidt Hall. First-year resident students may not bring a car to campus nor may they park on city streets in the neighborhood surrounding campus. If this policy poses a significant hardship, an exception may be granted by Campus Safety. Additional information about parking and commute options, as well as other services of the Department of Campus Safety can be found on the Campus Safety website, up.edu/campussafety.

Campus Safety is located in Haggerty Hall Suite 100, on Warren St., near the Chiles Center. The non-emergency (business) phone number for public safety is (503) 943-7161; for emergencies call (503) 943-4444.

Residence Life

Andrew Weingarten, director

The Office of Residence Life is committed to creating supportive living and learning environments where an education of the heart and hands is as important as the education of the head. We are committed to formation of Christian community in the spirit of the Congregation of Holy Cross. We are also committed to the formation of individuals through caring relationships and interactions between staff, faculty, and students. Our students are called by this mission to involve themselves in faith, service, and leadership experiences for a continuous education of the mind, heart, and hands.

Through their experience in the halls, students learn what it means to love thy neighbor while also caring for one's self. Student and professional leadership provide residents with a safe, healthy environment enriched with opportunities to develop spiritually, ethically, and socially.

The residential community consists of ten buildings with a choice of single gender and co-ed. Each hall includes first-year through senior students, except for Haggerty and Tyson halls, which house juniors, seniors, and graduate students.

Every community has a chapel and weekly Mass. Other communal amenities and programs include lounges, recreation rooms, storage, and laundry rooms. Community assistants serve at residence hall front desks, providing hospitality, distributing packages, and checking out cooking and recreation equipment to residents and their guests. Community assistant hours are set by each individual hall.

Leadership in the hall includes a hall director (full-time professional with a master's degree) and assistant hall director (current graduate student), resident assistants (current junior and senior students), and a pastoral resident (Congregation of Holy Cross priest or brother). All members of hall leadership work to build the hall's faith, intellectual, and social community.

Student and professional leaders combine to offer a diverse experience out of the classroom that supports the overall teaching, faith, and service mission of the University.

The Office of Residence Life assists the Office of Physical Plant in the assignment of student tenants to the more than 40 university-owned rental properties. All houses and apartments are located in the immediate neighborhood of the University. The Office of Physical Plant manages the properties, including maintenance concerns as well as coordinating leases and deposits. For more information, please email physicalplant@up.edu.

The Office of Residence Life is located in Tyson Hall 123 and can be reached at (503) 943-7205. Website: up.edu/residencelife.

Student Activities

Jeromy Koffler, Ed.D., director

The University aims to enhance the educational experience of students by encouraging and supporting a wide range of student activities, interests and organizations, including student government, student media, multicultural programs, weekend/late night programming, and a rich variety of student run clubs. Students who take advantage of the activities and participate in organizations gain invaluable experience in leadership and organizational skills, technical and professional skills, political and social skills. The Office of Student Activities (OSA) serves the University's mission by promoting active participation, by creating fun and engaging opportunities for students to learn and practice decision-making as it relates to their core values and the benefits of the community, and by facilitating the formation of healthy and productive relationships.

Approximately 95 student-run organizations are recognized by the University, including social clubs, academic honors and professional societies, club sports, service groups, and groups organized for cultural, academic, or special interests. As student interests change, the list of clubs changes; the most recent list is updated regularly on Engage. Student media include an on-line student newspaper, The Beacon; a yearbook, The Log; and a student radio station, KDUP.

The Associated Students of the University of Portland (ASUP), the student government of the undergraduate student body, allocates the student government fee, providing support for many of the student-run organizations, and gives voice to student concerns. Campus Program Board (CPB), under the auspices of ASUP, coordinates a multi-faceted menu of social, cultural, and educational programs including the large scale concert, Rock the Bluff. Other services provided by ASUP include ADvantage, a publicity service for campus events; Espresso UP, a free "latte break" on Wednesday evenings in St. Mary's

lounge; ASUP films, a service coordinating the screening of different films and documentaries on campus; the Pilot Express, a shuttle service to the airport and train station in conjunction with official University breaks; and Pilot Audio and Lighting (PAL), an event production service.

The Office of Student Activities coordinates an orientation program for new undergraduates at the start of the fall and spring semesters, including events planned especially for transfer students and commuter first-year students. Each semester, the department collaborates with the Office of Alumni and Parent Relations to coordinate Families Weekend, events which gives students and their families time to spend together on The Bluff. The department also sponsors Pilots After Dark, a menu of weekend and late night programs generally offered each Friday and Saturday night from 10 p.m. to 1 a.m. in the Pilot House. The Office of Student Activities is located in St. Mary's Student Center and can be reached at (503) 943-7470 or at www.up.edu/activities.

INFORMATION SERVICES DIVISION

The University of Portland manages information technology to support an integrated, open, collaborative environment. The Information Services Division pursues this vision by providing a technological environment that supports the access, analysis, and management of information benefiting all University constituencies. Information services provides high performing, reliable, secure, and integrated technology to students, faculty, and staff with the aim to facilitate the University's mission of teaching, learning, and service. The personnel who provide these services are dedicated professionals ready to meet constituents' needs. University community members are encouraged to take the time to consult with them with questions, problems, or needs which relate to the use and application of information technology.

More information about Information Services can be found online at up.edu/is, at the specific websites linked below, or by contacting the Technology Help Desk at help@up.edu or (503) 943-7000.

Student Technology Checklist

Technology Help Desk

Audio Visual Services

Accessible Technology

Technology Training

Classroom Technology

Computer Labs and Kiosks

Tech Support Portal

Wireless Network

Single Sign On

Email and Calendaring

Password Management

PilotsUP

Mobile App

IS Communications

Moodle

Office365 for Education

Web Services

Software

Conferencing

Voice Services

Storage

Printing

Virtual Computing

Cybersecurity

WiFi Calling

Policies

COURSES

AS - Aerospace

AS 101 - Heritage and Values (1)

AS 101, "Heritage and Values," allows students to examine general aspects of the Department of the Air Force, Air Force Leadership, Air Force benefits, and opportunities for Air Force officers. The course lays the foundation for becoming an Airman by outlining our heritage and values.

AS 102 - Heritage and Values (1)

As a continuation of AS 101, this course allows students to examine general aspects of the Department of the Air Force, Air Force Leadership, Air Force benefits, and opportunities for Air Force officers. The course lays the foundation for becoming an Airman by outlining our heritage and values.

AS 111 - Leadership Laboratory (2)

This course is taken in conjunction with AS 101. It consists of a weekly laboratory including Air Force customs and courtesies, health and physical fitness, drill and ceremonies, leadership studies, leadership exercises, and Air Force officer career days. Course is graded P/NP.

AS 112 - Leadership Laboratory (2)

This course is taken in conjunction with AS 102. It consists of a weekly laboratory including Air Force customs and courtesies, health and physical fitness, drill and ceremonies, leadership studies, leadership exercises, and Air Force officer career days. Course is graded P/NP.

AS 201 - Team and Leadership Fundamentals (1)

This course is designed to provide a fundamental understanding of both leadership and team building. It is imperative that cadets are taught from the beginning that there are many layers to leadership, including aspects that don't always jump to mind. Such things include listening, understanding themselves, being a good follower, and problem solving efficiently.

AS 202 - Team and Leadership Fundamentals (1)

As a continuation of AS 201, this course is designed to provide a fundamental understanding of both leadership and team building. It is imperative that cadets are taught from the beginning that there are many layers to leadership, including aspects that don't always jump to mind. Such things include listening, understanding themselves, being a good follower, and problem solving efficiently.

AS 211 - Leadership Laboratory (2)

This course is taken in conjunction with AS 201. It consists of a weekly laboratory including Air Force customs and courtesies, physical fitness, drill and ceremonies, leadership studies, leadership exercises, and Air Force officer career days. Provides students opportunities to demonstrate fundamental management skills and prepares cadets for Field Training. Course is graded P/NP.

AS 212 - Leadership Laboratory (2)

This course is taken in conjunction with AS 202. It consists of a weekly laboratory including Air Force customs and courtesies, physical fitness, drill and ceremonies, leadership studies, leadership exercises, and Air Force officer career days. Provides students opportunities to demonstrate fundamental management skills and prepares cadets for Field Training. Course is graded P/NP.

AS 301 - Leading People and Effective Communication (3)

This course teaches cadets advanced skills and knowledge in leadership and communication. Special emphasis is placed on enhancing leadership skills. Cadets have an opportunity to apply these leadership and management techniques in a supervised environment as juniors and seniors.

AS 302 - Leading People and Effective Communication (3)

As a continuation of AS 301, this course teaches cadets advanced skills and knowledge in leadership and communication. 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.

AS 311 - Leadership Laboratory (2)

This course is taken in conjunction with AS 301. It consists of a weekly laboratory including Air Force customs and courtesies, physical fitness, drill and ceremonies, leadership studies, leadership exercises, and Air Force officer career days. It provides students opportunities to use fundamental management skills while planning and conducting corps activities. Course is graded P/NP.

AS 312 - Leadership Laboratory (2)

This course is taken in conjunction with AS 302. It consists of a weekly laboratory including Air Force customs and courtesies, physical fitness, drill and ceremonies, leadership studies, leadership exercises, and Air Force officer career days. It provides students opportunities to use fundamental management skills while planning and conducting corps activities. Course is graded P/NP.

AS 401 - National Security/Leadership Responsibilities/Commissioning Preparation (3)

AS 401 is designed for college seniors and gives them 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. Special topics of interest focus on the military as a profession, officership, military law, evaluations, and joint warfighting.

AS 402 - National Security/Leadership Responsibilities/Commissioning Preparation (3)

As a continuation of AS 401, this course is an overview of the complex social/political issues facing the military profession and requires a measure of sophistication commensurate with the senior college level. Special topics of interest focus on the military as a profession, officership, military law, evaluations, and joint warfighting.

AS 411 - Leadership Laboratory (2)

This course is taken in conjunction with AS 401. It provides the opportunity to use leadership skills in planning and conducting cadet activities while preparing students for commissioning and entry into the active-duty Air Force. Course is graded P/NP.

AS 412 - Leadership Laboratory (2)

This course is taken in conjunction with AS 402. It provides the opportunity to use leadership skills in planning and conducting cadet activities while preparing students for commissioning and entry into the active-duty Air Force. Course is graded P/NP.

AS 415 - Leadership Laboratory (2)

This course provides the opportunity to use leadership skills in planning and conducting cadet activities while preparing students for commissioning and entry into the active-duty Air Force. Course is graded P/NP.

AS 416 - Leadership Laboratory (2)

This course provides the opportunity to use leadership skills in planning and conducting cadet activities while preparing students for commissioning and entry into the active-duty Air Force. Course is graded P/NP.

BIO - Biology

BIO 005 - BIO 205 Workshop (0)

This workshop is based on the Peer-Led Team Learning model (PLTL) with students working individually and in small groups to learn and exercise problem-solving techniques. Students participate in learning activities led by peer facilitators to further explore topics presented in the lecture course. This workshop is offered each semester.

Corequisite: BIO 205.

BIO 104 - Biology of Food (3)

An introduction to the biological, chemical, and physical nature of food. Students will explore food chemistry, diet, human health, and societal issues through readings and lab activities. Three hours of lecture per week.

BIO 106 - Genetics and Society (3)

Survey of the principles and methods of science as applied to the field of Genetics. Current topics pertaining to Biotechnology, Gene editing, Gene Therapy and others will be discussed with an emphasis on their social, ethical, and legal implications. Three hours of lecture per week.

BIO 107 - Plants as Food and Medicine (3)

An introduction to the origin, history, biology, and utilization of plants important in human societies. Worldwide use of plants for food, medicine, spices, fibers, and many other purposes will be explored. Three hours of lecture per week.

BIO 203 - Health and Longevity (3)

An exploration of how the human body's systems work in coordination with each other and in response to changes in the environment, with a particular focus on how this relates to health and longevity. Three hours of lecture per week.

BIO 205 - Foundations of Biology (3)

Introductory principles of biology, including the nature of scientific inquiry, biochemistry, metabolism, protein structure and function, cell structure and function, and genetics. Three hours of lecture per week. Credit for 205 will not be granted for students who have completed BIO 207. This course meets the requirements for nursing majors.

BIO 207 - Introduction to Molecular and Cellular Biology (3)

This course provides introductory principles of biology. Topics include the nature of scientific inquiry, biochemistry and metabolism, macromolecular structure and function, cell structure and function, and molecular and Mendelian genetics. Credit for BIO 207 will not be granted to students who have completed BIO 205. Three hours of lecture per week.

Corequisite: BIO 277 may be taken concurrently.

BIO 208 - Introduction to Evolution and Ecology (3)

Second course in the sequence of introductory principles of biology, providing essential background in the fields of Evolution and Ecology. Topics include evolution, population genetics, processes of speciation, phylogeny and classification, dynamics among individuals in populations and communities, the concepts underlying ecosystem functions, and interactions between organisms and their environment. Three hours of lecture per week.

Prerequisite: BIO 205 or BIO 207, and BIO 277 or ENV 200; all with a C- or higher. Corequisite: BIO 278 may be taken concurrently.

BIO 277 - Introduction to Molecular and Cellular Biology Lab (1)

Laboratory investigation into the biochemistry, cellular structure and function, and genetics of cells and living organisms. Three hours of lab per week. Fee: \$70

Corequisite: BIO 205 or BIO 207.

BIO 278 - Introduction to Evolution and Ecology Lab (1)

This lab emphasizes scientific literacy and scientific inquiry through reading primary literature and performing student-designed research. Three hours of lab per week. Fee: \$70.

Prerequisite: BIO 205 or BIO 207, and BIO 277; all with a C- or higher. Corequisite: BIO 208.

BIO 290 - Directed Study (Variable)

Independent study in a specialized field under the direction of an instructor. Maximum of eight credits under the number. Instructor permission is required.

BIO 301 - Microbiology (3)

This course examines the cell biology, physiology, and genetics of microorganisms, focusing primarily on microbes that affect human health. Specific organisms covered include the beneficial organisms that aid in the digestion of food, synthesize vitamins, and protect the body against invasion by harmful microbes. In addition, the course also covers pathogens that cause disease. Three hours of lecture per week.

Prerequisite: BIO 208 and BIO 278, both with a C- or higher; and CHM 208 and CHM 278. Corequisite: BIO 361.

BIO 302 - Ornithology (3)

This is an intensive course investigating the behavior, physiology, evolution, taxonomy, and natural history of birds with an emphasis on species found in the Pacific Northwest. This course is usually offered in the summer.

Prerequisite: BIO 208 and BIO 278, all with a C- or higher. Corequisite: BIO 362 may be taken concurrently.

BIO 303 - Entomology (3)

Entomology is the study of insects. Topics include evolution, ecology, ethology, conservation, classification, identification, agriculture, and social and medical applications. The focus will be developing skills necessary to delve deep into areas of current research by synthesizing concepts, formulating and communicating hypotheses and data, and critically evaluating experiments and conclusions from research in entomology.

Prerequisite: BIO 208 and BIO 278; all with a C- or higher. Corequisite: BIO 323 may be taken concurrently.

BIO 304 - Wetlands Ecology (3)

Explores the biological, chemical, and physical structure of Pacific Northwest wetlands. Species interactions, human impacts to wetlands, wetland disease agents, and the role wetlands play in human health will be considered. Three hours of lecture per week.

Prerequisite: BIO 208 and BIO 278; all with a C- or higher. Corequisite: BIO 374.

BIO 305 - Human Anatomy and Physiology 1 (3)

Anatomy and Physiology 1 is the first of a two-course sequence. The course focuses on the structure and function of the human body including cells, tissues and organs of the integumentary, skeletal, muscular, nervous, endocrine, and reproductive systems. Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis. Three hours of lecture per week.

Prerequisite: BIO 205 or BIO 207 and 277; all with a grade of C or higher.

BIO 306 - Human Anatomy and Physiology 2 (3)

Human Anatomy and Physiology 2 is the second of a two-course sequence. The course focuses on the structure and function of the human body including cells, tissues and organs of the cardiovascular, respiratory, digestive, and urinary systems. Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis.

Prerequisite: BIO 305 with a grade of C or higher. Corequisite: BIO 366 may be taken concurrently.

BIO 318 - Mammal Behavior and Conservation (3)

An exploration of mammal behavior, from species interactions to behavioral ecology, integrated with issues related to mammal conservation. Topics include factors contributing to their endangerment, the role of humans in both their demise and conservation, and strategies currently being used to try to save mammal species from extinction. Three hours of lecture per week.

Prerequisite: BIO 208 and BIO 278; all with a C- or higher.

BIO 320 - Primatology (3)

This course is comprehensive in that it will span morphology, ecology, behavior, evolution, and conservation of the Order Primates. This course will introduce students to the diversity, distribution, and abundance of nonhuman primates. We will explore the significance of primates in a broad scholarly context, as sources of insight into human evolution, and as intensive recipients of conservation efforts.

Prerequisite: BIO 208 and BIO 278.

BIO 323 - Entomology Lab (1)

In entomology lab students will learn how to sample, collect, prepare, and identify insects. Three hours of lab per week. Fee: \$70

Prerequisite: BIO 208 and BIO 278; all with a C- or higher. Corequisite: BIO 303.

BIO 325 - Plants and Civilization (3)

This course is an introduction to the origin, history, biology, and utilization of plants important in human societies. Worldwide use of plants for food, medicine, spices and other purposes will be explored.

Prerequisite: BIO 207, 277, 208, and 278, all with C- or higher.

BIO 330 - Genetics (3)

This course examines genetic information storage, transmission and utilization, and technological advances in the field. Three hours of lecture per week.

Prerequisite: BIO 208 and BIO 278, all with a C- or higher; and CHM 208 and CHM 278. Corequisite: BIO 333 may be taken concurrently.

BIO 333 - Genetics Lab (1)

Overview of lab methodology in genetics and its practical application in authentic research projects that are inquiry driven and problem based. Three hours of lab per week. Fee: \$70

Prerequisite: BIO 208 and BIO 278, both with a C- or higher; and CHM 208 and CHM 278. Corequisite: BIO 330.

BIO 336 - Developmental Biology (3)

An exploration of the fundamental cell biology and genetics that dictate embryonic development of all multicellular animals. Major developmental model systems examined include the fruit fly, frog, chicken, and mouse. Three hours of lecture per week.

Prerequisite: BIO 208 and BIO 278; all with a C- or higher. Corequisite: BIO 376 may be taken concurrently.

BIO 338 - Marine Biology of the Pacific Northwest (3)

Taxonomy, morphology, physiology, and ecology of the Northwest marine fauna. Three hours of lecture per week.

Prerequisite: BIO 208 and BIO 278; all with a C- or higher. Corequisite: BIO 368.

BIO 340 - Ecology (3)

Principles of ecology including structure and function of ecosystems, ecosystem development, behavioral ecology, and population biology. Three hours of lecture per week.

Prerequisite: BIO 208 and BIO 278; all with a C- or higher. Corequisite: BIO 343 may be taken concurrently.

BIO 341 - The Nature of Plants (3)

An exploration of the major groups of land plants, their diversity, life cycles, morphology, and ecological interactions. Three hours of lecture per week.

Prerequisite: BIO 208 and BIO 278; all with a C- or higher. Corequisite: BIO 371 may be taken concurrently.

BIO 343 - Ecology Lab (1)

Laboratory and field investigation of community structure, productivity, and population dynamics. Three hours of lab per week. Fee: \$70

Prerequisite: BIO 208 and BIO 278; all with a C- or higher. Corequisite: BIO 340.

BIO 345 - Vertebrate Biology (3)

Natural history of vertebrates including morphology, physiology, evolution, and taxonomy of the vertebrate classes. Three hours of lecture per week.

Prerequisite: BIO 208 and BIO 278; all with a C- or higher. Corequisite: BIO 375 may be taken concurrently.

BIO 347 - Animal Behavior (3)

Course will review the history of ethology and behavioral ecology, and examine the behavior of both invertebrate and vertebrate organisms in physiological, ecological, adaptive, and phylogenetic contexts. Three hours of lecture per week.

Prerequisite: BIO 208 and BIO 278; all with a C- or higher.

BIO 348 - Conservation Biology (3)

An examination of the principles underlying ecological diversity and ecosystem services, the factors contributing to their endangerment and loss, and the role and stake humans have in their conservation. Topics include local and global issues discussed from a variety of perspectives including ecological, economical, political, and ethical. Three hours of lecture per week.

Prerequisite: BIO 208 and BIO 278 or BIO 206 and 276, all with a C- or higher.

BIO 350 - Plants and Civilization Lab (1)

This is the associated laboratory course for Plants and Civilization lecture (BIO325) and can only be taken by students enrolled in Plants and Civilization lecture. These courses together are an introduction to the origin, history, biology, and utilization of plants important in human societies. Worldwide use of plants for food, medicine, spices and other purposes will be explored.

Prerequisite: BIO 207, 277, 208, and 278, all with a C- or higher. Corequisite: BIO 325.

BIO 354 - Cell and Molecular Biology (3)

This course applies and expands upon the foundational knowledge built in BIO207. Students develop skills necessary to delve deeply into areas of current research in molecular and cell biology by synthesizing concepts, formulating and communicating models and hypotheses, and evaluating data. Three hours of lecture per week.

Prerequisite: BIO 208 and BIO 278, all with a C- or higher; and CHM 208 and CHM 278.

BIO 358 - Mammal Behavior and Conservation Lab (1)

Field and laboratory investigation of mammalian identification, behavior, and ecology. To be taken concurrently with BIO 318. One three-hour lab per week.

Prerequisite: BIO 208 and BIO 278, both with a C- or higher. Corequisite: BIO 318.

BIO 359 - Microbiology for Nurses (3)

Structure, physiology, and genetics of cellular microorganisms and viruses, discussed in relation to the pathogenesis, treatment, and prevention of infectious diseases including study of the immune system. Three hours of lecture per week.

Prerequisite: BIO 205 or BIO 207 and BIO 277, all with a C or higher. Corequisite: BIO 379 may be taken concurrently.

BIO 361 - Microbiology Lab (1)

Overview of microbiology laboratory methodology and its application in authentic research projects. Three hours of laboratory per week, and follow-up at times other than the scheduled lab period. Fee: \$70

Prerequisite: BIO 208 and BIO 278, all with a C- or higher; and CHM 208 and 278. Corequisite: BIO 301.

BIO 362 - Ornithology Lab (1)

Identification, taxonomy, and natural history of birds, emphasizing Pacific Northwest species. Field and lab work with two required weekend camping field trips, usually the two weekends after Memorial Day weekend: Fri-Sun to Malheur NWR and Fri-Sat to the Oregon Coast. Fee: \$70.

Prerequisite: BIO 208 and BIO 278; all with a C- or higher. Corequisite: BIO 302.

BIO 363 - Freshwater Ecology (3)

The physical, chemical, and biological components of freshwater ecosystems. Three hours of lecture per week.

Prerequisite: BIO 208 and BIO 278; all with a C- or higher. Corequisite: BIO 373.

BIO 365 - Human Anatomy & Physiology Lab 1 (1)

Anatomy and Physiology 1 lab is the first of a two-course lab sequence. The course focuses on the structure and function of the human body including cells, tissues and organs of integumentary, skeletal, muscular, nervous, endocrine, and reproductive systems. Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis. Three hours of lab per week. Fee: \$70

Prerequisite: BIO 205 or BIO 207 and BIO 277; all with a grade of C or higher.

BIO 366 - Human Anatomy & Physiology Lab 2 (1)

Anatomy and Physiology 2 lab is the second of a two-course sequence. The course focuses on the structure and function of the human body including cells, tissues and organs of the cardiovascular, respiratory, digestive, urinary systems. Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis. Three hours of lab per week. Fee: \$70

Prerequisite: BIO 305 and BIO 365, all with a grade of C or higher.

BIO 368 - Marine Biology Lab (1)

Laboratory and field experience in the taxonomy, morphology, physiology, and ecology of Northwest marine fauna. Three hours of lab per week. Fee: \$70

Prerequisite: BIO 208 and BIO 278; all with a C- or higher. Corequisite: BIO 338.

BIO 371 - Field Botany (1)

A field and laboratory-based exploration of the vegetative and reproductive structures of plants, with an emphasis on the identification and ecology of plants native to the Pacific Northwest. Three hours of lab per week. Fee: \$70

Prerequisite: BIO 208 and BIO 278; all with a C- or higher. Corequisite: BIO 341.

BIO 372 - Cell and Molecular Biology Lab (1)

Students perform cell and molecular biology experiments utilizing techniques such as PCR, *in vitro* transcription, recombinant protein purification, CRISPR gene editing, and fluorescence microscopy, and gain authentic research experiences by guiding their own research progress and synthesizing their data with published data in the field. Three hours of lab per week. Fee: \$70

Prerequisite: BIO 208 and BIO 278, both with a C- or higher; and CHM 208 and CHM 278. Corequisite: BIO 354.

BIO 373 - Freshwater Ecology Lab (1)

Field and laboratory investigation of freshwater ecosystems. Three hours of lab per week. Fee: \$70

Prerequisite: BIO 208 and BIO 278; all with a C- or higher. Corequisite: BIO 363.

BIO 374 - Wetlands Ecology Lab (1)

Field and laboratory investigation of wetland ecosystems. Students will explore problems facing wetlands, methods for assessing wetland health, and how to apply ecological principles to solve wetland related issues. Three hours of lab per week. Fee: \$70

Prerequisite: BIO 208 and BIO 278; all with a C- or higher. Corequisite: BIO 304.

BIO 375 - Vertebrate Biology Lab (1)

Field and laboratory experience in the natural history and taxonomy of vertebrate organisms. Three hours of lab per week. Fee: \$70

Prerequisite: BIO 208 and BIO 278; all with a C- or higher. Corequisite: BIO 345.

BIO 376 - Developmental Biology Lab (1)

Experimental and microscopic examination of major developmental model systems including chick. May include fruit fly, zebrafish and/or amphibians, and invertebrates including sea urchins, flatworms and/or hydra. Three hours of lab per week. Fee: \$70

Prerequisite: BIO 208 and BIO 278; all with a C- or higher. Corequisite: BIO 336.

BIO 379 - Microbiology Lab for Nurses (1)

Laboratory investigation of microorganisms that affect human health, with an emphasis on proper handling of specimens, selective and differential cultivation, laboratory diagnosis, and evaluation of antimicrobial agents. Three hours of lab per week. Fee: \$70

Prerequisite: BIO 205 or BIO 207 and 277, each with a grade of C or higher. Corequisite: BIO 359.

BIO 384 - Remote Sensing & Geographic Information Systems (3)

This course investigates environmental applications of multispectral remote sensing and geographic information systems. RS topics include sensor systems, digital image processing, and automated information extraction. GIS topics include spatial database management systems, data analysis, and environmental modeling. Emphasis is placed on biological applications including vegetation mapping, habitat identification, and field data mapping.

Crosslisted as: ENV 384, CE 458.

BIO 387 - Service Learning in Biology (1)

Faculty-directed student teaching or outreach. Requires permission of instructor. May be repeated for credit.

BIO 391 - One Time Course Offering (Variable)

Credit arranged.

BIO 392 - One Time Course Offering (Variable)

Credit arranged.

BIO 397 - Internship (Variable)

Field experience in academia, selected industries, or agencies. Department permission and supervision is required. Students may receive a grade of IP (In-Progress) until the completion of their internship. Course is graded P/NP.

Prerequisite: BIO 208 and BIO 278 or BIO 206 and 276, all with a C- or higher, or permission of instructor.

BIO 400 - Immunology (3)

This course examines the principles of innate and adaptive immunity including conserved pathogen recognition systems, generation of antigen receptors through somatic recombination, clonal selection of T and B lymphocytes, and immunological disorders such as immunodeficiency, autoimmunity, allergy, and transplant rejection. Three hours of lecture per week.

Prerequisite: BIO 208 and BIO 278, all with a C- or higher; and CHM 208 and CHM 278.

BIO 405 - Ecology, Evolution, and Culture of East Africa (3)

East Africa is one of the planet's richest sites of human and nonhuman ecological histories and provides the ideal space to study diversity and difference. Topics will include evolution and ecology, marine ecology, land use conflict, and sustainability. Fulfills requirements for upper-division BIO field lab or capstone. Counts towards 3 credits in CAS core science; 3 credits in upper-division elective in Environmental Studies; or 3 credits in upper-division Biology elective. Fee: \$7,233

Corequisite: CST 405.

BIO 408 - Endocrinology (3)

This course provides an introduction to endocrinology, covering the physiologic effects of hormones in health and disease. By the end of the course, students will be able to describe: (1) the structure and function of hormones; (2) the signaling pathways of hormones; (3) the regulatory mechanisms of hormones; and (4) the consequences of disruption of normal levels of hormones. Three hours of lecture per week.

Prerequisite: BIO 305.

BIO 410 - Advances in Biomedical Science (3)

This course uses primary literature and project-based learning to investigate recent advances in biomedical science, focusing on genetic, molecular, and cellular advances in diagnostics, therapies, and research. Three hours of lecture per week.

Prerequisite: BIO 207, BIO 277, BIO 208, BIO 278, all with C- or higher.

BIO 415 - Readings in Biology (1)

Topics in biology, including medicine, ecology, animal behavior, biochemistry, genetics and evolution. One hour of discussion per week.

Prerequisite: BIO 208 and BIO 278; all with a C- or higher.

BIO 418 - Biology of Exercise

This course examines the mechanisms that underlie physiological changes following acute and chronic exercise and other forms of stress. Emphasis is placed on the interrelationships of the skeletal, muscular, nervous, respiratory, circulatory, endocrine, and digestive systems. Three hours of lecture per week.

Prerequisite: BIO 306.

BIO 423 - Computational Biology (3)

Algorithmic and analysis techniques for biological data such as DNA, RNA, proteins, and gene expression. Topics include molecular biology, alignment and searching algorithms, sequence evolution algorithms, genetic trees, and analysis of microarray data. This course is interdisciplinary and assumes programming skills. Three hours of lecture per week.

Prerequisite: MTH 201, CS 203 with a grade of C- or better, and one of the following: BIO 205, BIO 208, or CS 305 with a grade of C- or better. Crosslisted as: CS 423.

BIO 428 - Neurobiology (3)

Course will examine anatomy and physiology of the nervous system with a particular focus on neurons as well as the electrical and chemical signaling used in neural communication. Three hours of lecture per week.

Prerequisite: BIO 205 or BIO 207, and BIO 305, all with a C- or higher.

BIO 440 - Advances in Ecology (3)

This course will use scientific investigation to explore current topics in ecology. Students will further their understanding of ecological issues through independent projects.

Prerequisite: BIO 303, BIO 304, BIO 340, BIO 345, or BIO 363.

BIO 445 - Molecular Genetics (3)

Principles of eukaryotic and prokaryotic genetics, including the nature of the genetic material, gene expression and regulation, mutation and repair, and molecular genetics techniques. Three hours of lecture per week.

Prerequisite: BIO 208 and BIO 278 or BIO 206 and 276, all with a C- or higher, and CHM 325. Corequisite: BIO 333 may be taken concurrently.

BIO 447 - Cancer Biology (3)

Exploration of the molecular, cellular, and genetic changes that are thought to cause tumors by disrupting normal cell division and function. Students will apply basic concepts they mastered in previous course work, such as principles of evolution, metabolism, and gene regulation, by critically evaluating a variety of primary literature articles in areas of current research in cancer biology.

Prerequisite: BIO 208 and BIO 278 or BIO 206 and 276, all with a C- or higher, and Bio 330 or 354.

BIO 453 - Evolution (3)

Required capstone course for Biology majors. Includes coverage of sources of genetic variation, speciation, phylogenetic analyses, and extinction. Students are strongly encouraged to take their sub-cellular lab requirement before they take this course. Students are required to take the course during the Senior year. Three hours of lecture per week.

Prerequisite: BIO 208 and BIO 278; all with a C- or higher.

BIO 470 - Immunology Lab (1)

This course uses current techniques in immunology including cell culture, microscopy, ELISA, and flow cytometry to explore the structure, function, and interactions of cells of the innate and adaptive immune system. Three hours of lab per week. Fee: \$70.

Prerequisite: BIO 208 and 278, both with a C- or higher; and CHM 208 and 278. Corequisite: BIO 400.

BIO 477 - Human Anatomy Dissection (1)

Completion of BIO 365 and BIO 366 and permission of the instructor required. Students engage in independent dissection of human cadavers to gain a more in-depth and comprehensive understanding of the human body. Fee: \$70

Prerequisite: BIO 365 and BIO 366.

BIO 493 - Research (Variable)

Faculty-directed student research. Before enrolling, a student must consult with a faculty member to define the project. Instructor permission required. May be repeated for credit. Fee: \$70

Prerequisite: BIO 208 and BIO 278; all with a C- or higher.

BIO 497 - Internship (Variable)

Intensive field experience in academia, selected industries or agencies. Department permission and supervision is required. Students may receive an IP (In-Progress) grade until completion of their internship.

Prerequisite: BIO 208 and BIO 278; all with a C- or higher.

BIO 499 - Senior Thesis (1-6)

Preparation of a scholarly thesis document with a public presentation of results from research, study, or original work under the direction of a faculty mentor. Requires approval of thesis director, department chair, and the director of the honors program, when appropriate.

Prerequisite: Senior standing; 3.0 G.P.A. in the thesis area or good standing in the honors program.

BME - Biomedical Engineering

BME 200 - Introduction to Biomedical Engineering (3)

Biomedical engineering is a broad discipline. This course will introduce students to topics within the field that may include biomechanics, bioinstrumentation, biofluids, and design, along with the societal context for its works. Professional development will be emphasized and learning will occur through a combination of lecture and hands-on work. Fee: \$50

BME 465 - Tissue Mechanics (3)

Applications of solid mechanics principles to understand mechanical response of biological tissues to physiological loading. Determination of appropriate mechanical testing methods to simulate physiological loading experienced by biological tissues in situ. Analysis of experimental load and deformation data to determine mechanical properties of biological tissues

Prerequisite: EGR 322. Crosslisted as: BME 565.

BME 466 - Human Factors Engineering & Ergonomics (3)

Introduction to human factors and ergonomics. Topics may include: work-related musculoskeletal disorders, hand tool design, anthropometry, workplace design, low back biomechanics.

Prerequisite: PHY 204. Crosslisted as: BME 566.

Graduate Courses

BME 550 - Physiology for Biomedical Engineers (3)

Physiology of the nervous, cardiovascular, respiratory, renal, and gastrointestinal systems. Emphasizes understanding of the function of the human body as integrated systems through an engineering lens. Includes discussion of human-made changes to the body. Laboratory experiments will be used to demonstrate key physiologic aspects of the human body. Knowledge of biology and basic physiology recommended. Fee: \$50

Prerequisite: BME Master's Program admission and program prerequisites.

BME 561 - Biomaterials (3)

Materials science of living structures and biomedical devices; biomaterial testing; mechanical behavior and failure mechanisms of biomaterials; medical device application and design; interactions between biomaterials and biological systems; special topics such as tissue engineering.

BME 562 - Biomechanics (3)

Covers a variety of biomechanical analysis and instrumentation topics such as skeletal anatomy, ergonomics, and exercise physiology. Methods for measuring and computing force and movement will be covered. Laboratory exercises will be used to demonstrate instrumentation including motion capture, force plates, EMG, ECG, heart rate monitors, accelerometers, and goniometers. Fee: \$50

BME 563 - Digital Signal Processing (3)

This course covers techniques used to process digital signals in applications such as audio filtering and speech recognition. Topics include analog-to-digital and digital-to-analog conversions, aliasing, quantization, discrete-time signals and systems, discrete-time Fourier transform, Z-transform, and digital filter design. MATLAB is used to demonstrate concepts and to process real signals. Course includes an advanced project to explore a digital signal processing system.

BME 565 - Tissue Mechanics (3)

Advanced applications of solid mechanics principles to understand mechanical response of biological tissues to physiological loading. Determination of appropriate mechanical testing methods to simulate physiological loading experienced by biological tissues in situ. Analysis of experimental load and deformation data to determine mechanical properties of biological tissues.

Prerequisite: No prerequisite. Crosslisted as: BME 465.

BME 566 - Human Factors Engineering & Ergonomics (3)

Introduction to human factors and ergonomics. Topics may include: work-related musculoskeletal disorders, hand tool design, anthropometry, workplace design, low back biomechanics. Students will be responsible for a self-directed project.

Crosslisted as: BME 466.

BME 578 - Management of Technology for Medical Devices (3)

Goes into depth on concepts and tools necessary to analyze the value of new technology, create new products, and get products to market. Upon completion, students will have the knowledge to put together a commercialization plan for bringing a new technology or product to market. Fee: \$50

BME 583 - Biomedical Device Planning and Design (3)

Students work in teams to plan and design a device for the biomedical field. Biomedical engineering design process will be covered including problem identification, medical motivation, background research and prototyping. There will be a focus on innovation, translation, and product development.

Prerequisite: BME 550 , EGR 555, EGR 564 or corequisites. Corequisite: BME 550 , EGR 555, EGR 564 or prerequisites.

BME 584 - Biomedical Device Optimization (3)

A continuation of BME 583. This project-driven course includes bench-scale to bedside perspectives regarding how to move discoveries from basic research into clinical and bedside care. Topics include prototyping, validation testing, and professional development. Course includes discussion of ethical issues related to biomedical engineering. Discussions include invited speakers from the outside community.

Prerequisite: BME 583. Corequisite: BME 578.

BME 597 - Biomedical Engineering Applied Internships (0)

BME students are required to secure, complete and report on an applied internship experience. To meet the requirement, the internship must follow the University's documentation rules for internships and be approved by the course instructor. Students may receive an IP (In Progress) grade until the completion of their internship. Course is graded Pass/No Pass.

Prerequisite: Preapproval by course instructor. BME students only.

BUS - Business Administration

BUS 100 - Introduction to Leadership Skills (3)

Introduces students to the key skill bases in leadership (team building, communication and problem solving). Covers these skills within global and ethical frameworks. Course includes one Saturday team building requirement. Must be completed by all students during their first two semesters in the business program. Fee: \$100

Prerequisite: School of Business students only.

BUS 101 - Software Applications Workshop (1)

Examines the coordinated usage of software applications commonly found in businesses today and approaches for utilizing them to enhance productivity. Covers analysis tools (e.g. Excel) including modeling and features of Word and PowerPoint that improve effectiveness.

BUS 150 - Smart Money I (1)

Develops critical life skills: smart, ethical money management. Learn: how to create a budget and build credit; how to take advantage of the magic of compounding; time tested techniques for socially meaningful and successful investing; and how to tailor a personal plan to ensure financial security, balance, and happiness in your life. Course is graded P/NP.

BUS 200 - Principles of Marketing (3)

Covers fundamental marketing concepts and practices, including the roles of marketing in organizations, marketing strategy, macro-environmental influences, market research, and the development of a marketing plan. Sophomore status.

BUS 202 - Professional Development (1)

Develops students' abilities to discuss their personal brand and professional goals as they move toward choosing a vocation. Part of the Pamplin Professional Preparation Program (P4), this course includes experiential learning activities designed to help students choose a major. Sophomore status. Course is graded P/NP. Fee \$10

Prerequisite: BUS 100, School of Business students only.

BUS 205 - Foundations of Finance (3)

A survey of Finance with coverage of Corporate Finance, Investments, Financial Institutions, International Finance, Risk Management, and Real Estate Finance. Emphasis on the tools for financial decision making – valuation, financial statements, and measurement of risk.

Prerequisite: MTH 161 or EGR 361.

BUS 209 - Financial Accounting (3)

Covers the preparation and interpretation of basic financial information. Includes the usage of information from the multiple perspectives of owners, creditors and investors of both large and small businesses who use this information in their lending and investing decisions.

BUS 210 - Managerial Accounting (3)

Examines the use of accounting information for planning, control, internal decision-making, and performance evaluation. Introduces mathematical tools and techniques for producing managerial information and considers the behavioral effects of the information.

Prerequisite: BUS 209.

BUS 250 - Legal and Social Responsibility in Business (3)

Provides an overview of the legal and ethical concerns of managers. Topics include governmental regulation of business, diversity in the workplace and the global legal environment. Explores private law topics including contracts and tort law. Designated as a writing enhanced course involving writing instruction and completion of several writing assignments. Sophomore status.

BUS 255 - Introduction to Operations & Technology Management (3)

Provides an overview of Ops Mgmt & Info Tech & how they work together to improve business efficiencies/competitive positioning. Introduces students to various high demand skills and concepts including forecasting, business process analysis and design, database management, cloud and network management, business intelligence and decision support, supply chain management and other operational disciplines. Sophomore status.

Prerequisite: BUS 101.

BUS 290 - Directed Study (Variable)

Credit arranged.

BUS 302 - Internship Preparation (1)

Part of the Pamplin Professional Preparation Program (P4), this course prepares students for a meaningful internship experience. Course is graded P/NP. Junior status. Fee: \$45

Prerequisite: BUS 202 and School of Business students only. Corequisite: BUS 397.

BUS 310 - Intermediate Accounting I (3)

Examines theoretical issues involving the valuing, classifying, recording, and reporting of accounting transactions related to asset and revenue recognition. Includes the analysis of financial statements, in particular the statement of financial position and statement of profit and loss and statement of comprehensive income.

Prerequisite: BUS 210, or BUS 209 and instructor permission.

BUS 311 - Intermediate Accounting II (3)

Examines theoretical issues involving the valuing, classifying, recording, and reporting of accounting transactions related to liabilities and equity. Includes the analysis of financial statements, in particular the statement of financial position, the statement of changes in stockholders' equity, the statement of cash flows, and the related footnotes.

Prerequisite: BUS 310.

BUS 312 - Cost Accounting (3)

Develops analytical skills used in cost and managerial accounting that are used for internal decision-making as distinct from external financial accounting. Topics include: the accountant's role in the organization, cost terms and purposes, cost-volume profit analysis, job costing, process costing, activity based costing, budgeting, variance analysis and other relevant information for decision making.

Prerequisite: BUS 210.

BUS 330 - Managerial Finance (3)

Considers the function of finance in relation to the overall strategy of an organization. Provides a conceptual and theoretical treatment to key corporate financial activities, including investing, financing, distribution, and risk-management. Extends core concepts relating to valuation, risk assessment, and financial statement analysis.

Prerequisite: BUS 205; MTH 121 or MTH 201.

BUS 332 - Personal Financial Planning for Non-Business Majors (3)

This course provides information and financial tools to empower students to make good financial decisions. We will cover developing a personal financial plan, the importance of good credit and debt management (including student loans and credit cards), compound interest, investing, taxes, retirement planning, and stewardship.

BUS 354 - Decision Modeling Lab (0)

This optional lab serves as a complement to BUS 355. The lab time is used to clarify student questions, help students with Excel and statistical analysis software skills required to be successful in business, and provide feedback concerning assignments. There will not be any additional graded topics covered in the lab beyond those covered in BUS 355.

Corequisite: BUS 355.

BUS 355 - Decision Modeling and Analytics (3)

Develops understanding of analytics-based decision making by considering problems in accounting, finance, human resources, marketing, operations, and strategic business management. Examines the impact of uncertainty on business results and the tools and methods useful in making business decisions under uncertainty and constraints. Stresses use of Microsoft Excel and statistical software in business analysis.

Prerequisite: MTH 161 or EGR 361; BUS 255.

BUS 356 - Database Management (3)

Examines how data management supports & enables business processes/objectives. Focuses on analysis of business processes, data structure, design & implementation of database systems using the relational, non-relational, star schema data models. Covers database skills such as entity relationship model, normalization, data warehouse & database systems skills, structured query language using mysql, & data warehouse using Excel PowerPivot.

Prerequisite: BUS 255; BUS 355; BUS 361 strongly recommended.

BUS 360 - Cross Cultural Organizational Behavior and Ethics (3)

Course will prepare students to work with people from other cultures, both domestically and abroad, which is vital given today's global economy and diverse work force. Students will gain greater understanding of the role of culture in organizational

behavior; develop facility in applying frameworks for ethical decision-making & understand the role of corporate social responsibility. Junior status.

Prerequisite: PHL 220.

BUS 361 - Foundations of Operations Management (3)

Focuses on the essential elements of Operations Management. Covers a diverse set of quantitative methods used in managing technology and operations such as queuing, quality management, inventory management, and scheduling. Provides students with a practical understanding of basic concepts related to the effective management of manufacturing and service operations.

Prerequisite: BUS 355.

BUS 362 - Foundations of Operations Management Lab (0)

This optional lab serves as a complement to BUS 361. The lab time is used to clarify student questions, help students with Excel and statistical analysis software skills required to be successful in business, and provide feedback concerning assignments. There will not be any additional graded topics covered in the lab beyond those covered in BUS 361.

Corequisite: BUS 361.

BUS 364 - Innovation (3)

Examines the key elements of creativity and innovation and managing innovation from both individual/team and organizational perspectives. Positions successful innovation outcomes as contributing to a firm's competitive advantage. Explores innovation as a creative problem-solving capability that is applied to a wide variety of market opportunities and social/institutional challenges.

BUS 365 - Accounting Information Systems (3)

Examines accounting information systems and internal control environments. Course content includes understanding enterprise risk management and internal control frameworks, understanding and documenting transaction cycles, and evaluating the design, implementation and controls of accounting information systems. Junior status.

Prerequisite: BUS 210 and BUS 255.

BUS 371 - Consumer Behavior (3)

Provides an in-depth examination of the internal mental processes and external factors that shape consumers' responses to marketing strategies, purchase decisions, and product usage behavior. Emphasizes application of core concepts to marketing decisions. Junior status.

Prerequisite: BUS 200.

BUS 376 - Marketing for Sustainability (3)

Explores the roles of marketing in a sustainable society. Sustainable marketing has two imperatives: 1) to conduct itself in a way that advances an organization's economic success while creating a positive impact on society and the environment, and 2) to help bring about a society that values and practices social and environmental sustainability in all its behaviors. Junior status.

Prerequisite: BUS 200.

BUS 385 - Entrepreneurship Opportunity Assessment (3)

Experience the entrepreneurial process. The course covers creating stand-alone new ventures as well as new business creation in established firms. Students are provided a hands-on opportunity to discover, develop, test, and present a financially viable and technically feasible new venture. Includes in-depth development of business plan and presentation to a panel of experts. Junior status.

Prerequisite: BUS 364.

BUS 391 - One Time Course Offering (Variable)

In the semesters in which offered, varying subject matter as business faculty deems appropriate for needs of the student in meeting the objectives of the undergraduate business program.

BUS 397 - Professional Development Internship (1)

Students must complete an approved internship to complete this course. Students will receive an In Progress (IP) grade until the completion of their internship and approval of final internship paper and evaluation. Course is graded P/NP.

Prerequisite: School of Business students only. Corequisite: BUS 302.

BUS 400 - Strategic Management (3)

Course examines the strategic leadership, strategy formulation, strategy implementation, and ethical functions in a firm. Teaches students to think strategically and to consider the perspective of all stakeholders, both internal and external to the firm. Using cases, readings and professional presentations, students will learn to think deeply about industry trends, opportunities, and how to commit resources to action. Junior status.

BUS 408 - Innovation for Sustainability (3)

Leaders in sustainability must be able to understand rapid changes in environmental and social conditions, innovate to adapt to those changes, collaborate to envision transitions to sustainable futures, and engage with others to realize those visions. To build these capacities, this course develops systems thinking skills using readings and case studies drawn from environmental, social, and business contexts.

Prerequisite: ENV 182 or CE 367 or permission of instructor. Crosslisted as: EGR 408, ENV 408.

BUS 409 - Real Estate Law (3)

Course examines legal issues associated with developing, acquiring, transferring and leasing real property. Topics include varieties of legal ownership, deeds, real estate contracts and leases, zoning and land use and environmental laws, vehicles for owning real estate, real estate covenants, conditions and restrictions, loan transactions. Course also examines how federal, state and local taxes impact real estate development.

Prerequisite: Junior Status.

BUS 411 - Advanced Accounting (3)

This course covers accounting for business combination and corporate consolidations. It also covers accounting for foreign currency transactions, hedging foreign exchange risk, translation of foreign currency financial statement and other emergent issues in accounting.

Prerequisite: BUS 311. Crosslisted as: BUS 566.

BUS 412 - Accounting Ethics (3)

This course focuses on ethical theory, reasoning, and critical thinking. Covers integrity, competence, objectivity, confidentiality, subordination of judgment, and independence with reference to AICPA, SEC, and various Board of Accountancy ethics rules. Accounting and business case studies will examine moral dilemmas for auditing professionals and managerial and tax accountants.

Prerequisite: BUS 310.

BUS 413 - Accounting Analytics for Decision Managers (3)

Course covers the use of data analytics to the field of accounting. Students learn how to apply analytical tools and information technology to make data-driven decisions to answer business questions, analyze financial trends and control for fraud. Techniques include extracting, transforming, visualizing data and applying statistical concepts in accounting settings. Junior Status.

Prerequisite: BUS 210.

BUS 430 - Investments (3)

Surveys the field of investment analysis and portfolio management. Topics include: investment process and financial planning, the definition and measurement of risk and return in global markets, security law and ethics, stock market indicators, stock and bond valuation models and real estate investment.

Prerequisite: BUS 330.

BUS 431 - Financial Markets and Institutions (3)

Examines the various financial markets that play a crucial role in helping individuals, corporations, and governments obtain financing and invest in financial assets such as stocks, bonds, mortgages, and derivatives. Includes the study of financial institutions that facilitate management of financial market transactions.

Prerequisite: ECN 120 and BUS 330.

BUS 432 - Personal Financial Planning (3)

Provides the informational and decision-making tools needed for planning and implementing a successful personal financial program. Topics include money management models, consumer finance issues, insurance, investing, retirement, and estate planning. Includes a survey of the wealth management industry.

Prerequisite: BUS 205.

BUS 433 - Real Estate Finance (3)

Course covers real estate finance and investment. Topics include the various forms of real estate investment including home ownership, rental property, REITs, real estate syndicates, mortgages and securitization of mortgages, real estate companies, investment in land, etc. Brokerage, loan analysis, and real estate valuation techniques will also be covered.

Prerequisite: BUS 205.

BUS 434 - Derivatives and Risk Management (3)

Examines derivatives, their markets and their role in portfolio and corporate financial management. Emphasis on risk management techniques employing derivatives and the pricing of options, futures, forward contracts and swaps. Other topics include market structure, speculation and arbitrage.

Prerequisite: BUS 330.

BUS 435 - Sports Finance & Sponsorship (3)

This course provides students with an understanding of the financial principles relevant to the business of sports. Students will learn about player/coach contracts and franchise valuation, endorsement and sponsorship deals, financing stadiums through public/private partnerships and the business of college sports. Course will be taught "seminar style" which means: guest speakers and possible field trips.

Prerequisite: BUS 205.

BUS 437 - Advanced Real Estate Finance (3)

Develops analytical skills using discounted cash flow techniques to study the performance of commercial real estate assets. Through case studies, students will learn to use Argus software to derive internal rates of return (IRR) by projecting income streams, operating expenses, debt service, tenant retention, and asset appreciation. Yield rates are tested to determine present values of income and reversionary cash flows.

Prerequisite: BUS 433.

BUS 441 - International Finance (3)

Provides an in-depth examination of international money and capital markets, exchange-rate determination and currency-risk management techniques employing forward, futures, and options contracts. Considers the functions of international financial management in relation to the overall objectives of the organization.

Prerequisite: BUS 330.

BUS 443 - International Marketing Management (3)

Examines the challenges of entering a new international market by researching and developing the first step in this decision process, a Country Notebook, by identifying cultural and economic factors in an emerging market and determining if the uncontrollable factors can be met successfully by adjusting the controllable ones. Junior status.

Prerequisite: BUS 200.

BUS 450 - Advanced Business Law (3)

Covers government regulation of business including securities regulation, antitrust, and union and employer relations. The course also explores private law topics including formation and operation of corporations, sales, leases of goods, real and personal property, bankruptcy, commercial paper, secured transactions, suretyship and professional liability. Junior status.

Prerequisite: BUS 250.

BUS 451 - Prescriptive Analytics Lab (0)

This optional lab serves as a complement to BUS 455. The lab time is used to clarify student questions, help students with prescriptive analytics software skills required to be successful in business, and provide feedback concerning assignments. There will not be any additional graded topics covered in the lab beyond those covered in BUS 455. Course is graded P/NP.

Corequisite: BUS 455.

BUS 452 - Project Management (3)

Takes a comprehensive view of the concepts, tools and realities of successfully managing projects. Covers project selection, justification, planning and scheduling, and cash flow management including methods such as PERT/CPM, Critical Chain, Earned Value Analysis, and Simulation. Addresses important management and leadership issues including contracts, team composition, team building, motivation and compensation/incentives.

Prerequisite: BUS 355.

BUS 453 - Supply Chain Analytics (3)

Takes a comprehensive look at supply chain design, operations and management. Develops skills in examining and improving the flow of materials and information through an international network of suppliers, manufacturers, distributors, and retailers in order to effectively match supply with demand. Topics include inter- and intra-firm coordination, incentive design, the impact of uncertainty, and the role of information technology.

Prerequisite: BUS 361.

BUS 454 - Project Management Processes and Certification (3)

Course looks at approaches & tools for planning, executing & closing projects based on the PMI library of global standards. Presents process-oriented view of project integration & managing project scope, cost, time, resources, quality & communications. Provides prep for PMI's Certified Assoc. in Project Mgmt & Project Mgmt Prof cert. examinations. Junior status.

Prerequisite: BUS 452 recommended.

BUS 455 - Prescriptive Analytics (3)

Develops understanding of advanced optimization methods by considering business problems in a variety of functional areas. Covers linear programming, integer programming, goal programming, multicriteria optimization, network models, nonlinear programming, stochastic programming, and decentralized optimization. The course stresses the use of computer software in solving business optimization problems and performing business analysis.

Prerequisite: BUS 355.

BUS 456 - Systems Analysis and Design (3)

Provides fundamental systems analysis and design concepts and methodologies essential for successful and effective development of complex information systems. Approaches the systems development from a business process-related problem-solving perspective including various systems models with data flow diagram, Structured English, ER model. Intended for students who plan to become business analysts or systems analysts.

Prerequisite: BUS 255. BUS 356 recommended.

BUS 457 - Inventory Management (3)

Presents a comprehensive view of managing the flow of inventory to, within, and from the organization. Deals with the balance between shortages and excesses in an environment characterized by demand and supply uncertainty. Includes critical aspects of contemporary strategies such as JIT, lean, and reverse logistics (sustainable supply chains). Emphasizes both theory and practice applications.

Prerequisite: BUS 361.

BUS 459 - Business Analytics (3)

This course covers the use of data, information technology, statistical analysis, and quantitative models to teach students how to make data-driven decisions. It provides students with knowledge and skills in descriptive and predictive analytics to understand, analyze, and predict business performance. The concepts learned will be applied to diverse business applications using easy-to-use software.

Prerequisite: BUS 255; strongly recommended BUS 355.

BUS 460 - Process Analysis & Quality Management (3)

Takes a comprehensive look at process analysis & design, and quality management. Emphasizes qualitative and quantitative tools for designing efficient and effective processes and integrating quality management into the production or service process. Covers process diagramming, process performance measurement, flow analysis and managing process variability, process capability, lean operations, and quality management methods and philosophies (e.g. six sigma and TQM).

Prerequisite: BUS 361.

BUS 461 - Introduction to R Programming in Business (3)

Develops understanding of R, a powerful statistical computing environment with an enormous base of statistical and modeling methods, frequently the statistical computing environment of choice for academia and industry. Emphasizes sound programming fundamentals and data management facilities. Applications in data management, project management, quality management, and supply chain management will be used to strengthen problem solving and programming skills.

Prerequisite: BUS 355; BUS 361 or BUS 453 recommended.

BUS 462 - Human Resources Management (3)

Examines theories and practices of staffing, training, assessing, and compensating employees from the perspectives of line management and the human resource department. Explores union/management interactions and healthy workplace environment while considering employment laws, the diverse labor force, and internal influences.

Prerequisite: Senior status. BUS 360 recommended.

BUS 463 - Introduction to Data Science (3)

Develops an understanding of the scientific process as it relates to social science research methods, and uses the scientific method, appropriate quantitative techniques, and technological tools (R and Excel) to conduct a basic data science research project. Also covers issues related to quantifying, monetizing, and managing information.

Prerequisite: BUS 255. Crosslisted as: BUS 558.

BUS 464 - Business Taxation (3)

Provides a survey of income tax issues for businesses. Includes overview of tax theory, taxation of corporations, partnerships and other business entities. Emphasizes how tax issues impact decision-making. Junior status.

Prerequisite: BUS 210.

BUS 465 - Auditing (3)

Provides information on theory, methodology, and specific techniques used in the verification/presentation of financial data provided. Course introduces specific verification services, including assurance, attest, and audit services while concentrating on external audits of publicly traded companies. Audit techniques, documentation of work completed, and audit opinions are studied and performed by the student. Accounting capstone.

Prerequisite: BUS 311 and BUS 365.

BUS 467 - Income Tax Strategies for Individuals (3)

Covers fundamentals of federal taxation for individuals, investments and pass-through business entities. Concepts include income tax computations, deductions, capital gains/losses & preferential income rates. Emphasis on planning transactions to minimize tax. Includes income tax case preparation. A service learning experience is offered to reinforce knowledge developed. Junior status.

Prerequisite: BUS 210.

BUS 468 - Applied Portfolio Management (3)

Students study portfolio management while managing the Miller Fund. Course involves the 'real-time' management of money. Students must possess strong financial analytical skills & a solid financial/accounting knowledge base. Concepts covered are investment philosophy, asset allocation, asset class management, investment process, and behavioral finance. Finance capstone. Senior status.

Prerequisite: BUS 330 and Finance majors only.

BUS 469 - Object Oriented Analysis and Design (3)

This course covers fundamentals of object oriented analysis and design. Topics include requirements gathering, systems modeling and software specification. The course emphasizes the use of the Unified Modeling Language (UML) to specify the structural and behavioral aspects of a software architecture. Additionally, the course will address object relational mapping and illustrate key object oriented concepts using Java.

Prerequisite: BUS 255, BUS 361 recommended.

BUS 470 - Marketing Research (3)

Surveys the field of marketing research, defined as all activities that provide information to guide strategic marketing decisions. Using an experiential method, students learn to define research objectives, choose and evaluate data sources, implement data collection procedures, interpret, analyze and present research results.

Prerequisite: BUS 200, MTH 161.

BUS 471 - Brand Promotions Management (3)

Closely examines and expands upon brand building strategies through social, digital and traditional promotional tools by analyzing brand touch points through hands-on learning by conducting an Integrated Brand Promotion Audit for a real client and making brand management recommendations. Marketing capstone. Senior status.

Prerequisite: BUS 200.

BUS 472 - Personal Selling (3)

Presents personal selling as a professional marketing activity with a special focus on fundamentals of consultative selling. Helps students develop professional selling skills, including identifying and qualifying prospects, discovering customer needs, developing and making a sales presentation, handling objections, and closing a sale. Examines the role of selling in the total marketing process. Junior status

Prerequisite: BUS 200.

BUS 473 - Sports Marketing (3)

Provides students with a basic understanding of sports marketing, including the marketing of sports as well as marketing through sports. Specific emphasis is placed on market selection, marketing mix decisions, and implementation of the strategic sports marketing process. Also covered are event sponsorships, professional sports teams, governing organizations, sports media (broadcast, print, and Internet), licensing, and hospitality.

Prerequisite: BUS 200.

BUS 474 - Digital Marketing (3)

Provides students with hands-on experience developing web marketing strategies for businesses and non-profit organizations seeking to leverage digital media in their competitive strategies. Topic areas include web marketing planning, website design, search engine optimization, online advertising, and marketing via email, blogs, social media, and mobile media.

Prerequisite: BUS 200.

BUS 475 - Design Thinking (3)

Offers an introduction to design thinking as a way of working with human-centered innovation to address business challenges, social problems, and complex systems. Students will learn how to use a set of tools that can apply in their workplace (everyday activities), where they continuously collaborate and communicate with clients, stakeholders, and co-workers to reimagine and solve problems or generate ideas.

Prerequisite: Junior Status.

BUS 476 - Product Design & Development (3)

Examines innovation in terms of developing and marketing new products (goods or services). Students learn the stages of new product development process, identify the components of new product development strategy, and understand how to structure organizations for creativity and innovation. Junior status.

Prerequisite: BUS 200.

BUS 477 - Brand Design (3)

Introduces the value of design in creating experientially based market strategies to leverage an organization's brand. Students will be introduced to brand, its elements -name, term, sign, symbol, design, or a combination- and architecture to achieve consistency. Furthermore, they will learn to assess the consumer journey of people that interacts with a brand to craft compelling brand messages.

BUS 483 - Strategic Controls for New Venture Operations (3)

Focuses on managerial, financial and process control issues specific to fast growing young companies. Organization systems and structure topics as applied to early stage growth companies also included. Junior status.

Prerequisite: BUS 210 and one of the following: BUS 312, BUS 330, BUS 364, BUS 365 or ECN 310.

BUS 484 - New Venture Finance and Accounting (3)

Provides an understanding of important roles of finance and accounting in funding and growing new ventures. Topics covered include (i) sources of financing young, fast growing business lines, (ii) valuation of new ventures, (iii) construction and presentation of pro forma financial statements, (iv) cash-flows in new businesses, (v) IPOs, (vi) measurement of financial performance, (vii) tax planning for new ventures. Junior status.

Prerequisite: BUS 205 or EGR 351.

BUS 485 - IT Audit (3)

This course is about information technology auditing, controls, and management practices. As business continues towards a more substantial reliance upon the capabilities of information technology, it becomes increasingly important for staff to understand these systems and how they relate to financial and general organizational controls. Topics include internal auditing standards, risk assessment, governance, ethics, audit techniques, and emerging issues.

Prerequisite: BUS 255; Recommended: BUS 356 and BUS 456 (may be taken concurrently).

BUS 486 - Venture Launch (3)

Designed as the culminating course in the Entrepreneurship and Innovation Management curriculum. Students are provided a hands-on opportunity to develop, test, present and launch a viable and sustainable new venture. Includes in-depth development of business plan and presentation to a panel of experts. Senior status.

Prerequisite: BUS 385.

BUS 487 - Social Entrepreneurship (3)

Examines innovative organizations that are created to improve social conditions. These organizations adopt aspects of the market model leveraging profit to a social end, rather than as an end itself. The course emphasis is on how such organizations are started, how they are sustained, and the various business models that are adopted to achieve an organizational mission.

BUS 488 - IT Security (3)

As Information Technology continues to be a main driver of organizational growth, it also becomes necessary to protect vital IT assets. Course provides a study of the principles and practices of IT security with an overview of security concepts, trends, issues, and risk assessment and governance, and prepares students to design, implement, and maintain effective IT security practices.

Prerequisite: BUS 255; Recommended: BUS 356 and BUS 456 (may be taken concurrently).

BUS 490 - Directed Study (Credit arranged.)

Designed for superior students desiring extensive and intensive study in a particular area of interest.

Prerequisite: Permission of instructor, advisor, and dean.

BUS 491 - One Time Course Offering (Variable)

In the semesters in which offered, varying subject matter as business faculty deems appropriate for needs of the student in meeting the objectives of the undergraduate business program.

BUS 492 - Seminar (Variable)

In the semesters in which offered, varying subject matter as business faculty deems appropriate for needs of the student in meeting the objectives of the undergraduate business program.

BUS 493 - Research (Variable)

Credit arranged.

BUS 494 - Research (Variable)

Credit arranged.

BUS 495 - Workshop (Variable)

Credit arranged.

BUS 496 - Meaningful International Experience (1)

Students must complete an approved Meaningful International Experience (MIE) to complete this course. Students may receive an In Progress (IP) grade until completion of the MIE and approval of the MIE reflection document. Course is graded P/NP. May not be repeated for additional credit.

Prerequisite: School of Business students only.

BUS 497 - Internship (Variable)

Students may complete a second internship related to their major areas in a different capacity than a previous internship. Students will receive an IP (In Progress) grade until the completion of their internship. (Preapproval by internship director. Senior status and School of Business students only.)

Prerequisite: BUS 302.

BUS 499 - Senior Thesis (3)

Research, study, or original work under the direction of a faculty mentor, leading to a scholarly thesis document with a public presentation of results. Requires approval of thesis director, dean, and director of the honors program, when appropriate.

Prerequisite: Senior standing, 3.0 GPA in the thesis area or good standing in the honors program.

Graduate Courses**BUS 500 - Statistical and Quantitative Analysis (3)**

Covers introduction to statistical analysis for conducting basic research in various fields of business administrations. Topics include descriptive statistics, probability distributions, hypothesis testing, and the introduction to regression analysis. The course presumes basic algebra and basic proficiency with MS Excel.

BUS 501 - Economic Analysis (3)

Microeconomics discusses the behavior of individual economic agents, i.e., consumers, workers and firms, in the market economy. Microeconomics shows how consumption, production, and income distribution are integrated through the market mechanism. Macroeconomics mainly discusses national income, unemployment, and inflation. It also explains the role of government policies that promote efficiency, growth, monetary and fiscal policies that stabilize the economy.

BUS 505 - Introduction to Operations & Technology Management (3)

Overview of how Operations Mgt & Info Technology improve business efficiencies and competitive positioning as an integrated discipline. Introduces critical concepts including forecasting, business process analysis/design, database management, business intelligence/decision support, supply chain management and operational disciplines through case-book analysis and technical skills development.

BUS 506 - Accounting Information for Decision Makers (3)

Introduction to financial and managerial accounting and reporting issues. Topics include the preparation, analysis, and interpretation of general purpose financial reports and uses of accounting information for decision-making purposes.

BUS 508 - Innovation for Sustainability (3)

Ecosystems, communities and enterprises are examples of complex systems. Sustainability, as it applies to each of these examples requires a systems thinking approach for its implementation and management. This course develops systems thinking perspectives and skills through a series of case studies drawn from environmental, social, and business contexts, using a participatory approach.

Crosslisted as: ENV 501.

BUS 509 - Strategic Fundraising (3)

Comprehensive view of the current philanthropic/fundraising landscape will be presented, and we will explore the individual and organizational components necessary for fundraising to thrive in organizations. We will explore why donors are important, their motivations for giving, and explore your personal orientation to fundraising. Best practices in annual giving, stewardship programs, and board fundraising efforts will be reviewed.

Prerequisite: BUS 518 or equivalent.

BUS 510 - Economics and Metrics for Sustainability (3)

Examines ecological and environmental economics and the role of the business, nonprofit, and government sectors in fostering sustainability. Through field study in the Portland region, students learn how to benchmark an organization's sustainability performance, build the quantitative and qualitative case for sustainability action, and propose flexible strategies for moving forward.

BUS 511 - Cross-Cultural Management and Ethics (3)

Promotes a systematic understanding of cultural differences across and within nations and their impact on business practice and managerial behavior. Students will conduct in-depth comparative cultural analysis and develop their global mindsets and multicultural skills (e.g., cultural sensitivity, intercultural communication, negotiations, and cooperation), while also applying frameworks for ethical decision-making.

BUS 512 - Leadership and Higher Level Management (3)

Explores the role of leadership within organizations focusing on integrative roles of middle and higher level managers. Topics include a survey of leadership theory, team building skills, conflict and politics, and the management of change.

BUS 513 - Social Responsibility in Organizations (3)

Explores the role of business in society. Coverage of company values, actions, and outcomes that affect employees, investors, business partners, communities, and the natural environment. Examines business ethics in these relationships and ways that leaders can improve corporate citizenship.

BUS 514 - Accounting and Financial Controls for the Nonprofit Organization (3)

The course covers key accounting and financial control concepts necessary for effective financial management. It provides an overview of budgeting, managerial controls, financial statement analysis, capital budgeting, other long-term decisions, cost models, risk and assessment and auditing. Students gain experience with basic accounting and financial tools supporting the successful management of a nonprofit organization.

BUS 515 - Social Venture Management (3)

Addresses the key area of business for nonprofit organizations from public relations, promotions, revenue generation, and strategic planning to governance, financial controls, and the use of information. Employs lectures, discussions, and case analysis.

BUS 517 - Marketing for the Nonprofit Organization (3)

The course provides students with an understanding of the marketing function within nonprofit organizations. It covers material such as marketing terminology, functions, and activities. Additional topics include cause-related marketing, negotiations, PR and advertising for the nonprofit manager, pricing, and social media.

BUS 518 - Financial Management for the Nonprofit Organization (3)

An examination of financial management of nonprofit organizations. The course addresses the role of finance in achieving the objectives of various nonprofit organizations by focusing on financial capital markets, working capital, cash flow analysis, Excel for financial analysis, and managing investments.

Prerequisite: BUS 514.

BUS 519 - Business Analytics (3)

Business analytics is the use of data, information technology, statistical analysis, and quantitative models to help managers make data-driven decisions. This course provides students with knowledge and skills in descriptive and predictive analytics to understand, analyze, and predict business performance. The concepts learned will be applied to diverse business applications using easy-to-use software.

Prerequisite: BUS 500 preferred.

BUS 520 - Applied Marketing Strategies (3)

Develops marketing plans and strategies for products and services in an increasingly competitive environment. Examines processes for serving these markets in ways that are economically, environmentally and socially sustainable.

BUS 521 - Consumer Behavior (3)

Offers a detailed analysis of consumer decision processes, product usage behavior, and responses to various elements of marketing strategy. Explores external environmental influences and internal mental processes that help shape consumer behavior.

Prerequisite: BUS 520 or equivalent.

BUS 522 - Marketing Research (3)

Presents a problem-solving approach to understanding the ways information is used to guide strategic marketing decisions. Using an experiential method, students learn to define research objectives, choose and evaluate data sources, implement data collection procedures, interpret, and analyze and present research results.

Prerequisite: BUS 520 or equivalent.

BUS 523 - Negotiation and Persuasion Strategies (3)

Applies negotiation strategies and tactics in a variety of business and nonprofit environments; emphasis on collaborative and competitive styles of negotiating. Seminar-style course with multiple bargaining simulations throughout the semester.

BUS 524 - Brand Promotions Management (3)

Provides an in-depth examination of how to build a brand, and successfully manage, an organization's brand by closely examining brand touchpoints including social, digital and traditional promotions tools of a chosen organization.

Prerequisite: BUS 520 or equivalent.

BUS 526 - Marketing for Sustainability (3)

Covers the principles of sustainable marketing. Using The Natural Step Framework, it begins at the mission, values, and strategy levels of marketing and then moves through the sustainable management of the various marketing influences (i.e. social, political, and technological) and functions (i.e. branding, product design, packaging, pricing, distribution).

Prerequisite: BUS 520 or equivalent.

BUS 527 - Digital Marketing (3)

Explores the strategic use of digital media and marketing tools to build a brand or achieve an organization's goals. We will investigate best practices for offering consumers a seamless brand experience using multiple media, information sources and purchase options. Students will apply course concepts in creating a strategic, actionable digital marketing plan for a brand or organization of their choosing.

Prerequisite: BUS 520 or equivalent.

BUS 528 - Sports Marketing (3)

Provides students with a basic understanding of sports marketing, including the marketing of sports as well as marketing through sports. Specific emphasis is placed on market selection, marketing mix decisions, and implementation of the strategic sports marketing process. Also covered are event sponsorships, professional sports teams, governing organizations, sports media (broadcast, print, and Internet), licensing, and hospitality.

Prerequisite: BUS 520.

BUS 529 - Product Design and Development (3)

Examines innovation in terms of developing and marketing new products (goods or services). Students learn the stages of a new product development process, identify the components of new product development strategy, and understand how to structure organizations for creativity and innovation.

Prerequisite: BUS 520.

BUS 530 - Corporate Finance (3)

Examines in depth the key theories and practices in corporate finance. Covers the corporation's financing, investing, and distribution activities, the assessment and management of risk, a critical analysis of financial reports, and the valuation of claims and contingent claims. Quantitative content.

Prerequisite: BUS 500 or successful completion of tutorials.

BUS 531 - International Finance (3)

Examines international financial institutions, markets, and instruments. Emphasis on exchange-rate determination, and currency-risk management techniques employing forward, futures, and options contracts. Other topics include international money and capital markets, portfolio theory in an international context, international capital budgeting, and economic developments reshaping the financing and investment environment.

Prerequisite: BUS 530 or equivalent.

BUS 532 - Security and Portfolio Analysis (3)

Surveys the field of investments. Topics include investment objectives, short-term and long-term media, real estate media, stock and bond valuation theory, the capital asset pricing model and portfolio theory, the efficient market hypothesis, options, and futures.

Prerequisite: BUS 530 or equivalent.

BUS 533 - Financial Markets and Institutions (3)

Studies the global financial system and the financial markets and intermediaries that comprise this system. The course examines related topics such as interest rates and the pricing of financial assets, regulation, and the risk analysis and management of banks and other financial institutions.

Prerequisite: BUS 530 or equivalent.

BUS 534 - Derivatives and Risk Management (3)

Examines derivatives, their markets, and their role in portfolio and corporate financial management. Emphasis on risk management techniques employing derivatives, and the pricing of options, futures, forward contracts, and swaps. Other topics include market structure, speculation, and arbitrage.

Prerequisite: BUS 530 or equivalent.

BUS 535 - Sports Finance & Sponsorship (3)

This course provides students with an understanding of the financial principles relevant to the business of sports. Students will learn about player/coach contracts and franchise valuation, endorsement and sponsorship deals, financing stadiums through public/private partnerships and the business of college sports. Course will be taught "seminar style" which means: guest speakers and possible field trips.

BUS 536 - Personal Financial Planning (3)

Provides the informational and decision-making tools needed for planning and implementing a successful personal financial program. Topics include money management models, consumer finance issues, insurance, investing, retirement and estate planning.

Prerequisite: BUS 530 or equivalent.

BUS 537 - Applied Financial and Economic Forecasting (3)

Covers forecasting methods useful in a range of applications. Introduces basic graphic and statistical tools of data analysis. Applies statistical methods such as regression, moving average, smoothing methods, and autoregressive models to produce forecasts of stationary and non-stationary financial and other time series data. Experiments with these forecasting methods will use actual data from the web.

Prerequisite: BUS 501 or equivalent.

BUS 538 - Corporate Financial Strategy: M&A and Restructure (3)

Course on advanced restructuring strategy. Content includes advanced coverage on mergers and acquisitions, corporate reorganization, and corporate governance and managerial incentives. Other topics include the management of the acquisition process, study the nature of information conveyed by financial decisions, and commonly used business valuation/financial modeling methods can be applied to valuing various types of business combinations.

Prerequisite: BUS 530 or equivalent.

BUS 539 - Research Methods in Finance (3)

Examines techniques employed to answer questions in the finance field for practitioners and researchers. Empirical research conducted based on econometric techniques such as event studies, cross-sectional and panel regressions. Problems studied include price effects of various corporate events, capital structure, executive compensation, corporate governance, market efficiency tests, portfolio-trading strategies, among others. Involves use of common econometric software such as EVIEWS.

Prerequisite: BUS 530 or equivalent.

BUS 540 - Process Analysis & Quality Management (3)

A comprehensive view of process analysis and quality management techniques with an emphasis on quantitative and qualitative analysis tools. A case based analysis approach will cover process diagramming, process performance measurement, process redesign, flow analysis, queuing methods, quality management methods, lean operations and six sigma concepts.

Prerequisite: BUS 543.

BUS 541 - Human Resource Management (3)

This course focuses on reward systems, performance management and motivational tools; all critical components towards professional effectiveness with organizational systems. This course will be designed to provide a foundation based on theory but also present the student with case studies and practical applications so as to be more effective managers in their organizations.

BUS 542 - Systems Analysis and Design (3)

Provides fundamental information systems analysis and design skills. Analytical skills to help evaluate if current business processes and systems meet business needs/information requirements and alternative solutions to support/enable effective business processes. Covers systems lifecycle & object-oriented models with data flow diagram, Structured English, relational database model, and normalization.

Prerequisite: BUS 505.

BUS 543 - Decision Modeling and Analytics (3)

Develops understanding of analytics-based decision making by considering problems in accounting, finance, HR, marketing, operations, and strategic business management. Examines the impact of uncertainty on business results, as well as the application of tools and methods useful in making business decisions under uncertainty and constraints. Stresses the use of computer software in performing business analysis.

Prerequisite: BUS 500 preferred.

BUS 544 - Managing Innovation and Technology (3)

Explores issues related to the management of innovation, technology and change within organizations. Examines the range of forces impacting new product/process/service development and the implementation and coordination of these activities with internal operations and external markets.

BUS 545 - Project Management (3)

Takes a comprehensive view of project management, addressing the technical and socio-cultural aspects of the field. Examines how the technical/tools aspects of project management integrate with the socio-cultural aspects in successfully managing projects. Utilizes lectures, group problem-solving exercises, team planning activities, and case discussion to emphasize various aspects of project management concepts, tools, and trade-offs.

Prerequisite: BUS 543 or, with instructor approval, may take simultaneously with BUS 543.

BUS 546 - Supply Chain Analytics (3)

Develops skills in examining and improving the flow of materials and information through the network of suppliers, manufacturers, distributors, and retailers to match supply with demand effectively. Topics include inter- and intra-firm coordination, incentive design, the impact of uncertainty, and the role of information technology.

Prerequisite: BUS 543.

BUS 547 - Inventory Management (3)

Covers inventory as more than simple raw materials or finished goods. Presents a comprehensive view of managing the flow of inventory to, within, and from the organizations. Deals with the balance between shortages and excesses in an environment characterized by demand and supply uncertainty. Includes contemporary strategies such as JIT, lean, and reverse logistics.

Prerequisite: BUS 543.

BUS 548 - Project Management Processes and Certification (3)

Takes a comprehensive look at approaches and tools for planning, executing and closing projects based on the Project Management Institute's (PMI) library of global standards. Presents a process-oriented view of project integration and managing project scope, cost, time, resources, quality and communications. Provides an excellent preparation for PMI's Certified Associate in Project Management and Project Management Professional certification examinations.

Prerequisite: BUS 545 is recommended.

BUS 552 - Prescriptive Analytics (3)

Develops understanding of advanced optimization methods by considering business problems in a variety of areas. Covers linear, nonlinear, integer, and goal programming, multicriteria optimization, network models, stochastic programming, and decentralized optimization. The goal is to maintain a balance between theory, problem formulation, solution development by computer software, and applications to business problems.

Prerequisite: BUS 543.

BUS 553 - Introduction to R Programming in Business (3)

Develops an understanding of R, a powerful statistical computing environment with an enormous base of statistical and modeling methods, frequently the statistical computing environment of choice for academia and industry. Emphasizes sound programming fundamentals and data management facilities. Applications in data management, project management, quality management, and supply chain management will be used to strengthen problem solving and programming skills.

Prerequisite: BUS 543; BUS 546 recommended.

BUS 555 - Database Management (3)

Covers fundamental concepts/techniques in design, implementation, and use of databases in the data driven business world. Approaches how database can support business objectives and solve business problems by managing data effectively. Focuses on conceptual relational database modeling using entity relationships models, normalization, relational schema and hands on database skills including Microsoft Access, Visual Basic Applications and Structured Query Language.

Prerequisite: BUS 505 or BUS 519.

BUS 556 - Distribution Center Operations (3)

Examines the functions of management applied in the design and daily operation of a warehouse or distribution center. Students will develop an understanding of the basic processes, relationships and requirements of distribution operations and to satisfy the needs of the company. Explores the application of labor and technologies in performing warehouse functions. Identifies and practice skills required of operations managers.

BUS 558 - Introduction to Data Science (3)

Develops an understanding of the scientific process as it relates to social science research methods, and uses the scientific method, appropriate quantitative techniques, and technological tools (R and Excel) to conduct a basic data science research project. Also covers issues related to quantifying, monetizing, and managing information.

Prerequisite: BUS 505 recommended. Crosslisted as: BUS 463.

BUS 559 - Object Oriented Analysis and Design (3)

This course covers fundamentals of object oriented analysis and design. Topics include requirements gathering, systems modeling and software specification. The course emphasizes the use of the Unified Modeling Language (UML) to specify the structural and behavioral aspects of a software architecture. Additionally, the course will address object relational mapping and illustrate key object oriented concepts using Java.

Prerequisite: BUS 505 or instructor permission. Crosslisted as: BUS 469.

BUS 560 - Managerial Accounting Applications (3)

Provides students with accounting and analytical skills useful for managerial decision-making. Topics covered include: performance evaluation, pricing and operational decisions, strategy, cost allocation, variance analysis, inventory and capital budgeting, among others.

Prerequisite: BUS 506 or equivalent.

BUS 561 - Advanced Real Estate Finance (3)

Develops analytical skills using discounted cash flow techniques to study the performance of commercial real estate assets. Through case studies, students will learn to use Argus software to derive internal rates of return (IRR) by projecting income streams, operating expenses, debt service, tenant retention, asset appreciation. Yield rates are tested to determine present values of income and reversionary cash flows.

Prerequisite: BUS 562.

BUS 562 - Real Estate Finance (3)

Course covers real estate finance and investment. Topics include the various forms of real estate investment including home ownership, rental property, REITs, real estate syndicates, mortgages and securitization of mortgages, real estate companies, investment in land, etc. Brokerage, loan analysis, and real estate valuation techniques.

Prerequisite: BUS 530 or equivalent.

BUS 563 - Financial Statement Analysis (3)

Develops skills for examining financial information by external users (lenders, stock analysts, and owners/shareholders). Includes study of properties of financial information, choices of generally accepted accounting principles, income manipulation, methods of information disclosure, and off-balance sheet accounting.

Prerequisite: BUS 530 or equivalent.

BUS 564 - Macro Economics in the Global Economy (3)

This course examines the determination of national output, inflation, and unemployment within the context of the global economy. Difficulties of implementing stabilization policies in the open economy are discussed. The effects of monetary and fiscal policy on interest rates and currency values are considered. The issue of trade deficits and surpluses are also discussed.

Prerequisite: BUS 501 or equivalent.

BUS 565 - Auditing (3)

Examines the theory, methodology, and specific techniques used in the verification and presentation of financial data provided to outsiders. The course introduces specific verification services, including assurance, attest, and audit services while

concentrating on the external audits of publically traded companies. Audit techniques, documentation of work completed, and audit opinions are both studied and performed by the student.

Prerequisite: BUS 311 or equivalent.

BUS 566 - Advanced Accounting (3)

The course covers accounting for business combination and corporate consolidations. It also covers accounting for foreign currency transactions, hedging foreign translation of foreign currency financial statement and other emergent issues in accounting.

Prerequisite: BUS 311 or equivalent. Crosslisted as: BUS 411.

BUS 567 - Applied Portfolio Management (3)

Students accepted into course will study portfolio management while managing the Miller Fund. Since this is an applied course involving the 'real-time' management of money, students must possess strong financial analytical skills and a solid financial/accounting knowledge base before beginning the course. Concepts such as investment philosophy, asset allocation, asset class management, investment process, and behavioral finance are covered.

Prerequisite: BUS 530 or equivalent.

BUS 568 - Income Tax Planning (3)

Examines how to integrate tax strategy into business decision-making. The focus is not on technical tax rules but optimizing operations to minimize tax. Topics include: fundamentals of the U.S. tax system; corporate structure, mergers, and liquidations; property dispositions; compensation issues including employee stock options; international and interstate tax planning; and family tax planning.

Prerequisite: BUS 506 or equivalent.

BUS 569 - Accounting Analytics for Decision Makers (3)

Covers the use of data analytics to the field of accounting. Students learn how to apply analytical tools and information technology to make data-driven decisions to answer business questions, analyze financial trends and control for fraud. Techniques include extracting, transforming, visualizing data and applying statistical concepts in accounting settings.

Prerequisite: BUS 506.

BUS 571 - New Venture Creation (3)

Experience the entrepreneurial process. Understand the driving forces behind creating, launching and developing a new venture. Hands-on opportunity to discover, create, test, present and launch a viable and sustainable new venture. Includes in-depth development of business plan and investor presentation. Emphasis on stand-alone new ventures; however, venture creation in established firms is also covered.

BUS 572 - Family Business Planning (3)

Explores the personal, family, and business issues found in family owned firms. Focus on development of relevant analytical and managerial skills. Topics include family business systems, family business governance, succession, and family wealth planning.

BUS 573 - International Ventures (3)

Course focuses on analysis of international business environments. Students will investigate cultural, legal and economic issues affecting the development of business relations in various countries and their economy. Course includes one week of international travel for student meetings and cultural visits. Primary research project for class will involve developing group projects specific to the development of international business relations. (Additional fee will be assessed for travel component.)

BUS 574 - New Venture Finance and Accounting (3)

Provides an understanding of the important roles of finance and accounting in funding and growing new ventures. Topics covered include sources of financing for young, fast growing business lines, valuation of new ventures, construction and presentation of pro forma financial statements, cashflows in new businesses, IPOs, measurement of financial performance, and tax planning for new ventures.

Prerequisite: BUS 530.

BUS 575 - Personal Selling (3)

Presents personal selling as a professional marketing activity with a special focus on fundamentals of consultative selling. Helps students develop professional selling skills, including identifying and qualifying prospects, discovering customer needs, developing and making a sales presentation, handling objections, and closing a sale. Examines the role of selling in the total marketing process and the broad nature of how companies make purchase decisions.

BUS 576 - Brand Design (3)

Introduces the value of design in creating experientially based market strategies to leverage an organization's brand. Students will be introduced to brand, its elements -name, term, sign, symbol, design, or a combination- and architecture to achieve consistency. Furthermore, they will learn to assess the consumer journey of people that interacts with a brand to craft compelling brand messages.

BUS 578 - Management of Technology for Life Science (3)

Goes into depth on concepts and tools necessary to analyze the value of new technology, create new products, and get products to market. Upon completion, students will have the knowledge to put together a commercialization plan for bringing a new technology or product to market.

Prerequisite: TEC program student status. Crosslisted as: BME 578.

BUS 580 - Strategic Issues and Applications in Management (3)

Examines the competitive process through the firm's management of its strategic issues. Students are exposed to the techniques used by managers to evaluate their firm's competitive position, to develop a strategy based on competitive advantages, and to successfully execute their chosen strategy. Course should be taken in student's graduating semester.

BUS 581 - Advanced Business Communication (3)

Course designed to help students attain professional-level competence in oral and written business communication. Students learn rhetorical principles and apply them to business communication situations. Included: making formal oral presentations, conducting meetings, writing business reports.

Crosslisted as: CST 581.

BUS 582 - Global Business Law (3)

Examines the impact of U.S., foreign, and international law on global businesses and comparison of U.S. and foreign commercial legal systems. Topics include laws governing multinational firms; international sales transactions; trade and transportation issues; protection of intellectual property; finance, accounting, and tax issues; and dispute resolution including the use of arbitration.

BUS 583 - Instruction and Leadership (3)

This course unpacks leaders' communicative means to engage people's thought, attention, motivation, and learning. Students examine research, theory, philosophy, and instructional communication practices designed to increase credibility, flexibility, comfort and effectiveness in teaching-learning leadership situations. Students develop their own teaching philosophies and learn about sharing memorable information, facilitating teamwork and discussion, and developing productive, satisfying teaching-learning relationships with others.

Crosslisted as: CST 583.

BUS 584 - Real Estate Law (3)

Course examines legal issues associated with developing, acquiring, transferring and leasing real property. Topics include varieties of legal ownership, deeds, real estate contracts and leases, zoning and land use and environmental laws, vehicles for owning real estate, real estate covenants, conditions and restrictions, loan transactions. The course also examines how federal, state and local taxes impact real estate dev.

BUS 585 - IT Audit (3)

This course is about information technology auditing, controls, and management practices. As business continues towards a more substantial reliance upon the capabilities of information technology, it becomes increasingly important for staff to understand these systems and how they relate to financial and general organizational controls. Topics include internal auditing standards, risk assessment, governance, ethics, audit techniques, and emerging issues.

Prerequisite: BUS 505; BUS 540 Recommended.

BUS 586 - IT Security (3)

As Information Technology continues to be a main driver of organizational growth, it also becomes necessary to protect vital IT assets. Course provides a study of the principles and practices of IT security with an overview of security concepts, trends, issues, and risk assessment and governance, and prepares students to design, implement, and maintain effective IT security practices.

Prerequisite: BUS 505; BUS 540 Recommended.

BUS 590 - Directed Study (Variable)

Designed for strong students desiring to do extensive study in a particular area of interest for which there is currently no University course offered. Students electing to do a directed study must find a professor with a particular area of expertise to serve as their faculty sponsor.

Prerequisite: Permission of the instructor, M.B.A. director, and dean.

BUS 591 - One Time Course Offering (Variable)

In the semesters in which they are offered, courses cover a variety of subjects the staff considers appropriate for the needs of the students in meeting the objectives of the graduate business program.

BUS 592 - Seminar (Variable)

In the semesters in which they are offered, courses cover a variety of subjects the staff considers appropriate for the needs of the students in meeting the objectives of the graduate business program.

BUS 597 - Graduate Internship (Variable)

Allows highly-qualified M.B.A. students to complete an internship for credit to gain professional work experience. Interns must fulfill an academic component in addition to the contact time with the company. Open to full-time students. (Approval of the internship director required.)

BUS 599 - Thesis (Variable)

Research study or original work under the direction of a faculty mentor, leading to a scholarly thesis document with a public presentation of results. Requires approval of thesis director, dean, and graduate dean when appropriate. Prerequisite: Approval of Associate Dean.

Prerequisite: Approval of Associate Dean.

BUS 599X - Thesis in Progress (0)

Registration for any candidate who has received the grade of IP in BUS 599 is required while the thesis is in progress. Fee: \$50

CAS - College of Arts and Sciences

CAS 101 - Introduction to the Health Professions (1)

Survey of health professions and requirements for educational, job, and market demands in selected health careers. Course helps students to become familiar with the many health professions available as career choices, develop an understanding of the American healthcare system, recognize the requirements of health professionals in today's healthcare world, and gain insight into life for healthcare providers.

Prerequisite: Freshmen and sophomores only.

CAS 197 - Internship & Career Preparation (1)

This course introduces students to the career planning process including occupational exploration, internship planning, and how to conduct a job search. Students will learn skills in networking and interviewing, and create self-marketing materials including a resume, cover letter, and professional online presence. After taking this course, students will be better prepared to locate satisfying internships and/or jobs. Course is graded P/NP.

CHM - Chemistry

CHM 007 - General Chemistry I Workshop (0)

These workshops are based on the Peer-Led Team Learning model (PLTL) with students working individually and in small groups to learn and exercise problem solving techniques. The problems presented in these workshops are often not amenable to solution through ready-made formulas and require the individual to interact with peers in a reflective manner. The workshop is 85 minutes each week.

Corequisite: CHM 207.

CHM 008 - General Chemistry II Workshop (0)

These workshops are based on the Peer-Led Team Learning model (PLTL) with students working individually and in small groups to learn and exercise problem solving techniques. The problems presented in these workshops are often not amenable to solution through ready-made formulas and require the individual to interact with peers in a reflective manner. The workshop is 85 minutes each week.

Corequisite: CHM 208.

CHM 025 - Organic Chemistry I Workshop (0)

These workshops are based on the Peer-Led Team Learning model (PLTL) with students working individually and in small groups to learn and exercise problem solving techniques. The problems presented in these workshops are often not amenable to solution through ready-made formulas and require the individual to interact with peers in a reflective manner. The workshop is 85 minutes each week.

Corequisite: CHM 325.

CHM 026 - Organic Chemistry II Workshop (0)

These workshops are based on the Peer-Led Team Learning model (PLTL) with students working individually and in small groups to learn and exercise problem solving techniques. The problems presented in these workshops are often not amenable to solution through ready-made formulas and require the individual to interact with peers in a reflective manner. The workshop is 85 minutes each week.

Corequisite: CHM 326.

CHM 031 - Physical Chemistry I Workshop (0)

These workshops are based on the Peer-Led Team Learning model (PLTL) with students working individually and in small groups to learn and exercise problem solving techniques. The problems presented in these workshops are often not amenable to solution through ready-made formulas and require the individual to interact with peers in a reflective manner. The workshop is 85 minutes each week.

Corequisite: CHM 331.

CHM 105 - Chemistry in Art (3)

The study of chemistry in a variety of art forms. Some topics covered: frescoes, pigments, metal etching, thin film coloring, bronze statuary, glass etching, cyanotypes, photography, pigments, dyes, and analytical techniques to identify pigments in paintings. Students work on numerous hands-on activities during class. Research papers, literature searching, and a final student-designed project are important parts of the course. Fee:\$70

CHM 106 - Chemistry of Food and Cooking (3)

The study of culinary reactions explores fermentation of lactose in milk, dough rising, and making Kimchi. In addition, spectroscopy is used for enzymatic browning of fruits and vegetables and non-enzymatic browning of food (the Maillard reaction), freezing point depression and making ice-cream as well as spherification technique looking at food polymers. Papers, lab-based activities and exams will be graded. Fee: \$60

CHM 207 - General Chemistry I (3)

For science and engineering majors. Introduction to stoichiometry, atomic structure, bonding, and reactions. Principles of solution chemistry and chemical thermodynamics included.

Prerequisite: 100-level or equivalent mathematics course or corequisite. Corequisite: CHM 007, 100-level mathematics course or prerequisite. May be taken concurrently with CHM 277.

CHM 208 - General Chemistry II (3)

Principles of chemical kinetics, thermodynamics, and equilibrium will be studied with emphasis on acid-base chemistry and electrochemistry. Other topics may include intermolecular forces, phase changes, colligative properties, organic chemistry, nuclear chemistry, polymers, and biochemistry.

Prerequisite: A grade of C- or higher in CHM 207 or equivalent. Corequisite: CHM 008. May be taken concurrently with CHM 278.

CHM 277 - General Chemistry I Lab (1)

This lab course teaches students how to use basic laboratory equipment as well as introduce them to laboratory techniques involved with fractional recrystallization, paper chromatography, identification and synthesis of ionic compounds, titrations, and calorimetry. Students practice accepted procedures for recording data in a laboratory notebook and write lab reports (including one formal report) for all experiments. Fee: \$70.

Corequisite: CHM 207.

CHM 278 - General Chemistry II Lab (1)

Experiments in this lab course include those that investigate intermolecular forces, colligative properties, chemical kinetics, equilibria, pH and buffers, synthesis and chemical analysis of a metal complex, and electrochemistry. Fee: \$70

Prerequisite: A grade of C or higher in CHM 277 or equivalent. Corequisite: CHM 208.

CHM 302 - Communicating Science in Public (3)

Students will learn to interrogate ways science and communication intertwine, especially in this politically polarized era. Field outings, lab experiments, community experts, films, and discussions help uncover communication's roles in scientific discovery. Scientific and communication scholarship help students draw conclusions about those interconnections and develop their means to understand and communicate science in public and in private.

Crosslisted as: CST 302.

CHM 303 - Computational Methods in Physical Sciences (3)

Computational techniques for solving physics and chemistry problems as well as for simulating, analyzing, and graphically visualizing physical systems and processes. Offered Fall of odd years.

Prerequisite: PHY 204 or PHY 201 and MTH 202. Crosslisted as: PHY 303, MTH 303.

CHM 314 - Analytical Chemistry (3)

This lecture course covers the theory and technique involved in making and interpreting chemical measurements. The main subjects are titration, gravimetric analysis, electrochemistry, spectroscopy, and chromatography. Additional topics include statistics, the communication of scientific data, and the use of spreadsheets.

Prerequisite: CHM 208, CHM 278, or permission of instructor. Corequisite: May be taken concurrently with CHM 379.

CHM 325 - Organic Chemistry I (3)

This course addresses nomenclature, stereochemistry, and the structure and reactivity of organic compounds; substitution, elimination, and addition reactions of organic substrates including alkanes, alkyl halides, alkenes and alkynes; and application of NMR and IR spectroscopy and mass spectrometry to the determination of molecule structure.

Prerequisite: A grade of C or higher in CHM 208. Corequisite: CHM 025.

CHM 326 - Organic Chemistry II (3)

This course extends the topics and principles of CHM 325 to an analysis of alcohols, aromatic systems, amines, ketones, aldehydes, carboxylic acids and derivatives. Special topics include synthetic strategies, polymers, and biochemistry, particularly the chemistry of lipids, carbohydrates, amino acids, and peptides.

Prerequisite: A grade of C- or higher in CHM 325. Corequisite: CHM 026.

CHM 331 - Physical Chemistry I (3)

Postulates of quantum mechanics, particle in a box, harmonic oscillator, rigid rotator, and hydrogen atom with application to electronic structure of atoms and molecules and to atomic and molecular spectra.

Prerequisite: A grade of C- or higher in CHM 208, PHY 205, MTH 202, or permission of instructor.

CHM 332 - Physical Chemistry II (3)

Classical and statistical thermodynamics to include Boltzmann statistics, partition functions and ensembles with applications to phase equilibria, chemical equilibria, solute-solvent interactions and non-equilibrium thermodynamics. Chemical kinetics to include rate laws, mechanisms, kinetic molecular theory and gas-phase reaction dynamics.

Prerequisite: A grade of C- or higher in CHM 331 or permission of instructor.

CHM 344 - Inorganic Chemistry I (3)

This course is the first part of the two-semester Inorganic Chemistry sequence. Topics covered: fundamentals of atomic structure; molecular symmetry and its applications in IR spectroscopy and molecular orbital theory of small covalent molecules; solid state chemistry; oxidation-reduction processes; physical methods in inorganic chemistry; descriptive chemistry of the main group elements.

Prerequisite: A grade of C- or higher in CHM 208.

CHM 372 - Physical Chemistry I Laboratory (1)

Atomic and molecular spectroscopy to illustrate the postulates of quantum mechanics, particle in a box, harmonic oscillator, rigid rotator and electronic structure of atoms and molecules. Fee: \$70

Prerequisite: CHM 331.

CHM 373 - Physical Chemistry II Laboratory (1)

Advanced laboratory designed to explore quantum chemistry, statistical mechanics, classical thermodynamics, kinetic molecular theory and chemical kinetics using spectrometers and experimental equipment designed in-house. A major component of this lab is the special project that requires students to design and conduct an experiment and orally present the findings to the class. Fee: \$70.

Prerequisite: CHM 332.

CHM 374 - Inorganic Chemistry I Laboratory (1)

This lab course covers synthetic and analytical techniques relevant to main group element chemistry and to solid state chemistry (including superconductors, semiconductors, nanoparticles). Fee: \$70.

Prerequisite: A grade of C- or higher in CHM 208 and CHM 278 (or equivalent). Corequisite: CHM 344.

CHM 375 - Organic Chemistry I Lab (1)

This course teaches the principles and techniques used in the synthesis, purification, and characterization of organic compounds. Students apply a variety of separation techniques; consult the chemical literature; investigate the kinetics of a proposed mechanism; synthesize organic compounds; operate IR and NMR spectrometers; and identify unknown compounds based on spectroscopic analysis. Fee: \$70

Prerequisite: A grade of C- or higher in CHM 278. Corequisite: CHM 325.

CHM 376 - Organic Chemistry II Lab (1)

In this course, students continue synthetic application of reactions learned in CHM 325 and 326; expand the techniques of CHM 375 to include gas chromatography/mass spectrometry; and apply GC/MS to a competitive nitration study. Students also research, propose, and execute an independent project, followed by oral presentation and formal documentation of the project's outcomes. Fee: \$70.

Prerequisite: A grade of C- or higher in CHM 375. Corequisite: CHM 326.

CHM 379 - Analytical Chemistry Laboratory (1)

Experiments in quantitative analysis, including titration, spectroscopic, electrochemical, and chromatographic methods. Additional emphasis on statistics, computerized data analysis, and report writing. Fee: \$70.

Corequisite: CHM 314.

CHM 386 - Environmental Chemistry (3)

This course is organized into three main sections in which chemical topics relevant to the atmosphere, hydrosphere, and terrestrial environments are discussed. The course also addresses anthropogenic effects on the environment, toxicology, risk assessment, environmental analysis, computer modeling, and the political and sociological aspects of environmental topics.

Prerequisite: CHM 208. Crosslisted as: ENV 386.

CHM 387 - Service Learning in Chemistry (1)

Faculty directed student outreach in community educational institutions. Before enrolling, students must consult with a faculty member to define goals for the project. May be repeated for credit.

Prerequisite: CHM 207, CHM 208.

CHM 390 - Directed Study (Variable)

Credit arranged by student in cooperation with faculty.

CHM 393 - Research in Chemistry (Variable)

Faculty directed student research. Before enrolling, students must consult with a faculty member to define the project. May be repeated for credit. Fee: \$70 per credit hour.

CHM 412 - Advanced Instrumental Theory (1)

Theory and practice of modern chemical instrumentation.

Prerequisite: CHM 314 or permission of instructor. Corequisite: CHM 472.

CHM 444 - Inorganic Chemistry II (3)

Coordination chemistry of transition metals; electronic structures of coordination complexes; crystal field theory and ligand field theory; optical and magnetic properties; descriptive chemistry of transition metals; organometallic chemistry; reaction mechanisms.

Prerequisite: CHM 326, CHM 331 (or instructor permission).

CHM 453 - Biochemistry I (3)

Physical-chemical basis of life processes. Topics include: structure and function of proteins, carbohydrates, and fats; metabolism of carbohydrates and fats; and metabolic control processes.

Prerequisite: A grade of C- or higher in CHM 326 or permission of instructor.

CHM 454 - Biochemistry II (3)

Continuation of CHM 453. Emphasis is on biosynthesis of macromolecules. Topics include photosynthesis, metabolism of amino acids, membrane synthesis, nucleic acid and protein biosynthesis, current topics in biochemistry.

Prerequisite: A grade of C- or higher in CHM 453 or permission of instructor.

CHM 468 - Advanced Organic Chemistry (3)

The course focuses on organic synthesis and builds upon the material covered in CHM 325 and CHM 326. Important topics are retrosynthetic analysis, protecting groups, and carbon-carbon bond forming reactions, such as advanced enolate chemistry and palladium cross coupling reactions. Important organic chemistry models, such as the Ireland, Zimmerman-Traxler, Cram and Felkin-Ahn models are presented.

Prerequisite: CHM 326.

CHM 471 - Biochemistry I Laboratory (1)

Techniques include modern methods for separation and quantitation of biological materials, including centrifugation, high pressure liquid chromatography, spectrophotometry, and gel electrophoresis. Fee: \$70.

Prerequisite: A grade of C or higher in CHM 376. Corequisite: CHM 453 or prerequisite.

CHM 472 - Instrumental Analysis Laboratory (1)

A survey of modern instrumentation including the use of spectroscopy, electrochemistry and chromatography for quantitative and qualitative analysis. Fee \$70.

Prerequisite: CHM 314, CHM 379. Corequisite: CHM 477.

CHM 473 - Inorganic Chemistry II Laboratory (1)

The lab is taught under the principles of discovery-based learning. The experiments involve syntheses of main group ligands using organometallic chemistry and inert atmosphere techniques; syntheses of new transition metal complexes and their investigations by spectroscopic methods (UV-vis, multinuclear NMR, FT-IR), electrochemistry, magnetic measurements, and structural analyses by X-ray diffraction methods (when possible). Fee: \$70.

Prerequisite: a grade of C- or higher in CHM344 and CHM374. Corequisite: CHM 444.

CHM 474 - Biochemistry II Laboratory (1)

Techniques utilized will include the use of enzymes in PCR, restriction digests, and ligations, as well as overexpression, purification, and characterization of a target protein and related cofactors. Skills in proposal writing will also be developed. Fee: \$70

Prerequisite: CHM 344 and a grade of C or higher in CHM 471. Corequisite: CHM 454.

CHM 477 - Data Analysis Laboratory (1)

Hands on instruction in the use of computer software and programming for the acquisition, manipulation, and interpretation of chemical data. Fee: \$70.

Prerequisite: CHM 314, CHM 379. Corequisite: CHM 472.

CHM 490 - Directed Study (Variable)

Credit arranged by student in cooperation with faculty.

CHM 491 - One Time Course Offering (Variable)

Special topic seminar. Lectures, panel discussions, student research paper, and oral presentation.

CHM 493 - Research in Chemistry (Variable)

Faculty-directed student research. Before enrolling, students must consult with a faculty member to define the project. May be repeated for credit. Fee: \$70 per credit hour.

CHM 497 - Industrial Internship (Variable)

Intensive field experience in selected chemical industries. Students may receive an IP (In Progress) grade until the completion of their internship. Department permission and chemistry G.P.A. of 3.0 required.

CHM 499 - Senior Thesis (Variable)

Research, study, or original work under the direction of a faculty mentor, leading to a scholarly thesis document with a public presentation of results. Requires approval of thesis director, department chair, dean, and the director of the honors program, when appropriate.

Prerequisite: Senior standing; 3.0 G.P.A. in the thesis area, or good standing in the honors program.

CE - Civil Engineering

CE 083 - CE Capstone Workshop I (0)

Students work with faculty adviser to complete the first phase of a capstone project.

Corequisite: CE 483.

CE 084 - CE Capstone Workshop II (0)

Students work with faculty adviser to complete the second phase of a capstone project.

Corequisite: CE 484.

CE 200 - Civil Engineering Seminar (1)

Survey of the sub disciplines within the civil engineering profession, along with the societal context for its works, with a focus on sustainable design. Students develop a preliminary career plan. Invited speakers, field trips, and projects. Fee: \$50

CE 201 - Introduction to Civil Engineering Design Graphics (2)

Graphical communication of civil engineering design ideas using computer and traditional methods. Use of graphical modeling in civil engineering design with an extended course project.

CE 223 - Surveying (2)

Introduction to surveying. Topics include theory of measurements and error analysis; distance and angle measurements; traverse, area, and volume computations; horizontal and vertical curves; topographic surveys; construction surveys and mapping.

Corequisite: CE 224.

CE 224 - Surveying Laboratory (1)

Introduction to surveying fieldwork emphasizing construction-related activities; use of automatic level, total station, and GPS; field activities include taping, differential leveling, traversing, layout, and mapping.

Corequisite: CE 223.

CE 302 - Construction Materials (3)

Introduction to the properties and applications of construction materials for civil engineers. Topics include mineral aggregates, Portland cement and concrete, asphalt concrete, timber, and steel. Lecture format with laboratory demonstrations. Fee: \$50

Prerequisite: EGR 322.

CE 315 - Transportation Engineering (3)

Introduction to transportation systems and modes; transportation planning; driver, pedestrian, and vehicle characteristics; fundamental principles of traffic flow; highway capacity analysis; geometric design of highways; traffic operations; design of the intersection and interchange; parking design; transportation safety and environmental impacts; introduction to pavement design.

Prerequisite: CE 223.

CE 321 - Geotechnical Engineering (3)

Introduction to soil mechanics. Weight-volume relationships, classification, compaction, soil hydraulics; subsurface stresses, consolidation, and strength concepts.

Prerequisite: EGR 322 with a grade of C- or higher. Corequisite: CE 371.

CE 351 - Structural Analysis I (3)

Concepts of stability and determinacy. Analysis of displacements and internal forces of determinate structures: trusses, beams, frames, cables, and arches. Influence line diagrams. Introduction to indeterminate structures.

Prerequisite: EGR 322 with a grade of C- or higher.

CE 353 - Reinforced Concrete Design (3)

Properties of an efficient concrete mix. Analysis and design of rectangular and T-beams. One-way and two-way slab design. Compression members subject to axial and eccentric loads. Primary emphasis on the ultimate strength design method and to recent ACI Building Code.

Prerequisite: CE 302, CE 351.

CE 362 - Water Resources Engineering (3)

Fundamentals of hydrologic and hydraulic engineering. Hydrology topics include precipitation, infiltration, evapotranspiration, and runoff. Hydraulic engineering topics include closed-conduit flow, including flow in branched and parallel pipe systems, open channel flow, and pump design. Application of water resources principles to water distribution and stormwater design.

Prerequisite: ME 311 or EGR 311.

CE 367 - Environmental Engineering (3)

Introduction to environmental engineering. Topics include material balances, reactor engineering, environmental chemistry, water quality, water treatment, water pollution, water quality modeling, wastewater treatment and residues management.

Prerequisite: CHM 207, MTH 202.

CE 371 - Geotechnical Laboratory (1)

Basic soil mechanics experiments: index tests, compaction, permeability, direct shear and triaxial strength testing. Application to field situations with written and oral reports. Fee: \$50

Corequisite: CE 321.

CE 373 - Water Resources Engineering Laboratory (1)

Students will apply the concepts learned in CE 362 in the laboratory. Lab activities cover pipe flow, pumps, open channel, and hydrology. Fee: \$50

Prerequisite: CE 362 or corequisite. Corequisite: CE 362 or prerequisite.

CE 376 - Environmental Engineering Laboratory (1)

Experiments on chemical and biological analysis of water including alkalinity, turbidity, hardness, biochemical oxygen demand, dissolved oxygen, solids and fecal coliform. Softening, jar testing, and reactor tracer studies are also conducted. Fee: \$50

Prerequisite: CE 367 or corequisite. Corequisite: CE 367 or prerequisite.

CE 401 - Computational Methods in Civil Engineering (3)

Application of computational methods to civil engineering problems. Numerical differentiation and integration. Matrix methods for structural analysis. Solving differential equations with finite difference and Euler and multi-step methods. Analysis of discrete and continuous mechanical systems.

Prerequisite: MTH 301, MTH 321, CE 351.

CE 404 - Construction Engineering (3)

Construction management and planning, management organization, principles and procedures for estimating and bidding of construction projects, construction contracts, contract documents, construction insurance and bonds; labor law, labor relations, and project safety; project planning and scheduling techniques, including CPM, PERT; resource allocations; project control and treatment of uncertainty.

Prerequisite: Upper division standing.

CE 416 - Traffic Engineering (3)

Introduction to traffic engineering; traffic stream components and characteristics; fundamental principles of traffic flow; studies of traffic speed, volume, travel time, delay, and pedestrian; capacity analysis of freeways, highways, signalized and unsignalized intersections; traffic control devices; traffic signals; traffic accidents and safety; and traffic management.

Prerequisite: CE 315.

CE 422 - Geotechnical Design (3)

Foundations, including footings, piers, and piles, and raft foundations. Permanent retaining structures, mechanically stabilized earth, and soil nailed walls. Temporary shoring of excavations. Slope stability fundamentals.

Prerequisite: CE 321.

CE 441 - Structural Steel Design (3)

Design of structural steel elements for buildings using the LRFD method. Includes tension members, columns, beams, and beam-columns. Bolted and welded connections.

Prerequisite: CE 351.

CE 444 - Structural Systems Design (3)

Analysis and design of structural units and building systems. Lateral force resistance to wind and seismic forces: diaphragms and lateral resisting frames. Fundamental aspects of steel, reinforced concrete, masonry, and pre-stressed/post-tension design. Introduction to structural detailing and drawings. Owner, Architectural, and MEP coordination and constraints as it relates to structural engineering. Emphasis on the IBC, ASCE loading, ACI and AISC codes.

Prerequisite: CE 351. Corequisite: CE 353.

CE 451 - Structural Analysis II (3)

Analysis of indeterminate structures by slope deflection method; moment distribution method; approximate methods of analysis. Introduction to space structures.

Prerequisite: CE 351.

CE 452 - Earthquake Engineering (3)

Response of structures to seismic loads and ground motion. Response spectra and their application to earthquake analysis of structures. Seismic design criteria and provisions for buildings and other structures. Use of current codes for earthquake resistant design of structures.

Prerequisite: CE 321, CE 351, MTH 321.

CE 454 - Advanced Civil Engineering Graphic Modeling (3)

Exploration of the principles of Building Information Modeling (BIM) used to improve project outcomes by enabling more rapid visualization and simulation as well as optimized collaboration with intelligent, data-rich models. Fundamentals of BIM modeling with Autodesk Revit software will be introduced. Extended course project will be required.

Prerequisite: CE 201, CE 351, or permission of instructor. Crosslisted as: CE 554.

CE 456 - International Structures (3)

This course addresses aspects that contribute to structural designs for the international community. Topics include: socio-economic, historical and sustainable factors of building design. Structural analysis using international codes and a global perspective are emphasized. Guest speakers are featured.

Prerequisite: CE 351.

CE 458 - Remote Sensing and Geographic Information Systems (3)

This course investigates environmental applications of multispectral remote sensing (RS) and geographic information systems (GIS). RS topics include sensor systems, digital image processing, and automated information extraction. GIS topics include spatial database management systems, data analysis, and environmental modeling. Emphasis is placed on biological applications including vegetation mapping, habitat identification and field data mapping.

Crosslisted as: BIO 384, ENV 384.

CE 462 - Sustainable Design (3)

This course addresses aspects that contribute to the design of sustainable facilities and communities. Topics include: sustainable measures, stormwater management, water use, energy use, appropriate materials, and waste minimization. Guest speakers and field trips are featured.

Prerequisite: Upper division standing.

CE 464 - Watershed Systems Modeling (3)

Application of computing tools in water resources engineering. Introduction to surface water modeling, including GIS, lumped and distributed systems, calibration, and validation. Computer programming for water resources applications such as water supply and demand. Discussions of water law, policy, and justice with emphasis on water management in the West. Course culminates in a final project using open data and computational tools.

Prerequisite: CE 362 or corequisite. Corequisite: CE 362 or prerequisite.

CE 465 - Open Channel Flow (3)

Students learn how to design lined or rigid boundary ("engineered") channels, unlined or erodible ("natural") channels, weirs, spillways, stilling basins, culverts, and other hydraulic structures. Students will also learn how to determine the water surface profile for gradually varied flow conditions. Principles of hydraulic analysis, including specific energy, momentum, critical depth, and uniform flow, will be applied.

Prerequisite: CE 362. Crosslisted as: CE 565.

CE 466 - Water and Wastewater Design (3)

Study of the fundamental concepts required to design and operate processes used for drinking water treatment and distribution and wastewater collection and disposal. Design of physical, chemical, and biological processes for water treatment and wastewater disposal. Design of water supply and wastewater collection infrastructure.

Prerequisite: CE 367.

CE 467 - Project Delivery Lifecycle: The Challenges of Implementing Wet Infrastructure in the 21st Century (3)

Take a peek 'under the hood' at what it takes to deliver large, municipal wet infrastructure projects in an increasingly complex society. This course will track a real-world project from conception/identification, engineering procurement, preliminary and detailed design, construction and start-up/commissioning.

Crosslisted as: CE 567.

CE 468 - Environmental Engineering Topics (3)

Introduction to the technology used to manage solid and hazardous wastes and remediate sites contaminated with toxic chemicals. Sanitary landfill design, risk assessment, remedial investigations and feasibility studies, fate and transport analysis. Introduction to air pollution modeling and air pollution treatment technologies.

Prerequisite: CE 367 or permission of instructor.

CE 483 - Civil Engineering Capstone Project I (3)

A major design experience based on the knowledge and skills acquired in earlier course work and incorporating appropriate standards and multiple realistic constraints. Projects have some combination of the following characteristics: realism, communication, exposure, teamwork, learning, and related opportunities. Fee: \$50

Prerequisite: EGR 351 or EGR 352 or corequisites, EGR 300. Corequisite: EGR 351 or EGR 352 or prerequisites, CE 083.

CE 484 - Civil Engineering Capstone Project II (3)

Continuation of a major design experience based on the knowledge and skills acquired in earlier course work and incorporating appropriate standards and multiple realistic constraints. Projects have some combination of the following characteristics: realism, communication, exposure, teamwork, learning, and related opportunities. Fee: \$50

Prerequisite: CE 483. Corequisite: CE 084.

CE 490 - Directed Study (Variable)

Selected study or project in civil engineering for upper-division students. Must be arranged between the student and an individual faculty member, and subsequently approved by the dean of engineering. No more than three hours of directed study taken at the University may be used for elective credits to satisfy degree requirements.

Prerequisite: Upper division standing.

CE 491 - One Time Course Offering (Variable)

Credit arranged.

CE 492 - Seminar (Variable)

Credit arranged.

CE 493 - Research (1-3)

Faculty-directed student research. Before enrolling, a student must consult with a faculty member to define the project. May be repeated for credit.

Prerequisite: Upper division standing.

Graduate Courses

CE 501 - Computational Methods in Civil Engineering (3)

Advanced computational methods to solve civil engineering problems. Matrix methods for structural analysis. Numerical differentiation and integration. Solving differential equations with finite difference and Euler and multi-step methods. Analysis of discrete and continuous mechanical systems. Basic knowledge of linear algebra is required.

CE 504 - Construction Engineering (3)

Principles and procedures used in construction management. Advanced topics in planning, management organization, estimating and bidding of construction projects, construction contracts, contract documents, construction insurance and bonds; labor law, labor relations, and project safety; project planning and scheduling techniques, including CPM, PERT; resource allocations; project control and treatment of uncertainty.

CE 516 - Traffic Engineering (3)

Advanced topics in traffic engineering; traffic stream components and characteristics; detailed principles of traffic flow; studies of traffic speed, volume, travel time, delay, and pedestrian; capacity analysis of freeways, highways, signalized and unsignalized intersections; traffic control devices; traffic signals; traffic accidents and safety; and traffic management.

CE 522 - Geotechnical Design (3)

Study of permanent retaining structures, mechanically stabilized earth, and soil nailed walls. Foundations, including footings, piers, piles, and raft foundations. Temporary shoring of excavations. Advanced slope stability fundamentals. Design aspects culminate in an engineering design report. Knowledge of structural analysis and basic geotechnical engineering is required.

CE 541 - Structural Steel Design (3)

Advanced topics pertaining to design of structural steel elements for buildings using the LRFD method. Topics include tension members, columns, beams, beam-columns, and bolted and welded connections. Design aspects culminate in an engineering design report. Knowledge of structural analysis is required.

CE 544 - Structural Systems Design (3)

Analysis and design of structural units and building systems. Lateral force resistance to wind and seismic forces: diaphragms and lateral resisting frames. Fundamental aspects of steel, reinforced concrete, masonry, and pre-stressed/post-tension design. Introduction to structural detailing and drawings. Owner, Architectural, and MEP coordination and constraints as it relates to structural engineering. Emphasis on IBC, ASCE loading, ACI and AISC codes.

CE 551 - Structural Analysis II (3)

Analysis of indeterminate structures by slope deflection method; moment distribution method; approximate methods of analysis. Introduction to space structures. Special report is required.

CE 552 - Earthquake Engineering (3)

Response of structures to seismic loads and ground motion. Response spectra and their application to earthquake analysis of structures. Seismic design criteria and provisions for buildings and other structures. Use of current codes for earthquake resistant design of structures. Special report required.

CE 554 - Advanced Civil Engineering Graphic Modeling (3)

Exploration of the advanced principles of Building Information Modeling (BIM) used to improve project outcomes by enabling more rapid visualization and simulation as well as optimized collaboration with intelligent, data-rich models. Fundamentals of BIM modeling with Autodesk Revit software will be introduced. Extended course project and research paper will be required.

CE 556 - International Structures (3)

This course addresses aspects that contribute to structural designs for the international community. Topics include: socioeconomic, historical and sustainable factors of building design. Emphasis on structural analysis using international codes and a global perspective. Guest speakers are featured. Special report required.

CE 562 - Sustainable Design (3)

This course addresses advanced topics involved in the design of sustainable facilities and communities. Topics include: sustainable measures, stormwater management, water use, energy use, appropriate materials, and waste minimization. Guest speakers and field trips are featured. Special project is required.

CE 564 - Watershed Systems Modeling (3)

Application of computing tools in water resources engineering. Introduction to surface water modeling, including GIS, lumped and distributed systems, calibration, and validation. Computer programming for water resources applications such as water supply and demand. Discussions of water law, policy, and justice with emphasis on water management in the West. Course culminates in a final project using open data and computational tools.

CE 565 - Open Channel Flow (3)

Advanced design of lined or rigid boundary channels, unlined or erodible channels, weirs, spillways, stilling basins, culverts & other hydraulic structures. Students analyze gradually varied flow conditions. Hydraulic analysis, including specific energy, momentum, critical depth, and uniform flow. Advanced topics in open channel flow. Complete a special project that will be presented as a lecture. Basic knowledge of hydraulics recommended.

CE 566 - Water and Wastewater Design (3)

Advanced study of the fundamental concepts required to design and operate processes used for drinking water treatment, distribution, and wastewater collection/treatment. Design of physical, chemical, and biological processes for water treatment and wastewater disposal. Design of water supply and wastewater collection infrastructure. Design aspects culminate in engineering design reports. Basic knowledge of environmental and hydraulics recommended. Special report required.

CE 567 - Project Delivery Lifestyle: The Challenges of Implementing Wet Infrastructure in the 21st Century (3)

Take a peek 'under the hood' at what it takes to deliver large, municipal wet infrastructure projects in an increasingly complex society. This course will track a real-world project from conception/identification, engineering procurement, preliminary and detailed design, construction and start-up/commissioning. Special project required.

Crosslisted as: CE 467.

CE 568 - Environmental Engineering Topics (3)

Introduction to the technology used to manage solid and hazardous wastes and remediate sites contaminated with toxic chemicals. Sanitary landfill design, risk assessment, remedial investigations and feasibility studies, fate and transport analysis. Introduction to air pollution modeling and air pollution treatment technologies. Students complete special project.

CE 590 - Directed Study (Variable)

Credit arranged.

CE 591 - One Time Course Offering (Variable)

Credit arranged.

CE 592 - Seminar (Variable)

Credit arranged.

CE 593 - Research (1-3)

Faculty-directed student research. Before enrolling, a student must consult with a faculty member to define the project. May be repeated for credit.

CE 599 - Thesis (Variable)

Credit arranged.

CHN - Chinese

CHN 101 - Beginning Chinese I (3)

This is the first of a three-semester sequence for students who have little or no background in Chinese. The course builds basic language skills in Mandarin, although oral proficiency and character recognition are emphasized.

Corequisite: CHN 111.

CHN 102 - Beginning Chinese II (3)

This is the second of a three-semester sequence for students who have little or no background in Chinese. The course builds basic language skills in Mandarin, although oral proficiency and character recognition are emphasized.

Prerequisite: CHN 101. Corequisite: CHN 112.

CHN 103 - Beginning Chinese Language and Culture III (3)

This is the third of a three-semester sequence for students with some background in Chinese. The course will continue to build basic language skills in Mandarin, although oral proficiency and character recognition are emphasized. By the end of this sequence, students will be able to identify components of other cultural perspectives and value other worldviews in comparison to their own.

Prerequisite: CHN 102. Corequisite: CHN 113.

CHN 111 - Chinese Language Lab I (1)

This lab is required concurrently with CHN 101 and emphasizes oral proficiency in authentic cultural contexts.

Corequisite: CHN 101.

CHN 112 - Chinese Language Lab II (1)

This lab is required concurrently with CHN 102 and emphasizes oral proficiency in authentic cultural contexts.

Corequisite: CHN 102.

CHN 113 - Chinese Language and Culture Lab III (1)

This lab is required concurrently with CHN 103 and emphasizes oral proficiency in authentic cultural contexts.

Corequisite: CHN 103.

CHN 203 - Intermediate Chinese Language and Culture (3)

Chinese 203 reviews fundamental skills developed in CHN 101-103 and develops further competencies in listening, speaking, reading, and writing Mandarin. Through communicative and multimedia activities, students will also learn more advanced grammatical structures and Chinese characters. The course presents elements of Chinese culture and history that will help students value other worldviews in comparison to their own.

Prerequisite: CHN 103 or instructor permission.

CORE - Core Curriculum

CORE 101 - Anchor Seminar (1)

What is the core of a UP education? The Anchor Seminar and accompanying workshops explore this question by introducing university life, the Core curriculum, and the values of a liberal arts education at a Holy Cross institution. Faculty and student leaders discuss, model, and engage Core Habits of Heart and Mind, while facilitating a positive transition into UP's educational community.

CST - Communication Studies

CST 101 - Introduction to Communication Studies (3)

This course introduces theories of communication, builds academic writing and research strategies, and considers various academic and career options.

CST 107 - Public Speaking for Change (3)

Theory and practice of public oral communication, with special emphasis on issue analysis and argumentation in public communication.

CST 225 - Interpersonal Communication: Relating to Others (3)

This course provides a relational approach to studying interpersonal communication by understanding how concepts such as affection, conflict, and listening are constrained and enabled in close relationships across diverse contexts. Students learn to see personal agency in interactions that shape quality of life, while also identifying and practicing the importance of dual perspective-taking, inclusion, civil discourse, and freedom of expression.

CST 227 - Speech and Debate (3)

This course provides instruction and practice in the art of public speaking and debate. Students train to compete in debate and individual events. During classes members will practice debating and speaking. Members are taught reasoning, case writing, rebuttals, and cross-examination.

CST 233 - From Corporations to Social Movements: Understanding Organization Communication (3)

This course examines how human communication creates and sustains organizations. Introduces knowledge of major organizational communication theories and organizing processes. Students apply theory to interpret and analyze communication patterns for the informational, cultural, and ideological meanings that influence how and why organizing happens as it does.

CST 265 - Creativity and Digital Tools (3)

This course emphasizes critical thinking through the creation of multiple media projects focusing on a singular theme. These projects ask students to address contemporary concerns within multimedia practice and utilize digital tools from flatbed scanners to book publishing software for their production and final output.

CST 290 - Directed Study (Variable)

Credit arranged.

CST 297 - Communication Internship Practicum (1)

Communication or organizational communication majors may undertake on-the-job training positions with professional organizations. This course is designed to provide reflective, specific guidance in applying students' academic experience to a professional communication experience. Students may receive an IP (In Progress) grade until the completion of their internship. May be taken twice. Only 1 credit can apply to the major.

CST 300 - Quantitative Research Methods (3)

Introduces students to quantitative research methods used to study human communication. Designed to develop students' ability to understand research ethics, develop research ideas, evaluate and critique others' research, and conduct original research.

Prerequisite: MTH 161. Crosslisted as: CST 500.

CST 301 - Media and Society (3)

Provides students theory and analysis necessary to understand mass media processes and messages as they shape personal, cultural, political, economic and civic life. History and contemporary development of media forms and processes are investigated.

CST 302 - Communicating Science in Public (3)

Participants consult experts, engage in hands-on field outings and lab experiments, and discuss podcasts, films, advice, and stories to unpack communication's roles in scientifically discovering, examining, and affecting the natural and social worlds. Braiding scientific and communication scholarship, students come away with thoughtful, alert means to understand and engage in the push-pull of communicating science in public and in private.

CST 307 - Advanced Public Speaking (3)

Students attain advanced public speaking abilities through study of pertinent rhetorical theories and advanced practice of persuasive speaking.

Prerequisite: CST 107.

CST 320 - Rhetorical Theory and Criticism (3)

Introduces students to rhetorical theories and analysis vital to understanding and evaluating key public messages. Students analyze cultural persuasion created in ever-changing forms of mediated messages.

Crosslisted as: CST 520.

CST 327 - Argumentation and Advocacy (3)

This course examines how to scrutinize, assess and create arguments. Students will learn the nature, uses and limits of argumentation and study arguments in political, religious and social rhetorical contexts, exploring fallacies in argument, the nature of causal reasoning, formal argument analysis and argumentative chains and clusters. Attention is given to cultural standards of reasoning, evidence and refutation.

CST 330 - Qualitative Research Methods (3)

Introduces students to qualitative research methods used to study human communication. Prepares students to design and implement qualitative research projects.

Crosslisted as: CST 530.

CST 332 - Transforming Small Group Communication (3)

This course builds knowledge and ability to influence small groups' development, leadership, decision-making, conflict management, and collaboration. Theory-based problem-solving helps explain and influence groups' task, procedural, interpersonal, and organizational processes especially regarding dynamics of power among diverse group members. Reflective, hands-on learning activities help apply and assess group principles.

CST 333 - The Future of Work (3)

This course focuses on students' individual futures and broader questions about labor and also the changing nature of work.

CST 335 - Visual Communication (3)

Study of effective communication of visual messages in the mass media. Students will learn design, concept, and composition strategies for visual media by learning and using visual crafting and formatting software.

CST 352 - News Writing and Reporting (3)

Instruction in news gathering, evaluating news, and writing typical news stories. Includes a variety of assignments such as hard news, cultural events, speeches, sports, and interviews. Practice work includes covering local assignments and preparing copy.

CST 361 - Introduction to Advertising (3)

Study of theory and practice of creating ad messages as an advertising creative. Course includes case studies and work on a dynamic set of projects replicating ad industry creative practices. Key focus of course is also on advertising ethics and a cultural critique of advertising.

CST 362 - Introduction to Public Relations (3)

Survey course provides understanding of the role of public relations in the profit-making and non-profit sectors, and specific working knowledge of the various facets of the public relations process, including social media. Planning and implementing public campaigns will be discussed.

Prerequisite: CST 352.

CST 370 - Environmental Organizing and Advocacy (3)

This course provides an introduction to the field of Environmental Communication, focusing on collaborative attempts to organize and advocate for environmental solutions. Using case studies, students will examine environmental communication in a range of contexts including communities, corporations, nonprofit organizations, governmental agencies, and social movements.

CST 391 - One Time Course Offering (Variable)

Credit arranged.

CST 401 - The Rhetoric of Politics (3)

Students study the American political culture using a rhetorical framework. They evaluate the rhetorical strategies used in campaigns, that create, maintain, and denigrate our political institutions. They examine the political strategies used in deliberative and constitutive rhetoric.

Crosslisted as: CST 501.

CST 402 - Social Media and Cultures (3)

This course overviews relationships between computer-mediated communication (CMC) and several forms and functions of human activity. It explores how humans use computers to construct knowledge, relationships, and specific realities. Utilizing different social media applications and tools will help identify, explain, and understand interrelationships among CMC, language, and identities.

CST 403 - Communication Law (3)

Survey course designed to increase student's understanding of First Amendment law as it relates to individual citizens, mass media, and corporate communication. Ethical considerations inherent in communication law decisions are emphasized.

CST 405 - Ecology, Evolution, and Culture of East Africa (3)

East Africa is one of the planet's richest sites of human and nonhuman ecological histories and provides the ideal space to study diversity and ecological entanglement. Topics include environmental communication, eco-tourism, conservation, post-colonialism and neocolonialism, climate change, and slavery and trade.

Corequisite: BIO 405.

CST 410 - Communication Theory (3)

Communication is a diverse discipline. This course provides students with a framework for understanding the variety of theories that influence what we know about human communication. This course investigates major explanatory theories of communication, with an emphasis on understanding theorizing as a powerful process of constructing knowledge and reality.

CST 411 - Communication Across Barriers (3)

This course investigates dynamics of differences that frame, enable, and constrain people's communication opportunities across diverse social identity groupings. Focusing on 'isms' related to race, gender, sex, social class, ability, sexuality, and age, its learning activities apply theory and scholarship to understand, integrate, and more insightfully navigate interactions across the welcome range of human differences.

CST 411 - Communication Across Barriers (3)

This course explores barriers to effective communication between members of differing social groups (sexes, races, generations, etc.). Consideration is given to causes of problems and effective strategies for solutions.

CST 416 - Communication and Conflict (3)

An intensive study of orientations toward managing disputes and of specific processes and techniques currently in use. The course includes consideration of both organizational and interpersonal disputes and also focuses on the role of the mediator.

CST 425 - Radical Relationships: Love, Care, Grief (3)

Investigates the dynamics of human communication in building, maintaining, or altering interpersonal relationships. Particular emphasis is given to family communication.

CST 431 - Intercultural Communication and Identity (3)

Course provides an introduction to the dynamics of intercultural communication. Content includes learning the importance of understanding one's own culture, navigating cultural similarities and differences through communication, and negotiating skilled, adaptive identities within and across cultures.

CST 432 - Gender and International Development (3)

The course examines alternative perspectives on international development, especially gender analysis in intercultural relationships, cross-cultural communication, peace and security, and nation building. Focusing on dignity and social justice, students learn to analyze, reflect on, and deconstruct narratives about gender and culture in ways that demystify the interplay among individuals, political leaders, non-profits, and the nation in international development.

CST 433 - Critical Perspectives on Work, Labor, and Organizing (3)

This course investigates organizations as sites of power, control, and influence. Major topics for the course include understanding organizations as raced, gendered, abled, classed, heteronormative, and more. An underlying theme of this course is to explore and consider how human communication sustains or transforms organizational power, control, oppression, and influence.

CST 434 - Researching Organizational Life: Identity, Culture, Voice (3)

This course offers an advanced investigation of organizational culture. Students will identify symbolic organizing practices, ideological meanings tied to these practices, and examine how cultural meanings and beliefs are marginalized. Topics include org. ethnography, cultural diversity, and social justice. Drawing from both interpretive and critical traditions, students will design and implement an advanced cultural research project.

Prerequisite: CST 330 or instructor permission.

CST 435 - Advanced Visual Persuasion (3)

Students study theory and analysis of visual public messages to understand the means of visual persuasion by rhetors who create important images, pictures, and designs. Students investigate ethical and influence dynamics of visual message design.

CST 440 - Broadcast Criticism (3)

Students study and write televisual criticism which closely analyzes messages as cultural repositories of meaning or which investigates the interaction between television and culture. Emphasis is on the method, stance, and purpose of broadcast critics.

Prerequisite: Recommended: CST 320.

CST 445 - Cinema Storytelling and Cultural Persuasion (3)

Explores the influence of movies on American culture. Students explore theories and ideas concerning film, society, conflict, visual persuasion, and narrative. Students view popular American movies as focal points for lecture and discussion.

Prerequisite: CST 320 recommended.

CST 452 - Public Affairs Reporting (3)

Provides instruction about news reporting of public affairs. Students learn to research, report, and write in-depth, interpretive, and analytical stories on public affairs in areas such as crime and police, courts, government, politics, and education. Students learn public records requests, common problems and techniques for covering public affairs agencies.

Prerequisite: CST 352.

CST 453 - Multimedia Journalism (3)

Prepares students to work in an online news environment where emerging devices, technologies, and social media are innovatively changing and challenging journalism practices. Students learn how to report, write, and produce stories for online news audiences. Students will produce and edit original content with audio, photographs, video, maps, info graphics, and text, and evaluate and critique current online journalism practices.

Prerequisite: CST 352 or instructor permission. Crosslisted as: CST 553.

CST 470 - Plants, Nonhuman Animals, Food Systems, and Climate Communication (3)

Students learn how we experience and relate to the environment through various communication processes. The course applies communication theories to critically analyze contemporary discourses and counter-discourses on ecology, environmentalism, and environmental justice. Students utilize existing resources to examine how their own assumptions, beliefs, language, and practices support and/or resist various environmental narratives.

CST 475 - Senior Project (3)

Under faculty supervision, each student works independently on a comprehensive project designed to display advanced skills.

Prerequisite: Senior standing.

CST 490 - Directed Study (Variable)

Credit arranged.

CST 491 - One Time Course Offering (Variable)

Credit arranged.

CST 492 - Seminar (Variable)

Credit arranged.

CST 495 - Workshop (Variable)

Credit arranged.

CST 496 - Workshop (Variable)

Credit arranged.

CST 497 - Communication Internship Practicum (3)

Communication or organizational communication majors may undertake on-the-job training positions with professional organizations. This course is designed to provide reflective, specific guidance in applying students' academic experience to a professional communication experience. Students may receive an IP (In Progress) grade until completion of their internship. May be taken twice. Only 3 credits can apply to the major.

CST 499 - Senior Thesis (Variable)

Research, study, or original work under the direction of a faculty mentor, leading to a scholarly thesis document with a public presentation of results. Requires approval of thesis director, department chair, dean, and the director of the honors program, when appropriate.

Prerequisite: Senior standing; 3.0 G.P.A. in the thesis area, or good standing in the honors program.

Graduate Courses**CST 500 - Research and Writing (3)**

Introduction to methods and findings of critical, analytical, qualitative, and quantitative research and techniques of preparing graduate-level research papers.

Crosslisted as: CST 300.

CST 501 - The Rhetoric of Politics (3)

Students study the American political culture using rhetorical framework. They evaluate the rhetorical strategies used in campaigns, issues, create, maintain, and denigrate our political institutions. They examine the political strategies used in deliberative and constitutive rhetoric.

Crosslisted as: CST 401.

CST 502 - Social Media and Cultures (3)

This course overviews relationships between computer-mediated communication (CMC) and several forms and functions of human activity. It explores how humans use computers to construct knowledge, relationships, and specific realities. Utilizing different social media applications and tools will help identify, explain, and understand interrelationships among CMC, culture, language, and identities.

CST 503 - Communication Law (3)

This graduate-level survey course is designed to develop an advanced understanding of First Amendment law as it relates to citizens, mass media, and democratic practice. The course examines core questions about how communities function and how civil society can be constructed and maintained through free and robust public discussion from diverse and antagonistic sources.

CST 510 - Communication Theory (3)

Communication is a diverse discipline. This course provides students with a framework for understanding the variety of theories that influence what we know about human communication. This course investigates major explanatory theories of communication, with an emphasis on understanding theorizing as a powerful process of constructing knowledge and reality.

CST 511 - Communication Across Barriers (3)

This course explores and critiques barriers to effective communication between members of differing social groups (sexes, races, generations, etc.). Consideration is given to problems' causes and effective strategies for solutions.

CST 516 - Negotiation and Conflict Management (3)

An intensive study of orientations toward managing disputes and of specific processes and techniques currently in use. Course includes consideration of both organizational and interpersonal disputes and also focuses on the role of the mediator.

CST 520 - Rhetorical Theory and Criticism (3)

Introduces students to rhetorical theories and analysis vital to understanding and evaluating key public messages. Students analyze cultural persuasion created in ever-changing forms of mediated messages.

Crosslisted as: CST 320.

CST 525 - Radical Relationships: Love, Care, Grief (3)

Investigates the dynamics of human communication in building, maintaining, or altering interpersonal relationships. Particular emphasis is given to family communication.

CST 530 - Qualitative Research Methods (3)

Introduces students to qualitative research methods used to study human communication. Prepares students to design and implement qualitative research projects.

Crosslisted as: CST 330.

CST 531 - Intercultural Communication and Identity (3)

Course provides an introduction to the dynamics of intercultural communication. Content includes learning the importance of understanding one's own culture, navigating culture similarities and differences through communication, and negotiating skilled, adaptive identities within and across cultures.

CST 532 - Gender and International Development (3)

The course examines alternative perspectives on international development, especially gender analysis in intercultural relationships, cross-cultural communication, peace and security, and nation building. Focusing on dignity and social justice, students review the research literature to analyze narratives about gender and culture pertaining to several aspects of international development, and to understand best models and practices for such development.

CST 533 - Critical Perspectives on Work, Labor, and Organizing (3)

This course investigates organizations as sites of power, control, and influence. Major topics for the course include understanding organizations as raced, gendered, abled, classed, heteronormative, and more. An underlying theme of this course is to explore and consider how human communication sustains or transforms organizational power, control, oppression, and influence.

CST 534 - Researching Organizational Life: Identity, Culture, Voice (3)

This course offers an advanced investigation of organizational culture. Students will identify symbolic organizing practices, ideological meanings tied to these practices, and examine how cultural meanings and beliefs are marginalized. Topics include org. ethnography, cultural diversity, and social justice. Drawing from both interpretive and critical traditions, students will design and implement an advanced cultural research project.

CST 535 - Advanced Visual Persuasion (3)

Students study theory and analysis of visual public messages to understand the means of visual persuasion by rhetors who create important images, pictures, and designs. Students investigate ethical and effectual dynamics of visual message design.

CST 540 - Televisual Storytelling and Cultural Persuasion (3)

Students study and write televisual criticism which closely analyzes messages as cultural repositories of meaning or which investigates the interaction between television and culture. Emphasis is on the method, stance, and purpose of broadcast critics.

Prerequisite: CST 520 or instructor permission.

CST 545 - Cinema Storytelling and Cultural Persuasion (3)

Explores the influence of movies on American culture. Students explore theories and ideas concerning film, society, conflict, visual persuasion, and narrative. Students view popular American movies as focal points for lecture and discussion.

Prerequisite: CST 520 or instructor permission.

CST 552 - Public Affairs Reporting (3)

Provides instruction in news reporting of public affairs, including crime and police, courts, governments, politics and education. Students learn about the problems and challenges of serving a watchdog role over the institutions and processes that shape civic

life. Includes an advanced investigative reporting component in which graduate students produce a series of investigative stories on an important public issue.

CST 553 - Multimedia Journalism (3)

Students evaluate and critique current online journalism practices and gain experience in editing, collaborating, and producing multimedia stories. Students analyze current digital storytelling practices of big and small news organizations in order to address some of the key ethical and entrepreneurial challenges associated with digital journalism, including commenting capabilities and revenue streams.

Crosslisted as: CST 453.

CST 581 - Advanced Business Communication (3)

Course designed to help students attain professional-level competence in oral and written business communication. Students learn rhetorical principles and apply them to business communication situations, such as: making formal oral presentations, conducting meetings, and writing business correspondence and reports.

Crosslisted as: BUS 581.

CST 583 - Instruction and Leadership (3)

This course unpacks leaders' communicative means to engage people's thought, attention, motivation, and learning. Students examine research, theory, philosophy, and instructional communication practices designed to increase credibility, flexibility, comfort, and effectiveness in teaching-learning leadership situations. Students develop their own teaching philosophies and learn about sharing memorable information, facilitating teamwork and discussion, and developing productive, satisfying teaching-learning relationships with others.

Crosslisted as: BUS 583.

CST 590 - Directed Study (Variable)

Credit arranged.

CST 591 - One Time Course Offering (Variable)

Credit arranged.

CST 592 - Seminar (Variable)

Credit arranged.

CST 593 - Advanced Research (Variable)

This course is for students nearing completion of their academic program. It will provide an opportunity for students to explore a research project in more depth and explore areas of special interest in communication.

CST 595 - Advanced Research (Variable)

Credit arranged.

CST 597 - Graduate Communication Internship Practicum (3)

Communication or organizational communication majors may undertake on-the-job training positions with professional organizations. This course is designed to provide reflective, specific guidance in applying students' academic experience to a professional communication experience. Students may receive an IP (In Progress) grade until completion of their internship. May be taken twice. Only 3 credits can apply to the major.

CST 599 - Thesis (Variable)

3-6 cr. hrs., 1 or 2 semesters.

CST 599X - Thesis in Progress (0)

Registration for any graduate student who has received the grade of IP in CST 599 is required while the thesis is in progress. Fee: \$50.

CS - Computer Science

CS 083 - CS Capstone Workshop I (0)

Students work with faculty adviser to complete the first phase of a capstone project.

Corequisite: CS 483.

CS 084 - CS Capstone Workshop II (0)

Students work with faculty adviser to complete the second phase of a capstone project.

Corequisite: CS 484.

CS 200 - Introduction to Computer Science for Non-Majors (3)

Introduction to computer science and programming. Representation of data in digital form. Data types, conditionals, loops, arrays and functions. Algorithmic time complexity. Creates a foundation for computer science and data driven software development. Emphasis on good design and programming techniques through practice in writing, running, and debugging programs. No programming experience expected.

CS 203 - Introduction to Computer Science (3)

Create a foundation for computer science and the software development process. Emphasis on good design and programming techniques through practice in writing, running, and debugging programs. Study of a programming language which incorporates objects, structured control statements, classes, inheritance, strong data typing, and sub-programs with parameters. No programming experience expected.

Corequisite: CS 273.

CS 260 - Programming Lab (1)

A non-required laboratory for CS 203. This course focuses on reinforcing basic programming techniques and skills. Students who are entering CS 203 with no previous programming experience will benefit most from this course. Course is graded P/NP.

CS 273 - Computer Science Laboratory (1)

Laboratory to support CS 203.

Corequisite: CS 203.

CS 290 - Directed Study (Variable)

Credit arranged.

CS 301 - Object-Oriented Design (3)

Continue to build a computer science foundation. Study of intermediate programming language constructs: event handling, graphical user interfaces, threads, and networking. Introduction to the software engineering process and programming-in-the-large.

Prerequisite: CS 203 with a grade of C- or better, CS 273. Corequisite: CS 371.

CS 305 - Data Structures (3)

Continues the study of computer science and software engineering methodologies with the C programming language. Analysis of common data structures, time and space efficiency, stacks, queues, linked lists, trees, graphs, hash tables, recursion, searching, and sorting algorithms.

Prerequisite: CS 203 with a grade of C- or better.

CS 324 - Analysis of Algorithms (3)

Design, analysis and correctness proofs of important algorithms from areas such as combinatorics, seminumerical algorithms, data storage and retrieval, systems programming, and artificial intelligence. Includes a study of complexity theory.

Prerequisite: CS 305 with a grade of C- or better, MTH 311 with a grade of C- or better, EGR 361 or MTH 461.

CS 333 - Computer Architecture (3)

Introduction to boolean and sequential logic. Introduction to computer system hardware including Arithmetic Logic Unit (ALU), main memory, cache memory, I/O devices, busses and interfaces, control unit, addressing techniques, and the MIPS assembly language.

Prerequisite: CS 305 with a grade of C- or better.

CS 334 - Operating Systems (3)

Functions, structure, design, and problems of operating systems. Concepts and principles of operating system design and implementation including file system, CPU scheduling, memory management (including virtual memory), deadlocks in computer systems, concurrent processes and programming, threads, and protection.

Prerequisite: CS 305 with a grade of C- or higher, CS 333, CS 376.

CS 341 - Software Engineering (3)

Software lifecycle models. Requirements engineering. Planning and managing software projects. Software design methods. System integration, software quality assurance, testing, and validation. Software maintenance.

Prerequisite: CS 301 with a grade of C- or better, CS 305 with a grade of C- or better.

CS 352 - Programming Languages (3)

Comparative analysis of several modern high level languages in terms of data types and control structures, with emphasis on run-time behavior of programs.

Prerequisite: CS 305 with a grade of C- or better.

CS 357 - Theory of Computation (3)

Introduction to finite automata, Turing machines, formal languages, and computability.

Prerequisite: CS 305 with a grade of C- or better, MTH 311 with a grade of C- or better.

CS 358 - Compiler Design (3)

Lexical analysis, syntactic analysis, type checking, and code generation. Introduction to optimization.

Prerequisite: CS 305 with a grade of C- or better, CS 357, CS 333.

CS 364 - Business and Technology Ventures (3)

Focus on applicable skills to a career in software engineering or a related field including software entrepreneurship, professional development, and employment.

CS 368 - Computer Science Seminar (2)

In-depth study of professional responsibility in the field of computer science. Students are expected to read journal papers, articles, and books, participate in class discussions, and give presentations.

Prerequisite: Upper division standing.

CS 369 - Honors Computer Science Seminar (3)

In-depth study of professional responsibility in the field of computer science. Students are expected to read journal papers, articles, and books, participate in class discussions, and give presentations. Students will also research a current topic, and make the presentation to an audience outside the University. Students may not receive credit for both CS 368 and CS 369.

Prerequisite: Upper division standing.

CS 371 - Object-Oriented Design Laboratory (1)

Laboratory to support CS 301.

Corequisite: CS 301.

CS 376 - Unix/Linux Tools Laboratory (1)

This laboratory introduces Unix/Linux commands and tools for software development and testing. Includes scripting languages.

Prerequisite: CS 203 with a grade of C- or better.

CS 382 - Advanced Programming Techniques (1)

The course focuses on developing and practicing techniques for rapid programming in a small team environment: approaches to problem assessment, selection of data structures and algorithms, implementation, and testing. Students will hone their skills by working in small teams to produce correct solutions to a wide variety of computing problems under time constraints. Course is graded Pass / No Pass.

Prerequisite: CS 305 with a grade of C- or better.

CS 421 - Artificial Intelligence (3)

The fundamentals of artificial intelligence. Topics include: heuristic search, adversarial search, local search, knowledge-based systems, artificial neural networks, reinforcement learning, AI history and philosophy of minds.

Prerequisite: CS 305 with a grade of C- or better.

CS 423 - Computational Biology (3)

Algorithmic and analysis techniques for biological data such as DNA, RNA, proteins, and gene expression. Topics include molecular biology, alignment and searching algorithms, sequence evolution algorithms, genetic trees, and analysis of microarray data. This course is interdisciplinary and assumes programming skills.

Prerequisite: MTH 201, CS 200 or 203 with a grade of C- or better; one of the following: BIO 205, BIO 207, CS 305 with a grade of C- or better. Crosslisted as: BIO 423.

CS 425 - Introduction to Robotics (3)

Concepts in robotics including state estimation, filtering, perception, localization, and mapping. Introduction to various topics in computer vision. Methods for robotic control and learning. Current topics in applied robotics. Fee: \$50

Prerequisite: CS 305 with a grade of C- or higher, MTH 201; MTH 361 or MTH 461 recommended.

CS 427 - Internet of Things (3)

A study of "smart," interconnected devices with myriad sensing capabilities, known as the "Internet of Things" (IoT). Today, IoT exists in our home appliances, automobiles, airplanes, and on our wrists - tracking how we exercise, and measuring and analyzing our sleep. Topic includes IoT technologies, architectures, protocols, data storage, and IoT security and privacy. Fee: \$50

Prerequisite: CS 305 with a grade of C- or higher.

CS 428 - User Experience Design (3)

Learn about UX (User Experience) Design to gain practical insights into staying focused on the right work for the right people. Areas of study include: user research, information architecture, interaction design, and information design.

Prerequisite: CS 305 with a grade of C- or better. Crosslisted as: CS 528.

CS 429 - Introduction to Machine Learning (3)

In-depth survey of basic and advanced concepts of machine learning. Topics include: linear discrimination, supervised, unsupervised, semi-supervised learning, multilayer perception, convolution neural networks, maximum-margin methods, Monte-Carlo, and reinforcement learning. Knowledge of linear algebra and vector calculus also recommended.

Prerequisite: CS 305 with a grade of C- or better. Crosslisted as: CS 529.

CS 432 - Computer Graphics (3)

An examination of topics in computer graphics, including graphical output devices, line-drawing and clipping algorithms, representation and drawing of curves, techniques for transforming graphical images, and methods of modeling and rendering in three-dimensions.

Prerequisite: MTH 201, CS 305 with a grade of C- or better, MTH 341 recommended.

CS 434 - Database Management Systems (3)

The design and implementation of databases with an emphasis on the use of relational database management systems (DBMS). Query languages, table and index design, query evaluation, transaction management, tuning, security.

Prerequisite: CS 305 with a grade of C- or better.

CS 436 - Parallel Computing (3)

A study of architectures, algorithms and programming/debugging techniques that employ parallelism to increase performance of computer programs. Topics include parallel computer architectures, parallel programming languages for distributed and shared-memory multiprocessors and code optimization.

Prerequisite: CS 305 with a grade of C- or better.

CS 438 - Introduction to Big Data Analytics (3)

As more data becomes available, solutions are needed to store, process, extract, interpret, and visualize large amounts of data for scientific discovery and innovation. This course covers algorithms and technologies for the storage, analysis, and interpretation of large, diverse, and heterogeneous data sets.

Prerequisite: CS 305 with a grade of C- or higher; EGR 361 or MTH 361.

CS 443 - Cloud Computing (3)

Cloud computing is the delivery of on-demand computing resources, from applications to data centers, over the Internet with pay-as-you-go pricing. This course is a study of fundamentals and capabilities of cloud across various service models. Topics include cloud infrastructure, programming models, and security and privacy issues in cloud computing. Includes various case studies from the industry.

Prerequisite: CS 305 with a grade of C- or higher.

CS 445 - Computer Networks and Internetworking (3)

A broad first course in computer networks and internetworking. OSI and TCP/IP layered models, TCP/IP protocol suite, transmission media, local area networks, network and transport-layer protocols, internetworking, internet addressing and routing.

Prerequisite: CS 305 with a grade of C- or better.

CS 447 - Computer Game Design (3)

This course will provide an introduction to the field of computer game design. The philosophy, objectives, and history of this field will be explored. In addition, the course will emphasize practical applications of some of the more prevalent techniques.

Prerequisite: CS 305 with a grade of C- or better. Crosslisted as: CS 547.

CS 448 - Topics in Cybersecurity (3)

Contemporary topics in Cybersecurity. Topics in this fast-moving field change from year to year, but each offering will introduce these core fundamentals: confidentiality, integrity, availability, access control, and defensive programming techniques.

Prerequisite: CS 305 with a C- or higher, CS 376.

CS 483 - Computer Science Capstone Project I (3)

A major design experience based on the knowledge and skills acquired in earlier course work and incorporating appropriate standards and multiple realistic constraints. Projects have some combination of the following characteristics: realism, communication, exposure, teamwork, learning, and related opportunities.

Prerequisite: EGR 300, CS 341. Corequisite: CS 083.

CS 484 - Computer Science Capstone Project II (3)

Continuation of a major design experience based on the knowledge and skills acquired in earlier course work and incorporating appropriate standards and multiple realistic constraints. Projects have some combination of the following characteristics: realism, communication, exposure, teamwork, learning, and related opportunities.

Prerequisite: CS 483. Corequisite: CS 084.

CS 490 - Directed Study (Variable)

Selected study or project in computer science for upper-division students. Must be arranged between the student and an individual faculty member and subsequently approved by the dean of engineering. No more than three hours of directed study taken at the University may be used for elective credits to satisfy degree requirements.

CS 491 - One Time Course Offering (Variable)

Credit arranged.

CS 492 - One Time Course Offering (Variable)

Credit arranged.

CS 493 - Research (1-3)

Faculty-directed student research. Before enrolling, a student must consult with a faculty member to define the project. May be repeated for credit.

Prerequisite: Upper division standing.

CS 499 - Senior Thesis (Variable)

Research, study, or original work under the direction of a faculty mentor, leading to a scholarly thesis document with a public presentation of results. Requires approval of thesis director, department chair, dean, and the director of the honors program, when appropriate.

Prerequisite: Senior standing; 3.0 G.P.A. in the thesis area or good standing in the honors program.

Graduate Courses

CS 521 - Artificial Intelligence (3)

Applications of artificial intelligence including advanced topics. Topics include: inference, knowledge representation, search, cognitive architecture, decision making under uncertainty, and machine learning. Special project required. Knowledge of data structures required.

Crosslisted as: CS 421.

CS 523 - Computational Biology (3)

Study of advanced algorithmic and analysis techniques for biological data such as DNA, RNA, proteins and gene expression. Topics and project include molecular biology, alignment and searching algorithms, sequence evolution algorithms, genetic trees and analysis of microarray data. Interdisciplinary course that assumes programming skills. Special project required. Knowledge of data structures, biology, programming and calculus required.

Crosslisted as: CS 423.

CS 525 - Introduction to Robotics (3)

Concepts in robotics including state estimation, filtering, perception, localization, and mapping. Introduction to various topics in computer vision. Methods for robotic control and learning. Current topics in applied robotics. Special project required. Knowledge of statistics, calculus, and data structures required.

Prerequisite: Graduate standing. Crosslisted as: CS 425.

CS 527 - Internet of Things (3)

A study of “smart,” interconnected devices with myriad sensing capabilities, known as the “Internet of Things” (IoT). IoT exists in our appliances, automobiles, airplanes, and on our wrists -- tracking how we exercise, and measuring our sleep. Topic includes IoT technologies, architectures, protocols, data storage, and IoT security and privacy. Special project required. Knowledge of data structures required.

Crosslisted as: CS 427.

CS 528 - User Experience Design (3)

Learn about UX (User Experience) Design to gain practical insights into staying focused on the right work for the right people. Go in-depth into areas of user research, information architecture, and information design. Other areas of study will include

interaction design, visual design, accessibility, story boarding, and game mechanics. Prior experience in data structures is required.

Crosslisted as: CS 428.

CS 529 - Introduction to Machine Learning (3)

In-depth survey of basic and advanced concepts of machine learning. Topics include: linear discrimination, supervised, unsupervised, semi-supervised learning, multilayer perception, convolution neural networks, maximum-margin methods, Monte-Carlo, and reinforcement learning. Prior knowledge of data structures is required. Knowledge of linear algebra and vector calculus also recommended. Research project requiring an application of a machine learning techniques.

Crosslisted as: CS 429.

CS 532 - Computer Graphics (3)

An examination of topics in computer graphics, including graphical output devices, line-drawing and clipping algorithms, representation and drawing of curves, techniques for transforming graphical images, and methods of modeling and rendering in three-dimensions. Special project required. Knowledge of data structures, linear algebra, and calculus are required.

Crosslisted as: CS 432.

CS 536 - Parallel Computing (3)

A study of architectures, algorithms and programming/debugging techniques that employ parallelism to increase performance of computer programs. Topics include parallel computer architectures, parallel programming languages for distributed and shared-memory multiprocessors and code optimization. Special project required. Knowledge of data structures, computer architecture, and object oriented design required.

Crosslisted as: CS 436.

CS 538 - Introduction to Big Data Analytics (3)

As more data becomes available, solutions are needed to store, process, extract, interpret, and visualize large amounts of data for scientific discovery and innovation. This course covers algorithms and technologies for the storage, analysis, and interpretation of large, diverse, and heterogeneous data sets. Special project required. Knowledge of statistics and data structures required.

Crosslisted as: CS 438.

CS 542 - Software Engineering for Internet Applications (3)

Advanced design, development, and evaluation of web-based applications. Human factors, security aspects, and databases are emphasized. Knowledge of data structures required.

CS 543 - Cloud Computing (3)

Cloud computing is the delivery of on-demand computing resources, from applications to data centers, over the Internet with pay-as-you-go pricing. Study fundamentals and capabilities of cloud across various service models. Topics include cloud infrastructure, programming models, and security and privacy issues in cloud computing. Includes various case studies from industry. Special project required. Knowledge of data structures required.

Crosslisted as: CS 443.

CS 545 - Computer Networks and Internetworking (3)

Computer networks and internetworking. Specialized applications of OSI and TCP/IP layered models, TCP/IP protocol suite, transmission media, local area network and transport-layer protocols, internetworking, internet addressing and routing. Special project required. Knowledge of data structures required.

Crosslisted as: CS 445.

CS 547 - Computer Game Design (3)

Computer game design emphasizing the philosophy, objectives, and history of this field. In addition, the course will emphasize advanced applications of some of the more prevalent techniques. Special project required. Knowledge of data structures required.

Crosslisted as: CS 447.

CS 548 - Topics in Cybersecurity (3)

Cryptography, program security, security in operating systems, security in computer networks, security administration and policies. Special project required. Knowledge of data structures and unix required.

Crosslisted as: CS 448.

CS 590 - Directed Study (Variable)

Credit arranged.

CS 591 - One Time Course Offering (Variable)

Credit arranged.

CS 592 - One Time Course Offering (Variable)

Credit arranged.

CS 593 - Research (1-3)

Faculty-directed student research. Before enrolling, a student must consult with a faculty member to define the project. May be repeated for credit.

DNC - Dance

DNC 214 - Jazz Dance (2)

A jazz dance technique class. Emphasis in learning proper body alignment and the value of body conditioning. Class includes warm-up and jazz combinations of movement. May be repeated for a maximum of 4 credit hours. May not be audited.

DNC 216 - Introduction to Ballet I (2)

Beginning instruction in classical ballet includes barre and center exercises designed to develop coordination, balance, and strength for dance and fitness. May be repeated for a maximum of 4 credit hours. May not be audited.

DNC 315 - Jazz and Modern Dance (2)

Dance technique class. Emphasis on jazz and modern dance. Class includes warm-up, strengthening and stretching exercises, and combinations of movement and fundamental steps to music. May be repeated for a maximum of 4 credit hours. May not be audited.

DNC 316 - Jazz Dance II (2)

An exploration of various dance styles. May be repeated for a maximum of 4 credit hours. May not be audited.

Prerequisite: DNC 315 or instructor permission.

DNC 317 - Ballet II (2)

Continuation of Ballet I. May be repeated for a maximum of 4 credit hours. May not be audited.

Prerequisite: DNC 216 or instructor permission.

DNC 418 - Ballet III (2)

This class is designed for the student who has had some previous ballet training/experience. Work at the barre as well as center floor will be included. Level III builds upon what was covered in Level I and Level II and is geared for the student with intermediate ballet skills. May be repeated for a maximum of 4 credit hours.

Prerequisite: DNC 317 or instructor permission.

ECN - Economics

ECN 120 - Principles of Macroeconomics (3)

Investigates the determinants of national output, the unemployment rate, and inflation, as well as the use of monetary and fiscal policies to regulate the economy. Examines international trade and determinants of exchange rates.

ECN 121 - Principles of Microeconomics (3)

Analyzes the behavior of consumers, workers, and firms in market economies. Examines issues in the context of both competitive and monopolistic markets, with a comparison of the way in which prices and output levels are determined in different markets. Extends analysis to include the role of government in market economies.

ECN 310 - Econometrics (3)

Applies statistical methods to economic or financial data to investigate the validity of hypotheses or theoretical models. Develops various techniques used in multiple regression analysis of time series and cross-section data.

Prerequisite: BUS 101, ECN 120, ECN 121, MTH 121 or MTH 201 and MTH 161.

ECN 319 - Intermediate Microeconomics (3)

Draws on the knowledge of economic theory, statistics, and calculus to provide managers with applicable tools for decisions regarding prices, production, and efficient resource allocation. Through problem-solving and hands-on projects, students learn the role of quantitative tools and economic theory in modern management.

Prerequisite: BUS 101, ECN 120, ECN 121, MTH 121 or MTH 201, and MTH 161.

ECN 320 - Intermediate Macroeconomics (3)

Studies macroeconomic theories, including those about the determinants of output, the unemployment rate, and the inflation rate in the short run, and those about the rate of economic growth in the long run. The predictions of these theories will be contrasted with economic experience in the US and elsewhere.

Prerequisite: ECN 120, ECN 121.

ECN 322 - Environmental Economics (3)

Provides economic analysis of public policy issues in resource utilization and environmental quality, considering political and macroeconomic aspects of environmental policy. Discussion includes externalities, the Tragedy of the Commons, property rights, benefit-cost analysis, and local water and air pollution issues. In addition, analyzes global problems such as global warming.

Prerequisite: ECN 121, Junior status.

ECN 325 - Metrics for Sustainability (3)

Covers current analytical frameworks and tools that leading-edge organizations are using to benchmark and improve environmental, social and financial performance. Includes environmental and social valuation techniques, life cycle analysis, and carbon footprinting. Features local case studies.

Prerequisite: ECN 120 or ECN 121. Crosslisted as: ENV 325.

ECN 326 - Climate Change Economics and Policy: A Global Perspective (3)

Examines (expected) impacts of climate change, mitigation of and adaptation policies to climate change and associated challenges. Contextualizes the U.S. approach by comparing it with policies in other parts of the world and highlights the role of uncertainty for climate change decision-making. The course draws on diverse disciplinary perspectives within the social sciences with an emphasis on economics.

Prerequisite: ECN 121; ECN 120 recommended.

ECN 327 - Market Power: Origins, Structures and Consequences (3)

Students will study factors that give firms/individuals market power as well as the consequences of unequal market power. Students will study strategic behavior among firms (price discrimination, product selection, intellectual property, and investment decisions) and the role of government policy in imperfectly competitive markets. Focuses on producer and consumer behavior when assumptions of perfect competition are violated.

Prerequisite: ECN 121.

ECN 424 - Income Inequality (3)

Examines the determinants of incomes in market economies, including education, training, experience, hours worked, discrimination, inheritance, unions, and government transfers. Studies causes of change in the extent of inequality and social impacts of inequality. Analyzes government policies to reduce inequality, including anti-poverty policies.

Prerequisite: MTH 161, ECN 121 or permission of instructor.

ECN 425 - Applied Economic Research (3)

Teaches skills needed for applied economic research. Students complete an empirical research paper, one that is theory-based and supported by data analysis. To build their research skills, students learn to develop a research proposal, write a literature review, find relevant data, and analyze that data using econometrics, or simulation, among other methodologies. Economics capstone.

Prerequisite: ECN 310, ECN 319, ECN 320; Senior Status.

ECN 426 - Comparative Economics (3)

Examines major economies of the world from a historical, theoretical and applied perspective. Students will analyze how different national economic systems have evolved through time as changing economic ideas and practices spread across national boundaries.

Prerequisite: ECN 120, ECN 121 or permission of instructor.

ECN 429 - Development Economics (3)

Students will analyze how nearly half the world's population has come to live on \$2 per day or less, as well what can be done in developing countries to try to lift and help people lift themselves out of extreme poverty. Includes an examination of the roles of education, income distribution, the rural and urban sectors, technology, investment, financial markets, foreign trade, domestic institutions, and international institutions.

Prerequisite: ECN 120, ECN 121.

ECN 430 - Psychology & Economics (3)

Analyzes how departures from the classical assumptions of human behavior (perfect rationality, self-interest, etc.) affect economic decision-making with a focus on experimental economics and real-world problems such as natural resource management, fighting poverty, and the impact of “fair” wages.

Prerequisite: MTH 161; ECN 120 or ECN 121.

ECN 431 - Health Economics (3)

Applies economic theory to the study of how best to promote health for all. Focuses on the decisions and institutions that influence the demand for and the production of health. Includes an evaluation of the roles of consumers, the environment, physicians, hospitals, insurers, and pharmaceutical companies. Evaluates government policy aimed at improving health, including the Affordable Care Act.

Prerequisite: ECN 121.

ECN 440 - International Economics (3)

Examines how trade among nations takes place and why free trade may improve standard of living for all nations. Discusses payments among nations, i.e., the balance of payments and determination of currency values in the international markets. Considers the effects of trade barriers and domestic monetary and fiscal policies.

Prerequisite: ECN 120, ECN 121, MTH 161.

ECN 490 - Directed Study (Variable)

Guided inquiry for superior students to pursue a particular subject area more intensively than course offerings permit. By special arrangement with economics faculty.

ECN 491 - One Time Course Offering (Variable)

In the semesters in which offered, varying subject matter as economics faculty deems appropriate for needs of the student in meeting the objectives of the undergraduate business program.

ECN 492 - One Time Course Offering (Variable)

In the semesters in which offered, varying subject matter as economics faculty deems appropriate for needs of the student in meeting the objectives of the undergraduate business program.

ECN 499 - Senior Thesis (Variable)

Research study or original work under the direction of a faculty mentor, leading to a scholarly thesis document with a public presentation of results. Requires approval of thesis director, department chair, dean, and the director of the honors program, when appropriate.

Prerequisite: Senior and 3.0 G.P.A. in the thesis area or good standing in the honors program.

ED - Education**ED 101 - Aim for Excellence (1)**

The aim of this class is to allow for an immersion experience in the culture of the University of Portland. Basic study skills such as improved reading comprehension, communication with professors, development of memory skills, critical thinking skills, application skills and the important time management skill will all be emphasized among other important abilities that a freshman must master.

ED 102 - University Success (1)

The University Success Class is specifically designed for students who have experienced difficulties and challenges with academic work. The course is designed to create greater academic success and in some cases, free a student from the burden of academic probation.

ED 103 - Sharing Success (1)

This course emphasizes the methods and pedagogy of teaching university study skills, such as time management, developmental reading comprehension, vocabulary development, and test taking skills. Methods of instruction and resources are also emphasized.

ED 150 - Introduction to Education (3)

Explores the profession of education and what is required to be a teacher whose values include life-long learning, empathy, and respect. Candidates will examine philosophical and current education issues and the professional attributes needed as a teacher in a diverse society. Through a weekly field experience candidates observe and assist P-12 teachers.

ED 230 - Pre-Adolescent Human Development (3)

Traces the life span of human development from age 3 through grade 8. Candidates will gain empathy and respect for the diversity present in the classroom through the study of physical, social, moral, psychomotor, emotional, and cognitive developmental theories. Field experience required.

ED 231 - Adolescent Human Development (3)

Traces the life span of human development from grades 5-12. Candidates will gain empathy and respect for the diversity present in the classroom through the study of physical, social, moral, psychomotor, emotional and cognitive developmental theories. Field experience required.

ED 250 - Theories of Child Development in Educational Contexts (3)

Examines behavioral, social, cognitive and biological influences on human learning and development across the life span, focusing primarily on early childhood through pre-adolescence. Content emphasizes the application of multiple theories in support of equitable classrooms. Field experience required. For Education majors and minors only.

ED 251 - Theories of Adolescent Development and Learning in Educational Contexts (3)

Examines behavioral, social, cognitive and biological influences on human learning and development across the life span, focusing primarily on grades 5-12. Content emphasizes the application of multiple theories in support of equitable classrooms. Field experience required. For Education majors and minors only.

ED 300 - Pre-Adolescent Psychology of Learning (3)

Gives future teachers deep knowledge of how people learn, focusing on children from age 3 through grade 8. Learning, motivation, intelligence, and assessment are explored through perspectives including behaviorist, constructivist, and cognitive science. Candidates use their emerging knowledge of learning theories to make developmentally sound instructional decisions, both theoretically and in concurrent field experience. For Education majors and minors only.

ED 301 - Adolescent Psychology of Learning (3)

Gives future teachers deep knowledge of how people learn, focusing on children grades 5-12. Learning, motivation, intelligence, and assessment are explored through perspectives including behaviorist, constructivist, and cognitive science. Candidates will use their emerging knowledge of learning theories to make developmentally sound instructional decisions, both theoretically and in practice, in a concurrent field experience. For Education majors and minors only.

ED 320 - Sociocultural Foundations of Education (3)

Examines relationship between schools and larger society. Analyzes the historical traditions, philosophical perspectives, and social practices interacting in American education with emphasis on culture, ethnicity, race, nationality, gender, sexual orientation, and socioeconomic status. Provides a heightened awareness of legal, curricular, and social factors necessary to help students learn equitably. Field experience required.

ED 330 - Inclusive Policies and Practices for Diverse Learners (3)

Identifies and addresses population characteristics, incidence, and general educational placement options for the different categories of exceptional learners. Assessment practices and exemplary teaching techniques are also explored for multicultural and diversity issues. Law, policy, and IEP procedures are emphasized. Field experience required.

ED 340 - Pre-Adolescent Health and Wellness for Educators (3)

This course explores factors that affect the health, safety, and well-being of children inside and outside the educational setting. Students will review main concepts of health and wellness and their impact on learning, strategies for working with families and professionals, resources for instruction, and plan integrative learning activities that promote a healthy lifestyle for all learners.

ED 341 - Foundations of Social and Emotional Development in Schools (3)

This course focuses on how positive social and emotional development (SEL) can be cultivated through promoting positive school and classroom climates and help students develop skills in self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. Presents students with the current theory underlying universal, school-based social and emotional learning (SEL) programs and considers the intersectionality between SEL and equity.

Crosslisted as: ED 501.

ED 342 - Social and Emotional Learning Programs and Practices (3)

Designed to teach students about evidence-based SEL programs and other programs schools use to promote the 5 dimensions of SEL, this course will focus on Adult SEL, helping candidates develop skills and competencies needed to facilitate and support SEL programs. Students will work with an educator in their field experience who is promoting SEL in their classroom or school and will practice implementing SEL lessons and activities with students. Field experience required.

Prerequisite: ED 341. Crosslisted as: ED 511.

ED 343 - Continuous Improvement in SEL Implementation (3)

SEL implementation requires continuous improvement approaches to help teachers and schools learn from their successes and challenges. Students will learn how to monitor and assess SEL implementation through continuous improvement cycles utilizing resources from CASELS Guide to Schoolwide SEL. Students will understand the national policy strategies around SEL and develop approaches to engaging with a diversity of stakeholders about SEL. Field experience required.

Prerequisite: ED 341. Crosslisted as: ED 512.

ED 387 - America Reads (1)

This seminar is required for students who tutor and support classrooms in local schools as part of the America Reads program. Candidates will discuss questioning strategies, ways to facilitate group work, how to deal with problems in the classroom, and learn how to interact with students and required expectations of student tutors. Fingerprinting and criminal background check required. May be repeated for credit. Course is graded P/NP.

ED 391 - One Time Course Offering (Variable)

Students engage with faculty and peers in scholarly discussion, analysis, and research-based activities related to educational topics of interest.

ED 400 - Pre-Adolescent Curriculum and Instruction (3)

The course is primarily designed to introduce future teachers to school curriculum, instruction, and assessment for students age 3 through grade 8. Candidates gain an understanding of how curriculum, instruction, and assessment are interrelated and how theory and practice must be combined to make appropriate decisions as they complete a simulated pedagogical portfolio. For Education majors and minors only.

ED 403 - Language Acquisition and Development: Assessment, Intervention and Strategies (3)

Focuses on the acquisition of language and the developmental products. Candidates will be provided with numerous effective language strategies that mediate and support learning of academic content as well as literacy. Candidates will practice using assessments and language intervention strategies designed for inclusive practice. For Education majors only.

ED 404 - School, Parent, and Community Relations (3)

Emphasizes developing knowledge, understanding, and communication skills to develop and apply the resources of communities and families to meet students' educational needs. Special attention is given to understanding both the concept of family as a social structure and the historical, cultural, legal, and social forces which shape families, schools, and communities. For junior or senior Education majors only.

ED 405 - Behavior Support: Consultative and Collaborative (3)

Analyzes and plans toward productive behavior in academic and social settings. Candidates will participate in developing support systems for behavior in the classroom (PreK-transition) by learning alternative forms of intervention as well as collaborative and consultative techniques. For Education majors only.

ED 406 - Academic Assessment: Curriculum and Instruction for Diverse Learners (3)

Candidates learn to compose an IEP for students with mild disabilities, use relevant assessment methods to identify students' instructional needs and monitor their progress, use the assessment data to inform planning and teaching, participate in field work and practice all knowledge and skills they learn in the course. For Education majors only.

ED 407 - Dual Language Education (3)

Candidates develop knowledge, skills, and dispositions for effectively teaching all learners participating in dual language (DL) programs. The course focuses on DL research, advantages and challenges of DL programs, planning, implementing and improving DL programs, DL instruction and assessment, advocating for multilingualism, and collaborating with communities.

ED 408 - Functional Assessment: Curriculum and Instruction for Diverse Learners (3)

Candidates learn to develop functional prevention and intervention assessment of students with moderate to severe disabilities, observe, sample, and analyze student behavior according to developmental cognitive, social, language, and motor domains in assessing and evaluating progress toward academic and curricular IEP goals and objectives, and understand specialized supports and technology. For Education majors only.

ED 409 - Methods and Materials for Teaching ESOL (3)

Candidate learns to select, modify, and evaluate curricular materials for individuals and groups of English as a second language learners taking into account the learners' abilities, learning rates, and styles of learning. Candidates are also given field practice time to work with ESOL individuals using the methods and materials discussed in class. For Education majors only.

ED 410 - Linguistics (3)

Examines and applies the major concepts, theories, and research related to the nature and acquisition of language as a system. This includes a focus on the components of language, including phonology, morphology, syntax, semantics, pragmatics, semiotics, discourse varieties, aspects of social and academic language, rhetorical registers, and writing conventions.

ED 411 - Assessment Practices for Teaching and Learning (3)

Examines various theories and current practices in employing discrete and holistic assessment to inform instruction and measure student learning. Formative and summative techniques in traditional and performance-based approaches, and the aggregation and disaggregation of student data to inform instructional practices in diverse classrooms are some of the topics explored. For Education majors only.

ED 414 - Children's and Adolescent Literature and Library (3)

Examines various genres of literature, pre-primary through grade 8. Includes book selection appropriate to age and interest level. The course uses literature to enrich integrated school curriculum and demonstrates techniques for increasing reading motivation and teaching through print and technological media.

ED 424 - Technology in Education (3)

Designed to help students become more proficient and effective when teaching with technology. Students will examine theory, issues, and concerns important when implementing technology and enhancing media and technology literacy; explore the impact of technology on today's schools; develop skills for integrating technology to enhance learning; and experiment with hardware and software for increased teacher productivity.

ED 425 - Intercultural and Civil Rights Education (3)

Includes the content of comparative education and global education. Emphasis on multicultural education, civil rights, student and teacher rights in the context of school law and discrimination awareness with emphasis on school applications.

ED 426 - Pre-Adolescent Classroom Relationships and Management (3)

Emphasizes proactivity, problem-solving and communication in ages 3 through grade 8 classrooms as the means for creating productive learning environments. Offers insights and strategies for working with students from diverse backgrounds and learning styles, and for establishing effective classroom relationships, procedures, and routines that encourage students' intellectual, personal, and moral development. Field experience required.

Corequisite: ED 330 or prerequisite.

ED 427 - Adolescent Classroom Relationships and Management (3)

Emphasizes proactivity, problem-solving and communication in grades 5-12 as the means for creating productive learning environments. Offers insights and practical strategies for working with students from diverse backgrounds and learning styles, and for establishing effective classroom relationships, procedures and routines that encourage students' intellectual, personal and moral development. Field experience required.

Corequisite: ED 330 or prerequisite.

ED 442 - Reading and Language Arts Methods (3)

Develops reading and language arts skills, including speaking, listening and writing from age 3 through grade 8. Emphasizes reading readiness, emergent literacy, assessment, methods, materials, recent research, and theoretically sound practices for improvement and instruction of reading and language arts skills. All coursework is evenly distributed between age 3 and grade 8. Field experience required. For Education majors only.

ED 445 - Mathematics and Science Methods (3)

Provides opportunities for candidates to explore trends, practices, materials, and resources for teaching mathematics and science to children ages 3 through grade 8. The course primarily includes content-specific methods, materials, and assessments appropriate to an integrated elementary curriculum. For Education majors only.

ED 447 - Fostering Creativity in the Classroom (3)

Pre-service teachers explore theoretical underpinnings and practice of integrating creativity into classrooms at all levels. Building from neuroscience and educational theorists, candidates explore readings, dialogues, and experimentation with creative methods and materials that can be implemented across disciplines. From music, visual arts, movement, and creative writing to invention, students will learn approaches to build divergent/metaphoric thinking. For Education majors only.

ED 450 - Models of Teaching and Literacy Development (3)

Introduces candidates to basic principles of curriculum planning and a variety of instructional models. Current literacy theory and practice primarily for grades 5-12 classrooms are explored. Candidates acquire various methods for integrating literacy into content-area planning and instruction in ethnically and linguistically diverse classrooms. Field experience required. For Education majors and minors only.

ED 452 - Content Methods: Language Arts (3)

Candidates learn content-specific instructional and assessment methods to plan, teach, and assess lessons that facilitate learning of important language arts related knowledge, skills, and dispositions. Coursework will primarily address grades 5-12. For Education majors and minors only.

ED 453 - Content Methods: Math (3)

Candidates learn content-specific instructional and assessment methods to plan, teach, and assess lessons that facilitate learning of important math related knowledge, skills, and dispositions. Coursework will primarily address grades 5-12. For Education majors only.

ED 454 - Content Methods: World Language (3)

Candidates learn content-specific instructional and assessment methods to plan, teach, and assess lessons that facilitate learning of important world language knowledge, skills, and dispositions. Coursework will primarily address grades 5-12. For Education majors only.

ED 456 - Content Methods: Social Studies (3)

Candidates learn content-specific instructional and assessment methods to plan, teach, and assess lessons that facilitate learning of important social studies knowledge, skills, and dispositions. Coursework will primarily address grades 5-12. For Education majors only.

ED 457 - Content Methods: Science (3)

Candidates learn content-specific instructional and assessment methods to plan, teach, and assess lessons that facilitate learning of important science knowledge, skills, and dispositions. Coursework will primarily address grades 5-12. For Education majors only.

ED 464 - Reading Practicum P-12 (3)

Practicum is a supervised field experience that provides opportunities for candidates to meet professional competencies as recommended by the state and national organizations. Prior approval by Reading Faculty Advisor. For Education majors only. Grade of IP is permitted.

ED 466 - Practicum (Credit arranged.)

Opportunity to blend study and practice in a specialized area such as a field placement. Regardless of setting, the practicum is under the direction of a university instructor. Candidate is expected to develop a proposal for study which must be approved by instructor, assistant dean, and the dean. May be repeated up to 9 hours. Grade of IP is permitted.

ED 468 - Special Education Practicum P-12 (3)

Practicum is a supervised field experience that provides opportunities for candidates to meet professional competencies as recommended by the state and national organizations. Grade of IP is permitted.

ED 469 - ESOL Practicum P-12 (3)

ED 469/569 Practicum is a supervised field experience that provides opportunities for candidates to meet professional competencies as recommended by the state and national organizations. For Education majors only. Grade of IP is permitted.

ED 470 - Multiple Subjects (Elementary) Student Teaching (3)

Provides student teachers opportunities to apply professional and pedagogical principles in a classroom and school community. Student teachers assume major responsibilities on a part-time basis of the wide range of teaching duties under the direction of qualified personnel and will produce a Unit Plan portfolio demonstrating acquired professional knowledge, skills, and dispositions. Grade of IP is permitted.

ED 471 - Single-Subject (Secondary) Student Teaching (3)

Provides student teachers opportunities to apply professional and pedagogical principles in a classroom and school community. Student teachers assume major responsibilities of the wide range of teaching duties under the direction of qualified personnel and produce a Unit Plan portfolio demonstrating acquired professional knowledge, skills, and dispositions. Education majors only. Grade of IP is permitted.

ED 472 - Multiple Subjects (Elementary) Student Teaching (3)

Provides student teachers opportunities to apply professional and pedagogical principles in a classroom and school community. Student teachers assume major responsibilities on a full-time basis of the wide range of teaching duties under the direction of qualified personnel and will produce an edTPA portfolio demonstrating acquired professional knowledge, skills, and dispositions. Grade of IP is permitted.

Prerequisite: Passing score on relevant licensure exam or other state approved measure of content knowledge.

ED 473 - Single-Subject (Secondary) Student Teaching (3)

Provides student teachers opportunities to apply professional and pedagogical principles in a classroom and school community. Student teachers assume major responsibilities on a full time basis of the wide range of teaching duties under the direction of qualified personnel and will produce an edTPA portfolio demonstrating acquired professional knowledge, skills, and dispositions. For Education majors only. Grade of IP is permitted.

Prerequisite: Passing score on relevant licensure exam or other state approved measure of content knowledge.

ED 475 - Single-Subject (Secondary) Student Teaching: Advanced (3)

Student teachers continue to apply professional and pedagogical principles in a classroom and school community. Student teachers assume full-time teaching responsibilities for an extended period of time under the direction of qualified personnel. An edTPA portfolio is required. For Education majors only. Grade of IP is permitted.

ED 476 - Multiple Subjects (Elementary) Student Teaching: Advanced (3)

Student teachers continue to apply professional and pedagogical principles in a classroom and school community. Student teachers assume full-time teaching responsibilities for an extended period of time under the direction of qualified personnel. An edTPA portfolio is required. Grade of IP is permitted.

ED 480 - Elements of Reading P-12 (3)

Studies components of the reading process and the various operations performed while reading. Candidates develop empathy and respect for the learner of reading while exploring the stages of reading and the particular operations and strategies necessary in the ability to be a reader. Required for reading endorsement. For Education majors only.

Prerequisite: ED 442 or ED 450, permission of instructor.

ED 481 - Language, Literacy & Culture (3)

Introduces candidates to the broad areas of language and culture relevant to P-12 classrooms. Introduces theories, materials, and methods for reading/language instruction for diverse classrooms. Candidates develop empathy and respect for students with language and cultural differences. Required for reading and ESOL endorsement. Field experience required.

ED 482 - Content Area Literacy (3)

Reviews current theory, knowledge and practice of reading and written communication for students in grades 4-12. Integrates pedagogical knowledge of literacy development of theory into practice. Candidates learn methods for facilitating the use of reading and writing skills in the content area classroom. An emphasis is placed on teaching for diversity and developing empathy and respect for all learners.

ED 483 - Diagnosis and Instruction for Literacy Achievement P-12 (3)

Studies theories, strategies, assessment methods, case studies of assessment, diagnosis, and instruction for literacy achievement in P-12 classrooms. Focuses on appropriate literacy practices for growth in individual learners' who excel in, and struggle with literacy. Required for reading endorsement. Field experience required. For Education majors only.

ED 484 - Administration and Evaluation of Reading Programs (3)

Provides understanding of reading program management as it applies to the development, implementation, and improvement cycle for increased student reading achievement. Students learn to integrate into practice theoretical content knowledge of reading, knowledge of and rights of diverse learners, and pedagogical knowledge of reading. This is the culminating course of the Reading Endorsement.

ED 486 - Single-Subject (Secondary) Seminar for Student Teachers (3)

Provides student teachers opportunities to examine accomplishments and share concerns regarding their teaching performance primarily in grades 5-12 classrooms. Student teachers will acquire information about transition to the profession, professional development plans, and information about initial and continuing licensure. For Education majors only.

ED 487 - Multiple Subjects (Elementary) Seminar for Student Teachers (3)

Provides student teachers opportunities to examine accomplishments and share concerns regarding their teaching performance primarily in age 3 through grade 8 classrooms through participation in group discussion. Student teachers will acquire information about transition to the profession, professional development plans, and information about licensure. For Education majors only.

ED 490 - Directed Study (Variable)

Credit arranged by student in cooperation with faculty. Grade of IP is permitted.

ED 491 - One Time Course Offering (Variable)

Students engage with faculty and peers in scholarly discussion, analysis, and research-based activities related to educational topics of interest.

ED 492 - One Time Course Offering (Variable)

Students engage with faculty and peers in scholarly discussion, analysis, and research-based activities related to educational topics of interest.

ED 495 - Workshop (Variable)

Students work interactively and collaboratively with faculty and peers to deepen professional knowledge, skills, and dispositions related to educational topics of interest.

ED 496 - Workshop (Variable)

Students work interactively and collaboratively with faculty and peers to deepen professional knowledge, skills, and dispositions related to educational topics of interest.

ED 499 - Senior Thesis (Variable)

Research, study, or original work under the direction of a faculty mentor, leading to a scholarly thesis document with a public presentation of results. Requires approval of thesis director, department chair, dean, and the director of the honors program, when appropriate. Grade of IP is permitted.

Prerequisite: Senior standing; 3.0 G.P.A. in the thesis area or good standing in the honors program.

Graduate Courses**ED 500 - PACE Clinical Practice Seminar (3)**

Provides early-career teachers opportunities to examine accomplishments and share concerns regarding their teaching performance in the classrooms through participation in various assignments, such as group discussion, video projects, and paper reflections. Teachers will acquire information about professional transitions, portfolio creation and professional development plans.

ED 501 - Foundations of Social and Emotional Development in Schools (3)

This course focuses on how positive social and emotional development (SEL) can be cultivated through promoting positive school and classroom climates and help students develop skills in self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. Presents students with the current theory underlying universal, school-based social and emotional learning (SEL) programs and considers the intersectionality between SEL and equity.

Crosslisted as: ED 341.

ED 502 - Policies and Practices for Diverse Learners (3)

Identifies and addresses population characteristics, incidence, and general educational placement options for the different categories of exceptional learners. Assessment practices and exemplary teaching techniques are also explored for multicultural and diversity issues. Law, policy, and IEP procedures are emphasized. Field experience required.

ED 503 - Language Acquisition and Development: Assessment, Intervention and Strategies (3)

Focuses on the acquisition of language and the developmental products. Candidates will be provided with numerous effective language strategies that mediate and support learning of academic content as well as literacy. Candidates will practice using assessments and language intervention strategies designed for inclusive practice.

ED 504 - School, Parent, and Community Relations (3)

Emphasizes developing knowledge, understanding, and communication skills to discover and apply the resources of communities and families to meet the students' educational needs. Special attention is given to understanding the concept of "family" as a social structure and to appreciating the historical, cultural, and social forces which shape families, school, and community.

ED 505 - Behavior Support: Consultative and Collaborative (3)

Analyzes and plans toward productive behavior in academic and social settings. Candidates will participate in developing support systems for behavior in the classroom (PreK-transition) by learning alternative forms of intervention as well as collaborative and consultative techniques.

ED 506 - Academic Assessments: Curriculum and Instruction for Diverse Learners (3)

Candidates learn to compose an IEP for students with mild disabilities, use relevant assessment methods to identify students' instructional needs, use the assessment data to inform planning and teaching, apply their assessment data to field cases or to case studies, and learn to monitor students' progress.

ED 507 - Dual Language Education (3)

Candidates develop knowledge, skills, and dispositions for effectively teaching all learners participating in dual language (DL) programs. The course focuses on DL research, advantages and challenges of DL programs, planning, implementing and improving DL programs, DL instruction and assessment, advocating for multilingualism, and collaborating with communities.

ED 508 - Functional Assessment: Curriculum and Instruction for Diverse Learners (3)

Candidates learn to develop functional prevention and intervention assessment of students with moderate to severe disabilities, observe, sample, and analyze students behavior according to developmental cognitive, social, language, and motor domains in assessing and evaluating progress toward academic and curricular IEP, and understand specialized supports and technology.

ED 509 - Methods and Materials for Teaching ESOL (3)

Candidate learns to select, modify, and evaluate curricular materials for individuals and groups of English as a second language learners taking into account the learners' abilities, learning rates, and styles of learning. Candidates are also given field practice time to work with ESOL individuals using the methods and materials discussed in class.

ED 510 - Linguistics (3)

Examines and applies the major concepts, theories, and research related to the nature and acquisition of language as a system. This includes a focus on the components of language, including phonology, morphology, syntax, semantics, pragmatics, semiotics, discourse varieties, aspects of social and academic language, rhetorical registers, and writing conventions.

ED 511 - Social and Emotional Learning Programs and Practices (3)

This course is designed to teach students about evidence-based SEL programs and other programs schools use to promote the 5 dimensions of SEL. It will focus on Adult SEL, helping candidates develop skills and competencies needed to facilitate and support SEL programs. Students will work with an educator in their field experience who is promoting SEL in their classroom or school and will practice implementing SEL lessons and activities with students.

Prerequisite: ED 501. Crosslisted as: ED 342.

ED 512 - Continuous Improvement in SEL Implementation (3)

SEL implementation requires continuous improvement approaches to help teachers and schools learn from their successes and challenges. Students will learn how to monitor and assess SEL implementation through continuous improvement cycles utilizing resources from CASELS Guide to Schoolwide SEL, understand the national policy strategies around SEL and develop approaches to engaging with a diversity of stakeholders about SEL. Students carry out an action-research project.

Prerequisite: ED 501. Crosslisted as: ED 343.

ED 514 - Children's and Adolescent Literature and Library (3)

Examines various genres of literature, pre-primary through grade 8. Includes book selection appropriate to age and interest level. The course uses literature to enrich integrated school curriculum, and demonstrates techniques for increasing reading motivation and teaching through print and technological media.

ED 515 - Readings in Education Administration (Credit arranged.)

Opportunity to create, under the guidance of an instructor, an in-depth, selective education administration bibliography to enrich personal knowledge and to augment professional career goals. Course includes reading logs and reflective journal assignments and for three or more credits a literature review is required. May be taken as a standard class or as an independent study.

ED 516 - Readings in Catholic Education (Credit arranged.)

An exposure to the core Church documents concerning Catholic education beginning with Vatican II. In addition to reading in-depth research related to Catholic education, course includes reading logs and reflective journal assignments and for three or more credits a literature review is required. May be taken as a standard class or as an independent study.

ED 517 - Catholic Educator Seminar (3)

Explores topics of teaching in learning through the lens of the Catholic faith tradition and the responsibilities of Catholic school teachers.

ED 518 - Life Span Personal and Professional Development (3)

Provides early career Catholic School Teachers opportunities to reflect on what it means to be a Catholic Educator and how to model and teach the values of the faith. Teachers receive support while they explore personal strengths, share teaching experiences, and learn and reflect on teaching practices while developing a philosophy of education that integrates Catholic values.

ED 519 - Dimensions of Adult Learning (3)

This course will introduce principles of adult learning and teaching to higher education instructors. Through an introduction to philosophy education theories of learning behavior, models of teaching, strategies of critical thinking and meta-cognition, and purposes and methods for assessment of learning, candidates will formulate their knowledge base relative to their goals as higher education instructors.

ED 520 - History, Organization, and Student Personnel in Higher Education (3)

A survey of contemporary and historical perspectives of the higher education and student affairs profession, how it fits into the larger structure of higher education, public and private, how institutions themselves have developed over time, including the Holy Cross tradition, and job responsibilities within this context.

ED 521 - Student Career Development and Planning (3)

A survey of theories, practices, and trends in formal and informal student support involving career development. Emphasis is on developing skills for assisting individuals and groups in career development and planning, as well as an examination of issues critical to one's professional growth and life-long learning as professionals working in higher education and student affairs.

ED 522 - Legal Issues in Higher Education (3)

An examination of the legal foundations and professional ethics that govern higher education institutions, particularly with respect to student-institution relationships, human resources, state and constitutional rights and responsibilities, differences between public and private institutions, church and state issues, due process, academic conduct, and freedom of expression.

ED 523 - Developmental Theory, Identity & College Population (3)

A survey of student development theory (including socio-emotional, spiritual, physical, and cognitive aspect/principles), the diverse profile of the contemporary college student, multicultural student populations, student identity formation and expression, and competencies related to student affairs practice.

ED 524 - Technology in Education (3)

Designed to help students become more proficient and effective when teaching with technology. Students will examine theory, issues, and concerns important when implementing technology and enhancing media and technology literacy; explore the impact of technology on today's schools; develop skills for integrating technology to enhance learning; and experiment with hardware and software for increased teacher productivity.

ED 525 - Intercultural and Civil Rights Education (3)

Includes the content of comparative education and global education. Emphasis on multicultural education, civil rights, student and teacher rights in the context of school law and discrimination awareness with emphasis on school applications.

ED 526 - Methods of Program Evaluation and Assessment (3)

An examination of the nature of program evaluation with specific implications of assessment in higher education. Review of both quantitative and qualitative methods of research as they relate to program evaluation and data-driven decision making, providing specific links to theory and practice.

ED 527 - Applied Studies in Higher Education and Student Affairs (Variable)

An individualized, applied experience providing focuses exploration of a specific area or practice in higher education and student affairs. Arranged with the program director, the applied studies experience may be a practicum, site-based project, or inquiry-based project that integrates program theories, skills, and practices. May be taken once for either 3 or 6 credits, or twice for 3 credits.

ED 528 - Foundations of Counseling and Student Affairs (3)

Provides a working knowledge of counseling issues and techniques to address the needs of the student within the realm of higher education. Introduction of mental health disorders and exposure to preventative and communication strategies to assist college-aged students.

ED 529 - Summer Learning (1)

Provides candidates with opportunities to apply professional and pedagogical knowledge in a tutoring setting. Candidates design lessons and assessments used with individual students or small groups of students. The course includes seminars on current topics in education that will assist candidates as they move into P-12 classroom experiences.

ED 530 - Educating for Sociocultural Diversity and Equity in Education (3)

Examines the relationship between schools and the larger society and analyzes the historical traditions, philosophical perspectives, and social practices interacting in American education. Emphasis on a variety of topics including culture, ethnicity, race, nationality, gender, sexual orientation, and socioeconomic status. Provides students a heightened awareness or legal, curricular, and social factors necessary to help all students learn equitably.

ED 531 - Principles of Learning and Development for Equitable Classrooms (3)

Examines perspectives on human learning and development (behavioral, sociocultural, cognitive, biological) with a focus on application of research and theory. Focuses on inclusive pedagogical principles and demonstrates how theories of learning and development inform effective, equitable, and differentiated approaches to instruction. Field experience required.

ED 532 - Assessment and Evaluation in Inclusive Classrooms (3)

Candidates explore current assessment and evaluation methods used in diverse P-12 classrooms. Using criteria from multiple perspectives, candidates will study and create traditional and performance-based strategies for analyzing and reporting individual and group performances.

ED 533 - Methods of Teaching and Learning (3)

Candidates learn content-specific instructional and assessment methods and plan, teach, and assess lessons that facilitate learning of important knowledge, skills, and dispositions. Coursework will primarily address teaching children ages 3 through grade 8.

ED 534 - Classroom Management for Inclusive Learning Communities (3)

Promotes the development of theoretical frameworks for educational practices encouraging intellectual, personal, and moral development of students from diverse backgrounds. Provides practical and cognitive strategies for constructing social order, building self-esteem, encouraging positive social interaction, engaging actively in learning, resolving conflict, and establishing effective and equitable classroom procedures and routines. Strategies address complex needs of students in inclusive learning communities.

ED 535 - Literacy Across Curriculum (3)

Emphasizes how children develop various types of literacy. Theory of development of literacies will be emphasized with application of skills in the classroom. The course includes an emphasis on reading readiness, emergent literacy, assessment methods, recent research and theoretically sound practice for improvement of reading and language arts.

ED 536 - Student Teaching Seminar (2)

Provides student teachers opportunities to examine accomplishments and share concerns regarding their teaching performance in the classrooms through participation in group discussion. Student teachers will acquire information about transition to profession, professional development plans, and information about licensure.

ED 537 - Research in Schools (3)

Examines educational research (both qualitative and quantitative) and statistical methods in light of current research on effective teaching, school practices, and data-driven decision making. Candidates locate, read, and critique research and

develop a research proposal relative to important classroom and school issues which will be applied when completing their culminating research project in the research class following this course.

ED 538 - Master of Arts in Teaching Capstone Project (3)

Candidates will develop a research project that applies and integrates research course content, professional knowledge, and the School of Education's shared values and is intended to translate theory and research into practice. The project is completed independently in consultation with a project advisor. Dissemination of research will include a written paper and an oral component. Grade of IP is permitted.

ED 539 - Institutional Research, Assessment and Evaluation in Higher Education and Student Affairs (3)

This course prepares students to engage with qualitative, quantitative, and mixed-methods research and to apply methods to inform their work in higher education and student affairs settings. Students will explore and demonstrate the ability to access, analyze, and apply information to problems associated with institutions of higher education and to improve higher education policy and practice by making data-driven decisions.

ED 540 - Student Teaching (3)

Provides student teachers opportunities to apply professional and pedagogical principles in a classroom and school community. Student teachers assume major responsibilities on a part time basis of the wide range of teaching duties under the direction of qualified personnel and will produce a Unit Plan portfolio demonstrating acquired professional knowledge, skills, and dispositions. Grade of IP is permitted. Fee: \$320

ED 541 - Student Teaching (3)

Provides student teachers opportunities to apply professional and pedagogical principles in a classroom and school community. Student teachers assume major responsibilities on a full-time basis of the wide range of teaching duties under the direction of qualified personnel and will produce an edTPA portfolio demonstrating acquired professional knowledge, skills, and dispositions. Grade of IP is permitted.

ED 542 - Student Teaching - Advanced (3)

Student teachers continue to apply professional and pedagogical principles in a classroom and school community. Student teachers assume full time teaching responsibilities for an extended period of time under the direction of qualified personnel. An edTPA portfolio is required. Grade of IP is permitted.

ED 544 - Human Resource Development and Management (3)

Explores interpersonal dynamics and those performance competencies that relate to human resource management in early childhood, elementary, middle school, and high school. Issues addressed range from hiring, supervising, and evaluating of personnel to personnel processes and systems, including empowering stakeholders, staff development, labor relations and collective negotiations, school-community relationships and partnerships.

ED 545 - Leadership and Organizational Change (3)

Focuses on perspectives and skills in leading and navigating schools through multi-level and systemic change. Change theory, the building of learning communities, and transformational leadership represent the core knowledge bases upon which candidates build their own mental models of administrative leadership. The course emphasizes using a local school as a center of inquiry and change.

ED 546 - Policy, Ethics, and the Law (3)

Examines legal foundation of educational policy focusing on constitutional and statutory provisions governing schools. Analyses, through selected case studies at various levels of schooling, research, trends, and emerging issues in the politics of educational governance equip the candidate with skills and understandings in interacting with local school systems in ethically responsible ways.

ED 547 - Resource Allocation, Finance, and Management (3)

This course provides skills and techniques for effectively and efficiently managing and evaluating resource allocation and finance at various levels of schooling. It includes an analysis of current national, state and district sources of revenue and also the identification and development of alternative revenue sources to support local schools.

ED 548 - Supervision for Instructional Improvement (3)

Familiarizes candidates with the benefits and challenges of supervision and coaching for instructional improvement. Theories of planning, analysis, and evaluation in conjunction with supervision as well as models of supervision will be explored and practiced. The relationship of the supervisor to curriculum development, staff development, and teacher evaluation will also be addressed.

ED 549 - Preliminary Administrator License (Pre-AL) Leadership Practicum (3)

This capstone course provides a partnership with the candidate, university supervisor, and field-based mentor-administrator. Candidates are required to demonstrate and document their skills, knowledge and experiences gained from their Pre-AL coursework and practicum activities. Candidates create a portfolio that documents successful completion of national administration standards to be assessed at the end of the practicum. Grade of IP is permitted.

ED 550 - Professional Growth and Development (3)

An examination of issues critical to educators' professional growth and life-long learning. Candidates make explicit their values and goals as they relate to pedagogical approaches, school and student assessment, technology use both in and out of the classroom, and other issues connected to educators' professional lives. This course provides a foundation for professional inquiry and research throughout the M.Ed. program.

ED 551 - Social and Cultural Foundations (3)

Examines social, cultural, and legal forces that affect schools and the experiences of students and teachers. This course encourages practitioners to value, embrace, and affirm the cultural, racial, class, and gender diversity of both their local and global communities and will help them to design and implement instructional practices that empower all students.

ED 552 - Leadership for Sustaining the Vision (3)

Assess your personal leadership attributes and craft a personal leadership development plan that leads to building an achievement-oriented district. Consider research which informs visions of current and future public and private schooling in a diverse and democratic society. Practice the art and science of leading toward and sustaining a vision through nurturing relationships, motivating stakeholders, and collaborating with others.

ED 553 - Leadership for Instructional Improvement (3)

Examine best practices and sound educational research that lead to achievement for all students. Learn strategies to create a culture of high expectations with academic and behavioral foci through leadership practices, staff development, policy development, and the allocation of time, funds, and human resources.

ED 554 - Leadership for Effective Data Driven Decision Making (3)

Explore the uses of data-based research and technology in leadership, business, and student learning in an era of information and communication expansion. Discern meaningful uses of technology and data to advance learning and organizational development. Explore the data-based management principles related to finance and other operational services such as nutrition, transportation, maintenance, and communication.

ED 555 - Teacher as Researcher (3)

Introduces research as a means to improve instructional and school-based decision-making. Various qualitative research techniques will be applied to classroom or school observation. As an extension of reflective practice, candidates will be expected to produce a qualitative research-based proposal.

ED 556 - Effective Leadership and Management in the Socio-Political Context (3)

Strategic policy development and effective leadership and management strategies can advance educational services for all students. Examine collaborative best practices with internal and external stakeholders including the boards of education, legislature, community, business, religious and service organization leaders, staff, students and families to build broad-based support for educational work in a modern, diverse community. Explores effective strategies for media relations.

ED 557 - Ethical Leadership and Moral Imperative for Inclusive Practice (3)

Explore ethical decision-making, hone political understandings and skills, learn to capitalize on diversity through inclusive practices, and develop a personal mantle of moral responsibility. Through case methodology, learn to act with integrity and justice while helping every student achieve.

ED 558 - Educational Research for Improved Student Learning (3)

Examines educational research and statistical methods in light of current research on effective teaching and schooling practices. The course is developed to enhance practicing educators' understanding and application of research findings in the classroom. Candidates will be expected to develop a proposal which applies course knowledge.

ED 559 - Professional Administrator License (Pro-AL) Leadership Practicum (3)

This practicum, conducted at the district level, involves field work to provide opportunities to participate in district leadership decision-making, policy design and implementation, uses of data and technology in communication, human resources, building positive community relations, and conflict management. Through action research, participants synthesize knowledge in these areas and enhance skills and dispositions. Grade of IP is permitted.

ED 560 - Content Methods: Language Arts (3)

Candidates learn content-specific instructional and assessment methods to plan, teach, and assess lessons that facilitate learning of important language arts related knowledge, skills, and dispositions. Coursework will primarily address grades 5-12.

ED 561 - Content Methods: Math (3)

Candidates learn content-specific instructional and assessment methods to plan, teach, and assess lessons that facilitate learning of important math related knowledge, skills, and dispositions. Coursework will primarily address grades 5-12.

ED 562 - Professional Development Process: Portfolio (3)

Serves as a capstone experience in which students produce a professional portfolio demonstrating skills related to the 10 standards for continuing licensure in Oregon. Simultaneously candidates develop a continuing professional development plan. Grade of IP is permitted.

ED 563 - Master of Arts Capstone Project (3)

Students design and conduct a classroom, school, or community-based research project written in formal academic style that integrates the professional knowledge and the School of Education's shared values in the non-thesis graduate program. The project is completed independently in consultation with a project advisor. Candidates must be eligible to graduate in the subsequent academic term. Grade of IP is permitted.

ED 563X - MA Capstone in Progress (0)

Registration for any MA candidate who has received the grade of IP in ED 563. May be repeated. Fee: \$50.

ED 564 - Reading Practicum P-12 (3)

Practicum is a supervised field experience that provides opportunities for students to meet professional competencies as recommended by the state and national organizations. Prior approval by Reading Faculty Advisor. Grade of IP is permitted. Fee \$55 per credit.

ED 565 - Teacher Internship (3)

The course provides experiences with intern teaching in a P-12 school classroom under the direction of a mentor and a University supervisor. This course may be repeated. Grade of IP is permitted.

ED 566 - Practicum P-12 (Credit arranged.)

Opportunity to fuse theory and practice in a specialized area in a field placement. The practicum is under the direction of a university instructor. Candidates are expected to demonstrate acquired knowledge, skills and dispositions related to the specialized area of study. A professional portfolio is required. The course may be repeated up to 9 hours. Grade of IP is permitted. Fee: \$55 per credit.

ED 567 - LCA Practicum P-12 (Credit arranged.)

Opportunity to fuse theory and practice in a specialized area in a field placement. The practicum is under the direction of a university instructor. Candidates are expected to demonstrate acquired knowledge, skills, and dispositions related to the specialized area of study. Professional portfolio required. This course may be repeated up to 9 hours. Grade of IP is permitted. Fee: \$55 per credit.

ED 568 - Special Education Practicum P-12 (3)

Practicum is a supervised field experience that provides opportunities for students to meet professional competencies as recommended by the state and national organizations. Grade of IP is permitted. Fee \$55 per credit.

ED 569 - ESOL Practicum P-12 (3)

Practicum is a supervised field experience that provides opportunities for students to meet professional competencies as recommended by the state and national organizations. Grade of IP is permitted. Fee: \$55 per credit.

ED 570 - Curriculum Development and Implementation (3)

Examines the spectrum of curriculum reform issues and tensions confronting today's schools and classroom. Candidates will develop a critical perspective that reflects the complexity of political, social, and pedagogical pressures and trends impacting teaching and learning.

ED 571 - Enhancing Classroom Relationships (3)

Offers practical classroom-based strategies for ensuring active engagement in learning positive social interactions, and responsible contributions to the classroom as learning community. Candidates examine and apply new techniques in their classrooms and assess them as members of a peer critical learning group. Helps candidates formulate a theoretical or research-based foundation that will guide them in developing classroom relationships and management.

ED 572 - Content Methods: World Language (3)

Candidates learn content-specific instructional and assessment methods to plan, teach, and assess lessons that facilitate learning of important world language knowledge, skills, and dispositions. Coursework will primarily address grades 5-12.

ED 573 - Quality Teaching and Peer Consultation (3)

Introduces systematic and objective processes for identifying, analyzing, and refining effective instructional practices providing the practitioner with skills and experiences in observing peers as well as an understanding of his or her teaching actions.

ED 574 - Models of Leadership (3)

This course explores how individuals across multiple roles in schools can collaboratively support instructional leadership. Models of leadership – from those rooted in positional authority to those that emerge from participatory decision-making – are examined. These models serve as frameworks that professionals can use to assess and improve their personal leadership within the structures and norms demonstrated within school settings.

ED 575 - Transforming Schools and Systemic Change (3)

Identifies and analyzes current educational reform initiatives and evaluates them based on theoretical and research-based (Best Practices) models of change. Candidates are required to engage in formal inquiry and dialogue about the challenges confronting their own schools as dynamic units of change. Key concepts include school growth and renewal, effective schooling, and professionalism.

ED 576 - Content Methods: Social Studies (3)

Candidates learn content-specific instructional and assessment methods to plan, teach, and assess lessons that facilitate learning of important social studies knowledge, skills, and dispositions. Coursework will primarily address grades 5-12.

ED 577 - Content Methods: Science (3)

Candidates learn content-specific instructional and assessment methods to plan, teach, and assess lessons that facilitate learning of important science knowledge, skills, and dispositions. Coursework will primarily address grades 5-12.

ED 578 - Improving the Instructional Process (3)

Provides insights into models of teaching and learning with focus on distinct learning activities, environment, evaluation, and assessment. Emphasis is placed on expanding personal repertoires to become competent in the selection and use of appropriate and effective teaching strategies.

ED 579 - Gateway to Neuroeducation Studies (3)

Neuroeducation is a translational field of study that utilizes literature from various disciplines. At the University of Portland, this unique program utilizes research from cognitive psychology, neuroscience, and language to inform educational practice. This course is designed to be taken online as a gateway to other neuroeducation studies.

Prerequisite: Graduate non-matriculating students only.

ED 580 - Elements of Reading P-12 (3)

Studies components of the reading process and the various operations performed while reading. Candidates develop empathy and respect for the learner of reading while exploring the stages of reading and the particular operations and strategies necessary in the ability to be a reader. Required for reading endorsement.

ED 581 - Language, Literacy & Culture (3)

Introduces candidates to the broad areas of language and culture relevant to P-12 classrooms. Introduces theories, materials, and methods for reading/language instruction for diverse classrooms. Candidates develop empathy and respect for students with language and cultural differences. Required for reading and ESOL endorsement. Field experience required.

ED 582 - Content Area Literacy (3)

Reviews current theory, knowledge, and practice of reading and written communication for students in grades 4-12. Integrates pedagogical knowledge of literacy development of theory into practice. Candidates learn methods for facilitating the use of reading and writing skills in the content area classroom. An emphasis is placed on teaching for diversity and developing empathy and respect for all learners.

ED 583 - Diagnosis and Instruction for Literacy Achievement P-12 (3)

Studies theories, strategies, assessment methods, case studies of assessment, diagnosis, and instruction for literacy achievement in P-12 classrooms. Focuses on appropriate literacy practices for growth in individual learners' who excel in, and struggle with literacy. Required for reading endorsement. Field experience required.

ED 584 - Administration and Evaluation of Reading Programs (3)

Provides understanding of reading program management as it applies to the development, implementation, and improvement cycle for increased student reading achievement. Students learn to integrate into practice theoretical content knowledge of reading, knowledge of and rights of diverse learners, and pedagogical knowledge of reading. This is the culminating course of the Reading Endorsement.

ED 585 - Foundations of Cognitive Processes in Learning (3)

This course provides an historical as well as socio-political review of the neuroscience that includes a shift in the western paradigm bridging cognitive processes of the mind with neuroscience. Such a paradigm shift is applied to how educators might think differently about these types of cognitive processes.

ED 586 - Neuroscience and Learning (3)

Research on the brain and the mind covers several different disciplines, specifically those of sciences and psychology. This course focuses on the translation of the brain research to understanding the human mind in education. Emphasis is on the functional way meaning is acquired through the brain as an organ of complex systems.

ED 587 - Neurobiological Aspects of Learning (3)

This course defines neurobiological learning, applies the knowledge to assessment and treatment for individuals with learning differences, and utilizes knowledge about language for higher order thinking and improved literacy. Numerous case studies for practice with applying cognitive psychology, language, and neuroscience to diverse learners' needs will be provided across disabilities.

ED 588 - Neuroeducation: A Cultural-Linguistic Translation (3)

Emphasis will be on how educators can improve learning for better literacy of all students. Participants will be given ample opportunities to practice strategies and to explore case studies.

ED 589 - Translational Studies and Research in Neuroeducation (3)

Participants are expected to spend a minimum of 45 self-managed, but supervised, hours in an activity that promotes their development and learning as neuroeducators.

Prerequisite: ED 585, ED 586, ED 587, ED 588 and ED 593, or permission of instructor.

ED 590 - Directed Study (Variable)

Credit arranged by student in cooperation with faculty. Grade of IP is permitted.

ED 591 - One Time Course Offering (Variable)

Students engage with faculty and peers in scholarly discussion, analysis, and research-based activities related to educational topics of interest.

ED 592 - One Time Course Offering (Variable)

Students engage with faculty and peers in scholarly discussion, analysis, and research-based activities related to educational topics of interest.

ED 593 - Readings and Topics in Neuroscience and Education (3)

This course is team taught by neuroscientists with a particular expertise in a topic and educator who translates the topical content to applications. A particular topic and/or related issues to a topic are explored with students through readings, discussions, and reflections. Topics vary each semester. May be repeated for credit.

Prerequisite: Permission of instructor.

ED 595 - Workshop (Variable)

Students work interactively and collaboratively with faculty and peers to deepen professional knowledge, skills, and dispositions related to educational topics of interest.

ED 596 - Workshop (Variable)

Students work interactively and collaboratively with faculty and peers to deepen professional knowledge, skills, and dispositions related to educational topics of interest.

ED 598 - MED Capstone Project (3)

Candidates design and conduct a classroom, school, or community-based research project written in formal academic style that integrates professional knowledge and the School of Education's shared values in the non-thesis graduate program. The project is completed independently in consultation with a project advisor. Candidates must be eligible to graduate in the subsequent academic term. Grade of IP is permitted.

ED 598X - MEd Capstone in Progress (0)

Registration for any MEd candidate who has received the grade of IP in ED 598. May be repeated. Fee: \$50.

ED 599 - Thesis (Variable)

Candidates develop a research thesis with a major professor and two other committee members for the master of arts degree. Grade of IP is permitted.

ED 599X - Thesis in Progress (0)

Registration for any candidate who has received the grade of IP in ED 599 is required while the thesis is in progress. Fee: \$50.

ED 600 - Introduction to Doctoral Research (3)

Candidates review basic issues in quantitative and qualitative research design. Basic computer skills are reviewed relative to research data collection and analysis. Five-chapter dissertation design is presented. Candidates apply library skills to complete a literature review.

ED 601 - Advanced Qualitative Research (3)

This course examines the theory and practice of qualitative research design and analysis through in-depth study of descriptive and interpretive research methods. Standards for rigorous and ethical qualitative research are applied across methodological approaches to critique research design and to evaluate the credibility of findings. This course supports prospectus and dissertation work.

ED 602 - Advanced Quantitative Research (3)

This course examines principles and application of advanced quantitative parametric and non-parametric statistical analysis as used with educational research. Course content includes examination of appropriate quantitative research designs, use of statistical software package(s) such as SPSS to analyze data, understanding hypothesis testing and assumptions supporting each test of significance, and instrument design. This course supports prospectus and dissertation work.

ED 603 - Research for Evaluation and Action (3)

This course examines the theory and practice of evaluation and action research methodologies. Develops skills to critique program evaluation designs, instruments, analysis, and reports in applied settings. Examine findings in relation to the data and to assess their influence on individual and organizational development. Approaches to strengthen evaluation and research capacity within a collaborative group or organization are addressed.

ED 604 - EdD Literature Review in Progress (0)

Registration to facilitate library access for second-year EdD candidates preparing for the Qualifying Paper. This course is only for candidates who are not otherwise enrolled in Fall or Spring courses. Approval of program counselor required. May be repeated. Fee: \$50.

ED 610 - Cultural and Institutional Perspectives on Education: Individual, Community, and Society (3)

This course is grounded in the premise that understanding the complexity of culture and cultural identities broadens an individual's ability to interpret and powerfully influence interaction in a diverse society. Developing an integrated perspective of how culture is expressed at the individual and organizational level supports an educator's ability to further social justice in a complex environment.

ED 611 - Essential Ideas in Education: History, Philosophy and Change (3)

This course engages students in integrating historical instances and educational philosophy within the context of change initiatives. The course will augment program graduates' understandings of the meaning of past events and will serve as a powerful resource for interpreting current practices, assessing evolving trends, and imagining future directions.

ED 612 - Individual, Group and Organizational Dynamics (3)

This course draws on theories of group and organizational dynamics to strengthen an educator's ability to evaluate and design structural dimensions of organizations that can enhance individual efficacy and interpersonal cooperation. Applying knowledge of group and organizational dynamics can enhance an educator's ability to act ethically, resolve conflicts, and foster purposeful collaboration.

ED 613 - Foundational and Emergent Understandings of Learning and Development (3)

This course examines seminal work and newly emerging research and theory about how individuals neurobiologically learn and change across the life span. A focus on the identification of principles of adult learning and the differences between adults and youth as learners offers a foundation for applications and investigations within concentrations. Application to teaching and leading will be supported.

ED 614 - Adult Learning, Group, and Organizational Dynamics (3)

This course draws on the neurobiological principles of adult learning, group, and organizational dynamics to strengthen an educator's ability to evaluate and design structural dimensions of organizations that can enhance individual efficacy and interpersonal cooperation. Application of these principles can enhance an educator's ability to act ethically, resolve conflicts, and foster purposeful collaboration.

ED 621 - Dissertation Prospectus (5)

The candidate will develop a dissertation prospectus under the guidance and direction of the faculty advisor.

ED 622 - Dissertation Seminar (2)

This course is designed to support students in the dissertation process. Students work collaboratively with faculty and peers around a common area of concentration to develop further their dissertation. Students develop skills for publication and dissemination of research. Must be taken twice to meet degree requirements.

ED 698 - Dissertation Defense (0)

Students will engage in a dissertation defense per the School of Education's Doctor of Education Handbook. Passing criteria is outlined in the Graduate School's Dissertation and Thesis Guidelines booklet. Graded on a pass/no pass basis. Grade of "IP" is allowed.

ED 699 - Dissertation Research (3)

Completion of dissertation research with the guidance of the chair of the candidate's dissertation committee. Students enroll in this course simultaneously with ED 622 Dissertation Seminar. Must be taken twice to meet degree requirements. Graded on a pass/no pass basis.

ED 699X - Dissertation in Progress (0)

Registration for any EdD candidate who has received the grade of IP in ED 698: Dissertation Defense is required while the dissertation is in progress. May be repeated. Fee: \$50.

EE - Electrical Engineering

EE 083 - EE Capstone Workshop I (0)

Students work with faculty adviser to complete the first phase of a capstone project.

Corequisite: EE 483.

EE 084 - EE Capstone Workshop II (0)

Students work with faculty adviser to complete the second phase of a capstone project.

Corequisite: EE 484.

EE 231 - Logic Design (3)

Introduction to designing digital circuits. Topics include number systems, Boolean algebra, simplification of Boolean functions, design and analysis of combinational and sequential logic circuits, hierarchical design, and simulation of digital circuits. Fee: \$50

EE 261 - Electrical Circuits (3)

Circuit elements and concepts. Ohm's and Kirchhoff's laws. Simple resistive circuits. Review of matrix algebra. Node voltage method using matrix equations. Superposition. Thevenin and Norton equivalent circuits. Maximum power transfer theorem. Capacitance and inductance. Natural and step response of first- and second-order circuits. Sinusoidal steady-state circuits. PSpice is incorporated as a simulation software.

Prerequisite: MTH 202, PHY 205 or corequisites. Corequisite: EE 271, MTH 202, PHY 205 or prerequisites.

EE 262 - Signals and Systems (3)

Introduction to continuous- and discrete-time signals and systems. Continuous- and discrete-time linear time-invariant systems. Convolution. Impulse and step response. Laplace transform. Fourier series and Fourier transform. Sampling. Z transform. MATLAB software is incorporated throughout.

Prerequisite: EE 261.

EE 271 - Electrical Circuits Laboratory (1)

Measurement experience with a variety of basic electrical instruments. The student engineer will verify many of the principles of electrical circuit theory. Fee: \$50

Corequisite: EE 261.

EE 300 - Electrical Engineering Seminar (1)

Study of ethical and professional responsibilities in the area of electrical engineering. The impact of solutions related to electrical engineering in global, economic, environmental, and societal contexts. Students are expected to develop a career plan and gain awareness regarding the importance of lifelong learning skills.

Prerequisite: Prerequisite: junior standing.

EE 301 - Electromagnetic Fields (3)

Lumped vs. distributed electrical circuits. Transient response of lossless transmission lines. Sinusoidal steady-state waves on lossless transmission lines. Smith chart and impedance matching techniques and networks. Review of vector calculus. Maxwell's equations and solution of wave equations. Uniform plane electromagnetic waves in a simple unbounded lossless medium.

Prerequisite: EE 261, MTH 301, PHY 205.

EE 332 - Digital Systems Design (3)

Introduction to digital systems. TTL and CMOS 74-series logic families. Register-transfer level (RTL) combinational and sequential circuit design principles and practices using 74-series devices. Programmable logic device (PLD) architectures. Combinational and sequential circuit designs using ABEL hardware description language.

Prerequisite: EE 231. Corequisite: EE 373.

EE 334 - Embedded Systems Design (3)

Computer systems evolution. Processor to memory interface. Introduction to microcontrollers. Microcontroller instruction set architecture and assembly language programming. Parallel input/output device interfacing. Timers and interrupt handling. UART and Inter-IC (I²C) serial communications. Analog-to-digital converter interface. Implementation of a microcontroller-based embedded system.

Prerequisite: EE 332 or CS 333.

EE 351 - Electronic Circuits I (3)

Basic concepts of electronic circuit analysis and design. Physical operation and modeling of diodes, Bipolar Junction Transistors and MOSFETs. Small-signal analysis of electronic circuits. Amplifier biasing and bias-point stability. Use of SPICE as a design tool.

Prerequisite: EE 261.

EE 352 - Electronic Circuits II (3)

EE 352 is a continuation of EE 351. It includes advanced analog circuit theory, analysis, and simulation using PSPICE. Topics include 1) BJT and MOS transistor amplifiers, 2) frequency response, 3) feedback and, 4) opamp active filters. EE 352 provides the theoretical foundation for the companion electronics laboratory course, EE 371.

Prerequisite: EE 351. Corequisite: EE 371.

EE 371 - Electronic Circuits Laboratory (1)

Companion laboratory course to the EE 352 Electronics Circuits II lecture course. Students analyze, assemble, and test various electronic circuits. Students perform rigorous AC and DC measurements using state-of-the-art instrumentation and correlate results to theoretical analysis. Rigorous written reporting of laboratory results is required. Designated as a Writing in the Discipline course. Fee: \$50

Corequisite: EE 352.

EE 373 - Digital Systems Design Laboratory (1)

Familiarization with the laboratory equipment. Basic gate operations. Combinational logic design using SSI, MSI, and LSI logic devices. Logic design with programmable logic devices. Sequential logic circuits. MSI counters. Designated as a Writing in the Discipline course. Fee: \$50

Corequisite: EE 332.

EE 402 - Microwave and Optical Transmission (3)

Review of Maxwell's equations and the wave equation. Uniform plane waves in a lossy medium. Wave polarization. Reflection and transmission of electromagnetic waves at planar boundaries. Normal incidence. Antireflection coatings and radomes. Oblique incidence. Brewster angle. Total internal reflection. Theory of parallel-plate waveguides. Rectangular and circular waveguides. Dielectric slab waveguides.

Prerequisite: EE 301.

EE 403 - Communication Systems (3)

Introduction to analog and digital communication systems with emphasis on modulation, demodulation, encoding, decoding, and synchronization techniques used in wireless systems. MATLAB is used to simulate communication systems and to process real RF signals.

Prerequisite: EE 262.

EE 404 - Automatic Control Systems (3)

Modeling and control of continuous-time control systems. Topics include feedback, transfer functions, responses in the time and frequency domains, stability, and compensation. Applications include manufacturing and robotics.

Prerequisite: MTH 321.

EE 420 - Energy Conversion (3)

Principles, models, and applications of electromagnetic and electromechanical devices including transformers and motors. Applications include power systems, manufacturing processes, robotics, and consumer products.

Prerequisite: EE 261.

EE 421 - Electric Power Systems (3)

Introduction to the modeling, design, and operation of modern power generation, transmission, and distribution systems. Topics include complex power, three-phase systems, compensation, and power flow.

Prerequisite: EE 261.

EE 424 - Renewable Energy (3)

Study of renewable energy systems including photovoltaic, wind, geothermal systems, biofuels, and tidal energy. Overview of renewable energy credits, sustainability definitions, life cycle assessment, and exergy assessment techniques.

Prerequisite: ME 331. Crosslisted as: ME 438.

EE 434 - ASIC Design (3)

Introduction to ASIC (application-specific integrated circuits) design flow. Synthesis of combinational and sequential logic. Synthesis of hardware description language constructs. Post-synthesis design tasks. FPGA (field programmable gate array) architectures. Design prototyping with FPGAs.

Prerequisite: EE 435.

EE 435 - Verilog Digital Systems Modeling (3)

Introduction to Verilog-based design process. Hierarchical modeling methodology. Basic Verilog language structures for modeling digital hardware functions. Modules and ports. Gate-level modeling. Data flow modeling. Behavioral modeling. Tasks and functions. Useful modeling techniques in digital system design. Component timing and delay modeling. Logic synthesis with Verilog HDL.

Prerequisite: EE 332.

EE 436 - Testing of Digital Systems (3)

Introduction to topics in testing of digital systems. Physical circuit failures and fault modeling. Fault simulation and fault coverage. Algorithms for automatic test pattern generation. Introduction to Built-in self test. Testing of sequential circuits. Test application and response processing techniques. Design for testability. Includes an advanced testing project.

Prerequisite: EE 332. Crosslisted as: EE 536.

EE 437 - Advanced Computer Architecture (3)

Processor control unit design techniques. Pipelined data path and control unit design. Cache memory and cache coherency design techniques. Memory management using virtual memory. Case studies of contemporary high-performance computer architectures.

Prerequisite: EE 334 or CS 333.

EE 438 - Introduction to Digital VLSI Design (3)

Introduction to digital CMOS VLSI chip design using Tanner's L-EDIT layout software, and PSPICE. Topics include CMOS gate logic design simulation and layout, speed and power considerations, and CMOS VLSI chip design using Standard Cells. Students are required to complete a modest-sized CMOS integrated circuit design project through layout, simulation, and verification.

Prerequisite: EE 231.

EE 439 - Pre-silicon Verification (3)

This course is an introduction to functional pre-silicon verification of digital systems. The course will cover verification flow, simulation based verification, virtual platforms, formal verification and FPGA-based emulation.

Prerequisite: EE 334. Crosslisted as: EE 539.

EE 451 - Advanced Analog Electronics (3)

Analysis and design of advanced MOS analog electronic circuits. Topics include advanced MOS semiconductor device models, active loaded amplifiers, operational amplifiers, feedback compensation, and switched-capacitor filters. PSPICE is used as a circuit simulation tool. An introduction to photovoltaics, thermoelectronics, and nanoelectronics is also included.

Prerequisite: EE 352.

EE 463 - Digital Signal Processing (3)

This course covers techniques used to process digital signals in applications such as audio filtering and speech recognition. Topics include analog-to-digital and digital-to-analog conversions, aliasing, quantization, discrete-time signals and systems, discrete-time Fourier transform, Z-transform, and digital filter design. MATLAB is used to demonstrate concepts and to process real signals.

Prerequisite: EE 262. Crosslisted as: BME 563.

EE 464 - Real-time Digital Signal Processing (3)

Introduction to the hardware and software used in real-time digital signal processing (DSP) systems. Topics include analog-to-digital and digital-to-analog converters, DSP chip architecture, and special software techniques such as frame-based processing, circular buffering, digital filters, and the Fast Fourier Transform. Students will implement real-time DSP systems using C language and will run them on a DSP board.

Prerequisite: EE 262, CS 305.

EE 483 - Electrical Engineering Capstone Project I (3)

A major design experience based on the knowledge and skills acquired in earlier course work and incorporating appropriate standards and multiple realistic constraints. Projects have some combination of the following characteristics: realism, communication, exposure, teamwork, learning, and related opportunities.

Prerequisite: EGR 351 or EGR 352 or corequisites, EGR 300. Corequisite: EGR 351 or EGR 352 or prerequisites, EE 083.

EE 484 - Electrical Engineering Capstone Project II (3)

Continuation of a major design experience based on the knowledge and skills acquired in earlier course work and incorporating appropriate standards and multiple realistic constraints. Projects have some combination of the following characteristics: realism, communication, exposure, teamwork, learning, and related opportunities.

Prerequisite: EE 483. Corequisite: EE 084.

EE 490 - Directed Study (Variable)

Selected study or project in electrical engineering for upper-division students. Must be arranged between the student and an individual faculty member and subsequently approved by the dean of engineering. No more than three hours of directed study taken at the University may be used for elective credits to satisfy degree requirements.

EE 491 - One Time Course Offering (Variable)

Credit Arranged.

EE 492 - One Time Course Offering (Variable)

Credit Arranged.

EE 493 - Research (1-3)

Faculty-directed student research. Before enrolling, a student must consult with a faculty member to define the project. May be repeated for credit.

Prerequisite: Upper division standing.

Graduate Courses

EE 502 - Microwave and Optical Transmission (3)

Review of Maxwell's equations and the wave equation. Uniform plane waves in a lossy medium. Wave polarization. Reflection and transmission of electromagnetic waves at planar boundaries. Normal incidence. Antireflection coatings and radomes. Oblique incidence. Brewster angle. Total internal reflection. Theory of parallel-plate waveguides. Rectangular and circular waveguides. Dielectric slab waveguides. Some knowledge of electromagnetic waves is recommended. Special report required.

EE 503 - Communication Systems (3)

Analog and digital communication systems with emphasis on modulation, demodulation, encoding, decoding, and synchronization techniques used in wireless systems. MATLAB is used to simulate communication systems and to process real RF signals. The course includes a project to explore a wireless system in detail. It is recommended that students take a course in signals and systems before taking this course.

EE 504 - Automatic Control Systems (3)

Modeling and control of continuous-time control systems. Topics include feedback, transfer functions, responses in the time and frequency domains, stability, and compensation. Applications include manufacturing and robotics. Knowledge of Laplace transforms is required. A research paper on a relevant topic of interest is required.

EE 520 - Energy Conversion (3)

Electromagnetic and electromechanical devices including transformers and motors. Advanced principles, models, and applications, including applications to power systems, manufacturing processes, robotics, and consumer products. Knowledge of basic circuit analysis is required. A research paper on a relevant topic of interest is required.

EE 521 - Electric Power Systems (3)

Introduction to the modeling, design, and operation of modern power generation, transmission, and distribution systems. Topics include complex power, three-phase systems, compensation, and power flow. Knowledge of basic circuit analysis is required. A research paper on a relevant topic of interest is required.

EE 524 - Renewable Energy (3)

Advanced study of renewable energy systems including photovoltaic, wind, geothermal systems, biofuels, and tidal energy. Study of renewable energy credits, sustainability definitions, life cycle assessment, and exergy assessment techniques.

Crosslisted as: ME 538.

EE 534 - ASIC Design (3)

Introduction to ASIC (Application Specific Integrated Circuit) design flow. Synthesis of combinational and sequential circuits. Synthesis of hardware description language constructs. Post-synthesis design tasks. FPGA (Field Programmable Gate Array) architectures. Design prototyping with FPGAs. Advanced topics on ASIC prototyping strategies.

EE 535 - Verilog Digital Systems Modeling (3)

Verilog-based design process. Hierarchical modeling methodology. Basic Verilog language structures for modeling digital hardware functions. Modules and ports. Gate level modeling. Dataflow modeling. Behavioral modeling. Tasks and functions. Useful modeling techniques in digital system design. Component timing and delay modeling. Logic synthesis with Verilog HDL. Advanced topics on high-level synthesis and system verification.

EE 536 - Testing of Digital Systems (3)

Introduction to topics in testing of digital systems. Physical circuit failures and fault modeling. Fault simulation and fault coverage. Algorithms for automatic test pattern generation. Introduction to Built-in self test. Testing of sequential circuits. Test application and response processing techniques. Design for testability. Includes an advanced testing project and a research paper.

Crosslisted as: EE 436.

EE 537 - Advanced Computer Architecture (3)

Processor control unit design techniques. Pipelined datapath and control unit design. Cache memory and cache coherency design techniques. Memory management using virtual memory. Case studies of contemporary high-performance computer architectures. Advanced topics on parallel computer architectures.

EE 538 - Introduction to Digital VLSI Design (3)

Digital CMOS VLSI chip design using Tanner's L-EDIT layout software, and PSPICE. Topics include CMOS gate logic design simulation and layout, speed and power considerations, and CMOS VLSI chip design using Standard Cells. A modest-sized CMOS integrated circuit design project through layout, simulation, and verification is required. A term paper on future trends in digital CMOS VLSI technology is required.

EE 539 - Pre-silicon Verification (3)

This course is an introduction to functional pre-silicon verification of digital systems. The course will cover verification flow, simulation based verification, virtual platforms, formal verification and FPGA-based emulation. Includes an advanced verification project. Prior knowledge of embedded systems is required.

Crosslisted as: EE 439.

EE 551 - Advanced Analog Electronics (3)

Analysis and design of advanced MOS analog electronic circuits. Advanced MOS semiconductor device models, active loaded amplifiers, operational amplifiers, feedback compensation, and switched-capacitor filters. PSPICE circuit simulation tool. Students design a custom CMOS OpAmp using hand calculations and PSPICE simulations. Introduction to photovoltaics, thermoelectronics, and nanoelectronics is also included. Students write a term paper on future trends in analog MOS technology.

EE 563 - Digital Signal Processing (3)

Covers techniques used to process digital signals in applications (audio filtering, speech recognition, biomedical signal processing). Topics: analog-to-digital/digital-to-analog conversions, aliasing, quantization, discrete-time signals & systems, discrete-time Fourier transform, Z-transform, digital filter design. MATLAB used to demonstrate concepts and process real signals. Includes an advanced project to explore a digital signal processing system. Prior course in signals and systems recommended.

Crosslisted as: BME 563.

EE 564 - Real-time Digital Signal Processing (3)

Hardware and software used in real-time digital signal processing systems. Analog-to-digital/digital-to-analog converters, DSP chip architecture, and software techniques including frame-based processing, circular buffering, digital filters, and Fast Fourier Transform. Implementation of real-time DSP systems using C language on a DSP board. Includes a project to explore a DSP system in detail. Recommended prior courses: signals & systems; C-language programming.

EE 590 - Directed Study (Variable)

Credit arranged.

EE 591 - One Time Course Offering (Variable)

Credit arranged.

EE 592 - One Time Course Offering (Variable)

Credit arranged.

EE 593 - Research (1-3)

Faculty-directed student research. Before enrolling, a student must consult with a faculty member to define the project. May be repeated for credit.

EE 599 - Thesis (Variable)

Credit arranged.

EGR - Engineering

EGR 083 - EGR Capstone Workshop I (0)

Students work with faculty adviser to complete the first phase of a capstone project.

Corequisite: EGR 483.

EGR 084 - EGR Capstone Workshop II (0)

Students work with faculty adviser to complete the second phase of a capstone project.

Corequisite: EGR 484.

EGR 110 - Introduction to Engineering (2)

An introductory exploration of engineering focused on a design project and several hands-on skills development labs covering a wide variety of engineering disciplines. Individual sections may cover additional topics including ethics, technical communication, and teamwork. Fee: \$130

EGR 111 - Engineering Computing with Applications (2)

Introduction to programming in MATLAB: numeric, Boolean, and string variables; flow control structures; vectors and matrices; and script and function files. MATLAB will be studied in the context of multiple engineering disciplines with applications. Fee: \$50

EGR 115 - Pathways to Engineering Success (1)

Pathways to Engineering Success asks students to think about “what makes a successful engineer?” and “what steps do I need to take to become a successful engineer?” Topics covered include time management, study strategies, goal setting, leadership, and professional development. This course is part of a 2-year academic and leadership program. (Course offered for First Time Freshmen)

Prerequisite: Permission of Instructor.

EGR 211 - Engineering Mechanics-Statics (3)

Quantitative description of forces, moments, and couples acting upon engineering structures. The free-body diagram is used to understand the equilibrium of a whole physical system through isolation of each component particle or body.

Prerequisite: MTH 201 with C- or better, PHY 204.

EGR 212 - Engineering Mechanics-Dynamics (3)

Dynamics mathematically describes the motions of bodies under the action of forces. The first part introduces kinematics which deals with the geometry of motion without considering applied forces. The second part, kinetics, relates the forces on bodies to the resulting motions.

Prerequisite: MTH 202, EGR 211 with a grade of C- or better.

EGR 214 - Principles of Dynamics (2)

Dynamics mathematically describes the motions of bodies under the action of forces. The first part introduces kinematics which deals with the geometry of motion without considering applied forces. The second part, kinetics, relates the forces on bodies to the resulting motions. The topic of kinetics is introduced without an emphasis on impulse and momentum.

Prerequisite: MTH 202, EGR 211 with a grade of C- or better.

EGR 221 - Materials Science (3)

Provides a fundamental understanding of the principles of materials science as they apply to typical engineering materials. Includes consideration of atomic bonding, crystal structures, phase transformations, and mechanical properties.

Prerequisite: CHM 207.

EGR 270 - Materials Laboratory (1)

Provides hands-on experience with the standard methods of processing and evaluating typical engineering materials. Includes experiments in tensile testing, heat treatment, microscopic examination, strain hardening, and impact testing. Fee: \$50

Prerequisite: EGR 221.

EGR 300 - Introduction to Capstone Project (0)

Preparation for senior capstone courses. Students learn the requirements for senior design projects. Project teams are formed and preliminary project plans prepared. Course should only be taken in the semester preceding capstone design. (Shiley School students only)

Prerequisite: Junior Standing.

EGR 311 - Mechanics of Fluids I (3)

Basic properties of a fluid, problems in hydrostatics. The general equations of fluid motion. Boundary layer concepts. Application to a variety of laminar and turbulent incompressible flow situations. The technique of dimensional analysis is introduced. Formerly ME 311.

Prerequisite: EGR 212 with a grade of C- or better or EGR 214 with a grade of C- or better.

EGR 322 - Strength of Materials (3)

Behavior of deformable body systems under various external loadings is presented with analysis of stress, strain, and deformation due to axial, torsional, bending and combined loads. Topics include statically indeterminate structures.

Prerequisite: EGR 211 with a grade of C- or better.

EGR 351 - Engineering Economics (3)

Economic analysis for choice among alternatives; present worth analysis, annual worth, rate of return and benefit-cost ratio analysis; effects of depreciation, sources of funds, inflation and income tax; analysis of decision under risk and uncertainty. Discussion of unemployment rate and inflation, financial markets, as well as the use of monetary and fiscal policies to regulate the economy.

Prerequisite: Sophomore standing.

EGR 352 - Engineering Economics (2)

Economic analysis for choice among alternatives; present worth analysis, annual worth, rate of return and benefit-cost ratio analysis; effects of depreciation.

Prerequisite: Sophomore standing.

EGR 361 - Analysis of Engineering Data (3)

Basic probability and statistical procedures used in the analysis of engineering data and an understanding in measurement. Methods for displaying data, commonly used probability distributions for discrete and continuous random variables, and statistical tools such as simple linear regression are presented. Students are introduced to concepts of statistical experimental design and error mitigation.

Prerequisite: MTH 202.

EGR 380 - Medical Instrument Repair in the Developing World (3)

The course will cover medical equipment commonly seen in a low-resourced hospital, including principles of operation and typical problems. Class will focus on learning hands-on and technical knowledge required to complete basic electronic and mechanical repairs. Skills include troubleshooting, problem solving, and testing. The class will conclude with a 3-week trip to a developing country to repair medical equipment. Fee: \$4,500

Prerequisite: MTH 202, PHY 205, PHY 275.

EGR 387 - Service Learning in Engineering (1)

Faculty-directed student outreach experience in community settings. Before enrolling, a student must meet with a faculty member to define goals for the project. May be repeated for up to 3 credits and count toward professional or general electives for degree requirements.

Prerequisite: Permission of instructor.

EGR 388 - Grand Challenges Seminar (1)

This course helps students participating in the Grand Challenges Scholars program prepare the final portfolios needed to be recognized by the National Academy of Engineering. Students prepare essays, posters, reports and other scholarly products in the areas of creativity, global and cross-cultural awareness, entrepreneurship, social consciousness and multidisciplinary analysis. Course is graded P/NP. Junior status required.

EGR 390 - Directed Study (Variable)

Selected group project in engineering. Must be arranged between the student and an individual faculty member, and subsequently approved by the dean of engineering. No more than three technical elective hours taken at the University may be satisfied with individualized study.

Prerequisite: Sophomore standing or higher.

EGR 407 - MECOP Seminar (0)

Professional development and preparation for MECOP internship. Information provided on specific MECOP events as well as assistance in completing the MECOP Placement Resumes and preparing for the Placement interviews. Current student interns also make presentations about the MECOP company sponsoring their internship. Only for approved MECOP interns. Graded: P/NP (Student must be a MECOP intern) Fee: \$200

Prerequisite: Permission of Instructor.

EGR 408 - Innovation for Sustainability (3)

Leaders in sustainability must be able to understand rapid changes in environmental and social conditions, innovate to adapt to those changes, collaborate to envision transitions to sustainable futures, and engage with others to realize those visions. To build these capacities, this course develops systems thinking skills using readings and case studies drawn from environmental, social, and business contexts.

Prerequisite: ENV 182 or CE 367 or permission of instructor. Crosslisted as: BUS 408 and ENV 408.

EGR 410 - Intro to Artificial Intelligence and Quantitative Modeling (3)

Introduction to foundational principles that define the artificial intelligence paradigm. Specific subject matter will include: linear and logistic regression, classification models, decision trees and graphical models.

EGR 411 - Telescope Design (3)

The rapid learning cycle of engineering design will be applied in the design, building and testing of amateur telescopes. Optics, atmospheric science, and anatomy of the eye will be discussed at introductory levels. Since consideration for user-needs is essential in design, this course will also study telescopic observations and basic astronomy.

Prerequisite: PHY 204. Crosslisted as: EGR 511.

EGR 431 - Engineering Research Methods (3)

Introduces the process of engineering research at an upper division level. Students explore a discipline specific research project and draft a research paper. Course discusses engineering research career topics including graduate programs, fellowships and funding, research organizations, publication and presentations.

Prerequisite: Permission of Instructor.

EGR 480 - Global Engineering (3)

Introduction to how to design, make decisions, and communicate effectively in a global technology environment. Students are introduced to globalization with case studies that may include design, supply chain, international development, and other relevant issues. Students are required to participate in the international field trip that complements the course. Fee: \$3,500

Prerequisite: upper division standing in Shiley School of Engineering.

EGR 483 - Multi-disciplinary Capstone Project I (3)

A major design experience based on the knowledge and skills acquired in earlier course work, incorporating appropriate standards and multiple realistic constraints, and requiring the expertise of two or more disciplines. Each project consists of at least two students pursuing different majors. Students are required to meet all disciplinary-specific requirements for their majors.

Prerequisite: EGR 300. Corequisite: EGR 083.

EGR 484 - Multi-disciplinary Capstone Project II (3)

Continuation of a major design experience based on the knowledge and skills acquired in earlier course work, incorporating appropriate standards and multiple realistic constraints, and requiring the expertise of two or more disciplines. Each project

consists of at least two students pursuing different majors. Students are required to meet all disciplinary-specific requirements for their majors.

Prerequisite: EGR 483. Corequisite: EGR 084.

EGR 490 - Directed Study (Variable)

Selected multi-disciplinary study or project in engineering for upper-division students. Must be arranged between the student and an individual faculty member, and subsequently approved by the dean of engineering. No more than three hours of directed study taken at the University may be used for elective credits to satisfy degree requirements.

EGR 491 - One Time Course Offering (Variable)

Credit arranged.

EGR 492 - One Time Course Offering (Variable)

Credit arranged.

EGR 493 - Multi-disciplinary Research (Variable)

Faculty-directed multi-disciplinary student research in engineering. Before enrolling, a student must consult with a faculty member to define the project. May be repeated for credit.

Prerequisite: Upper division standing.

EGR 497 - Internship (Variable)

Practical field experience working within an engineering organization. Internships are individually arranged. Students will be required to supplement their experience with a learning agreement. Students may receive an IP (In Progress) grade until the completion of their internship. Course is graded Pass/No Pass.

Prerequisite: Shiley School major, permission of instructor.

Graduate Courses

EGR 511 - Telescope Design (3)

The rapid learning cycle of eng. design will be applied in the design, building and testing of amateur telescopes. Optics, atmospheric science, and anatomy of the eye will be discussed at intro levels. Since consideration for user-needs is essential in design, this course will also study telescopic observations and basic astronomy. Prior knowledge of physics/optics required. A research report and teaching 3 lectures is required.

Crosslisted as: EGR 411.

EGR 551 - Mathematical and Numerical Methods for Engineers (3)

Numerical techniques for computer-aided solution and analysis of systems using MATLAB. Emphasis on applications from engineering and the physical sciences. Topics covered may include non-linear equations, interpolation, integration and differentiation, and ordinary and partial differential equations. Knowledge of ordinary differential equations and linear algebra required.

Crosslisted as: MTH 451.

EGR 555 - Design of Engineering Experiments (3)

Examines how to design experiments to gather engineering data with an emphasis on developing experiments and analyses that lead to statistically significant results. Various designs are discussed and their respective differences, advantages, and disadvantages are noted. A project to design an experiment in the relevant discipline is part of the course. Knowledge of statistics required.

Prerequisite: Graduate standing.

EGR 564 - Instrumentation and Computer Interfaces (3)

Fundamentals of sensors, instrumentation, designing with electronics/computer hardware and software systems, and real-time programming for control and data collection. Emphasizes human-computer interface challenges and designing for the end user. Laboratory work involves circuits, electronics, sensor design and interface, building complete engineering instrumentation, and

applications using LabVIEW/Arduino systems. Project work specific to graduate discipline. Knowledge of circuits and programming required. Fee: \$50

ENG - English

ENG 101 - English as a Second Language for International Students: Advanced (3)

Advanced ESL reading and writing; study skills; vocabulary; sentence structure; writing of paragraphs and short essays to prepare students for college writing.

ENG 107 - College Writing (3)

Development of writing skills with emphasis on instruction and practice in writing the college essay and the library research paper. Restricted to students with 59 or fewer credit hours. Students with 60 or more credit hours who are not exempted from ENG 107 take ENG 311.

Prerequisite: ENG 101 for students who need this preparatory course.

ENG 112 - Thinking Through Literature (3)

This course invites students to approach the practice of reading literature as a vehicle for thinking through life's larger questions and to cultivate fundamental habits of critical thinking, dialogue, and expression. A writing-embedded course.

ENG 161 - Thinking Through Literature: Reading and Writing Cultures of Food (3)

ENG 161 invites students to explore a buffet of food literature - novels, short stories, poems, cookbooks, films - to learn more about how we compose and shape individual and cultural identities. In collaboration with ENV 161, students will also explore our relationship to the natural world through how we cultivate and consume food. *Fulfills ENG 112 Core Requirement.*

Corequisite: ENV 161.

ENG 225 - Introduction to Literary Studies (3)

This course provides English majors and other students with an introduction to literary research and theory, applying both to works of literature. It also provides students with an introduction to effective use of the academic library and of online resources as part of the research process. Required of English majors. Can be taken concurrently with a 300-level English course.

ENG 301 - British Literature I (Medieval through 18th Century) (3)

Survey of representative authors and texts from the medieval period through the 18th century, with special attention to British political and cultural history.

ENG 302 - British Literature II (19th Century to Present) (3)

Survey of representative authors and texts from the 19th century through the present, with special attention to British political and cultural history.

ENG 303 - American Literature I (Beginnings to 1900) (3)

Survey of representative authors and texts from the colonial days through the 19th century, with special attention to key historical, political, and cultural developments and their impact on literary production.

ENG 304 - American Literature II (1900 to Present) (3)

Survey of representative authors and texts from the 20th century through the present day, with special attention to key historical, political, and cultural developments and their impact on literary production.

ENG 306 - Writing Workshop: Poetry (3)

Elements of poetry for poets who wish to receive guidance for their own work and who wish to read the work of both contemporary poets and fellow students; an opportunity for writing, reading, and discussing poetry and poetics.

ENG 308 - Writing Workshop: Screenwriting (3)

Study of the aesthetics and techniques involved in the written dramatic form for video and film production. Emphasis upon writing, workshop critiques, and discussion of students' screenplays.

Crosslisted as: FA 308.

ENG 309 - Writing Workshop: Fiction (3)

Principles and techniques necessary to the short story writer. Analysis of professional fiction as well as guidance for original work of beginning and intermediate writers.

ENG 311 - Writing Workshop: Nonfiction (3)

The writing and editing of various types of nonfiction essays in a workshop setting, plus an examination of the writing process itself and the reading of fine essays.

ENG 317 - Writing Theory and Practice (3)

Study of relevant research and theory from composition, rhetoric, linguistics, and psychology applicable to practice. Intended for nominated Writing Assistants in training; others may join with instructor consent.

Prerequisite: 3.0 in writing courses, including ENG 107.

ENG 326 - Shakespeare: Page, Performance, and Perceptions (3)

Introduction to Shakespeare's works including analysis and discussion of several of the comedies, histories, and tragedies with attention given to the cultural background and the interesting particulars of the Elizabethan theater.

ENG 329 - Shakespeare in Ashland (3)

Team taught with a professor from Philosophy or Theater to explore the literary, metaphysical, and/or performance aspects of Shakespeare's plays. Involves the reading of four plays (three by the Bard and one non-Shakespearean), and attendance for four nights at the Oregon Shakespeare Festival in Ashland seeing live performances. Taught first summer term. Fee: \$350

Crosslisted as: PHL 339, THTR 405.

ENG 336 - Studies in Drama (3)

Survey of representative plays within the Anglo-American literary tradition, with possible inclusions ranging from medieval drama to works by contemporary playwrights, with special attention to the genre's major features and preoccupations

ENG 337 - Modern/Contemporary Arabic Literature (3)

A selection of novels, short story collections, and memoirs by Arab writers from the 20th-21st century, examined within their historical and cultural contexts. Topics include: religion, gender, war, Post-Colonialism, Pan-Arabism, forced migration, and Bedouin culture. Features authors from the Levant, North Africa, and the Arabian Peninsula.

ENG 338 - European Literature in Translation (3)

Study of classic authors and texts from France, Germany, Russia and Scandinavia including Lafayette, Laclos, Flaubert, Mann, Chekhov, Tolstoy and Ibsen among others, situating the texts within their specific cultural and historical contexts and highlighting gender and class as thematic concerns.

ENG 339 - Studies in Fiction (3)

Intensive analysis of the key techniques, practitioners, and representative themes of English-language novels and short stories. Readings may focus solely on short fiction or the novel, or a combination of both genres.

ENG 342 - Studies in Poetry (3)

Intensive practice in reading poetry in English across a wide range of genres, with attention paid to influential forms, themes, and historical developments in poetry from the beginnings of modern English to the present.

ENG 343 - Studies in Nonfiction (3)

Intensive analysis of the methods, modes, and manipulations of nonfiction prose. Readings may draw from such nonfiction works as essays, memoirs, political documents, documentaries, and reportage to explore topics of truth and falsehood, representation and reality, medium and message.

ENG 351 - Satire (3)

Explorations in the themes, forms, and theories of satire, past and present, examining how great writers have turned malice and moral indignation into witty, funny, or biting fiction, poetry, and drama. Readings drawn from authors such as Orwell, Houellebecq, Heller, West, Voltaire, Swift, Atwood, Pope, Jonson, Horace, and Juvenal.

ENG 352 - Film and Literature (3)

Investigating a century of imaginative synergy between the medium of film and the medium of literature, this course explores connections, divisions, and adaptations between these two vehicles for narrative and ideas. Readings and viewings will exemplify how history, genre, and artistic form influence the translations of pictures and words.

ENG 353 - Letters and Literature (3)

Study of the letter (epistle, postcard, telegram, text message, etc.) as a literary form, with special attention paid to literary networks, experiments in self-expression, and the spread of ideas, from 18th century Enlightenment Europe to the present day.

ENG 360 - Literature and Social Change (3)

Examination of literary works that turns upon historical and political events. Emphasis given to the characteristics of fiction as opposed to the requirements of history and to fiction as a means of interpreting political events.

ENG 361 - Northwest Literature (3)

Study of the diverse literature from the Pacific Northwest region in light of global concerns, to become sharper readers of whatever spaces and places life takes us to live in. May include such authors as Ken Kesey, Norman Maclean, Annie Dillard, David James Duncan, Brian Doyle, Molly Gloss, Timothy Egan, Cheryl Strayed, and Renée Watson.

ENG 363 - Environmental Literature (3)

Study of British and American authors from the eighteenth century to today who have creatively considered and analyzed humans' relationship to and representation of the environment. Selected authors may include William and Dorothy Wordsworth, Henry David Thoreau, Rachel Carson, and Michael Pollan.

Crosslisted as: ENV 363.

ENG 370 - Studies in Women Writers (3)

Study of 20th and 21st century literary and theoretical texts by women foregrounding gender and feminism as critical lenses, with critical attention to intersecting categories of inquiry such as class, sexual identity, race, and ethnicity. (Gender & Women's Studies Minor elective)

ENG 371 - City Life in American Literature (3)

Most of the human population now lives in cities. Americans, in particular, saw their lives restructured around cities throughout the nineteenth and twentieth centuries. Through the varying formats of prose, poetry, and drama, this course explores questions of politics, power, identity, growth, individualism, and cooperation, which evolving configurations of urban space force us to ask.

ENG 372 - Multi-Ethnic American Literature (3)

A comparative study of representative works by American writers of African, Asian, Latin American, American Indian, and Jewish descent, within a historically situated understanding of issues, such as cultural continuity, immigration, assimilation, civil rights, and citizenship, affecting the lives of ethnic Americans.

ENG 373 - African-American Literature (3)

Study of important works by African American writers, from the slave narratives of the nineteenth century to the prose, poetry, and drama of the twentieth century.

ENG 375 - Studies in Irish Writers (3)

This survey of Irish fiction, drama, and poetry from 1900 to today explores issues of identity, nationalism, gender, history, and faith through works by heavyweights Joyce and Yeats, but also by Lady Gregory, Sean O'Casey, Edna O'Brien, Roddy Doyle, Colm Toibin, Brian Friel, Seamus Heaney, Eavan Boland, and Marina Carr, among others.

ENG 401 - Seminar in British Literature I (3)

Research and development of an extended argument informed by critical debates; topics to rotate and may include "Chaucer," "Otherness in Early Modern English," and "British Modernism". May be repeated once for credit. English majors only or instructor permission.

Prerequisite: ENG 225.

ENG 402 - Seminar in American Literature I (3)

Research and development of an extended argument informed by critical debates; topics to rotate and may include "American Romanticism," and "Naturalism and Dystopia." May be repeated once for credit. English majors only or instructor permission.

Prerequisite: ENG 225.

ENG 403 - Seminar in Topic I (3)

Research and development of an extended argument informed by critical debates; topics to rotate and may include "Telling/Retelling," "Economics & Ethics," and "Posthumanism." English majors only or instructor permission.

Prerequisite: ENG 225.

ENG 404 - Seminar in Non-Western Literature I (3)

Research and development of an extended argument informed by critical debates; topics to rotate and may include "Postcolonial Literature," "Indian Literature," and "Modern Chinese Literature." Restricted to English majors or with instructor permission.

Prerequisite: ENG 225.

ENG 493 - Research (Variable)

Involves students in professional-level research by assisting faculty in research or creative projects. An opportunity for mentoring beyond the classroom and involvement in processes and procedures of research and publication. Work will vary, but could include researching primary and secondary materials, summarizing articles and books, compiling bibliographies, indexing, copy editing, manuscript preparation, and dissemination of manuscripts.

ENG 497 - English Internship (Variable)

Academic internships are available for qualified students (3.0 G.P.A.; 3.25 G.P.A. in English). Internships provide English majors with job experience pertinent to the study of English. The internship may be taken for one to three credit hours, and the credit can apply to the English major. Students may receive an IP (In Progress) grade until the completion of their internship.

ENG 498 - Alternative Capstone (3)

Research, study, or original work under the direction of a faculty member, applying and mastering all major skills (close reading, critical thinking, integration of sources, and persuasive writing) through the development of individual research project from portfolio of prior course assignments. English majors only.

Prerequisite: ENG 225.

ENG 499 - Senior Capstone Seminar (3)

Seminar course required of all majors, with emphasis on applying and mastering all major skills (close reading, critical thinking, integration of sources, and persuasive writing) through the development of individual research project from portfolio of prior course assignments. English majors only.

Prerequisite: ENG 225.

ENT - Entrepreneurship

ENT 200 - Introduction to Entrepreneurship (1)

Introduces students to the language, process, mindset and skillset of entrepreneurship. Course format includes entrepreneurial speakers and leaders, identification of potential opportunities, and key elements of preparing for an entrepreneurial career, including starting a new enterprise, developing a social venture, or creating a new product.

ENT 480 - Creating a World-Class Venture (3)

This course teaches the Lean Launch Pad Opportunity Assessment process, using the Business Model Canvas and other tools to assess the viability of entrepreneurial endeavor. Students pursue and investigate an opportunity, conducting real world business meetings, including business trip to New York. (Open only to Entrepreneur Scholars.) Fee: \$2,000 covers participation in ENT 480, including travel.

ENT 481 - Entrepreneur Apprenticeship (3)

Students develop a business plan (including market analysis and financial projections) and launch key aspects of an entrepreneurial venture. Students complete an apprenticeship which implements aspects of their own venture. Prepares students to compete in the University's Pilot Venture Challenge. (Open only to Entrepreneur Scholars.) Fee: \$2,000 covers participation in ENT 481 and ENT 482, including travel. IP grade permitted.

Prerequisite: ENT 480.

ENT 482 - Global Entrepreneurship (3)

Prepares students to conduct international business by comparing and contrasting the business practices of entrepreneurs in the US with entrepreneurs globally. Immerses students in a foreign culture where they meet with business experts, suppliers, or potential partners in an international destination, to understand issues of global launch, sourcing or expansion, and potentially transact business internationally. (Open only to Entrepreneur Scholars.) IP grade permitted.

Prerequisite: ENT 480.

ENV - Environmental Studies

ENV 110 - Earth Systems Science (3)

This course develops a holistic view of planet Earth by considering global interactions between atmosphere, hydrosphere, biosphere, and geosphere. A regional perspective is developed by examining how plate tectonics, earthquakes, and volcanoes have shaped the active continental margin in the Pacific Northwest. Fee: \$30

ENV 111 - Natural Hazards in the Pacific Northwest (3)

Geological catastrophes (e.g. earthquakes, meteorite impacts, and flooding) are important processes in shaping the Earth. This course will acquaint students with the scientific principles governing these catastrophes. Fee: \$30

ENV 112 - Glaciers, Ice, and Climate Change (3)

Covers global climate change past and present through ice sheets, glaciers, land forms, and global climate dynamics. Additional emphasis on current global climate issues.

ENV 160 - Science of a Sustainable Gourmet (3)

This course explores foods, including the science behind the ways we grow, process, distribute, and cook them. We consider the impacts food choices have on our environment and health. We ask what dietary choices are the most sustainable and how to make informed decisions about buying food. Finally, we discuss the aesthetic and cultural attributes of really delicious food.

ENV 161 - The Science of the Literate and Sustainable Gourmet (3)

This course introduces current issues, scientific background, and future prospects related to food production and consumption. Students will explore the consequences and limitations of modern agriculture and understand the impacts food choices have on our environment and health. In collaboration with ENG 161, Thinking Through Food in Literature, students will engage in a research project to consider sustainable dietary choices.

Corequisite: ENG 161.

ENV 162 - Introduction to Oceanography (3)

Survey of the world's oceans in terms of chemical, physical, and geological principles, and examples of marine habitats. Fee: \$30

ENV 170 - Sustainability Science (3)

Core sustainability principles through the lens of political ecological perspectives. Topics include ecological stewardship, global systems, natural resources, technology, transportation; and community and personal resilience.

Corequisite: None. Crosslisted as: No.

ENV 182 - Environmental Science (3)

Survey of the scientific issues involved in the problems of maintenance of environmental quality and preservation of our ecosystem. The search for a sustainable society will be discussed.

ENV 200 - Perspectives in Environmental Studies (3)

This entry course surveys the different specialties that make up the field of environmental studies, including environmental biology, atmospheric science and climatology, geomorphology, geology, GIS & remote sensing, conservation biology, water quality regulation, the relationship between science environmental ethics, and/or other current topics. Students will be presented with a broad introduction to all of these disciplines. Fee: \$30

ENV 273 - Special Environmental Laboratory (Variable)

For special lower-division laboratory projects. Content and credit to be arranged. Fee: \$60 per credit hour.

ENV 300 - Techniques in Environmental Research (3)

This course will provide a field and/or laboratory experience that gives students an introduction to techniques used in environmental research. In different sections research approaches used in atmospheric science, climatology, geomorphology, geology, coastal ecology, conservation biology, or other areas of active research in the environmental studies department will be focused on. May be repeated for up to 6 credits.

Prerequisite: Instructor permission.

ENV 305 - Environmental Regulation and Non-Regulatory Responses (3)

This course is designed to provide an understanding of the basics of the environmental regulations and how local, state and the federal governments responding to regulatory issues through innovation and performance-based approaches. Performance based approaches include, among others: accurate measures, best management practices; purchasing and certification and implementing environmental management systems and programs.

ENV 310 - Topics in Environmental Studies (3)

This course introduces students to environmental studies at an upper division level through an examination of various topics and/or issues related to the environment. Possible topics may include the nature of science and the scientific method, skepticism about science, endangered species, compassionate conservation, water, and/or climate change.

Prerequisite: One lower division ENV course.

ENV 314 - Resilience and Policy (3)

Resilience Science is the dominant theory of social-ecological systems, shaping policy, planning and practice. Students investigate a series of local, national and international case studies and related regulatory policy, environmental planning and sustainable development practices, while comparing traditional command-and-control approaches with the Resilience Science model.

ENV 317 - Science of the Two Americas (3)

The Two Americas in terms of environmental health are not just the coasts and the inner states, or just white people and people of color, or just liberal and conservative. Those with dramatically different environmental health impacts are rich and poor people. This course will look at lead in drinking water, mountaintop mining, fracking for natural gas, subsistence fish consumption, air pollution and children, septic systems and diseases.

Prerequisite: ENV 182 or ENV 200 or ENV 310.

ENV 324 - Environmental Ethics (3)

An inquiry into our obligations to the non-human world and the philosophical basis of those obligations.

Prerequisite: PHL 150, PHL 220. Crosslisted as: PHL 324.

ENV 325 - Metrics for Sustainability (3)

Covers current analytical frameworks and tools that leading-edge organizations are using to benchmark and improve environmental, social and financial performance. Includes environmental and social valuation techniques, life cycle analysis, and carbon footprinting.

Prerequisite: ECN 120 or ECN 121. Crosslisted as: ECN 325.

ENV 333 - Geomorphology (3)

This course explores the physical and biological controls on sediment transport and the shape of the Earth's landforms on human to geologic timescales. Topics include: rivers, glaciers, hillslopes, soils, landslides, coastal processes, and Aeolian processes. Will also consider applications to land management and river restoration.

Corequisite: ENV 337.

ENV 337 - Geomorphology Lab (1)

Field and laboratory investigation of geomorphology. Three hours of laboratory per week. Fee: \$60

Corequisite: ENV 333.

ENV 348 - Geopolitics of Energy and the Environment (3)

This course addresses questions such as: What is the relationship between the biophysical environment and international security? Does competition over resources cause conflict? Does environmental scarcity cause conflict? How will global warming affect relations among great powers the political stability of the developing world?

Crosslisted as: POL 348.

ENV 349 - Environmental Policy (3)

This course will consider how environmental problems arise, looking at how a progression of natural and human circumstances becomes an "environmental problem." It will survey the law, politics, and institutions that manage pollution. The course will also look closely at a handful of environmental policy issues, particularly in the Columbia River, and the interplay of science, risk, and uncertainty.

ENV 357 - Environmental History of the Americas and World (3)

This course will examine the exploitation of natural resources in modern global society, from the beginnings of the Industrial Revolution to the modern day. Special emphasis is placed on the intersection of technology, culture, and the environment in modern life.

Crosslisted as: HST 357.

ENV 358 - Physical Oceanography (3)

This course examines data from modern buoy networks, sonar, satellites, and computational models to explore seawater chemistry, seafloor and coastal geology, currents, waves, tides and more; especially focusing on maritime transportation, ocean acidification, pollution, overfishing, tsunamis, beach erosion, storm surge, sea-level rise, rogue waves, rip currents, sustainable coastal development, surfing and swell forecasting. Fee: \$30

ENV 361 - Meteorology (3)

This course focuses on physical processes controlling day-to-day weather, along with the current tools and techniques that professional meteorologists use to monitor, model, and forecast the weather. Course goals include helping students to make better weather-related planning decisions, and reducing vulnerability to hazardous weather phenomena such as blizzards, lightning, large hail, downbursts, tornadoes, damaging straight-line winds, and other extremes.

ENV 363 - Environmental Literature (3)

Study of British and American authors from the eighteenth century to today who have creatively considered and analyzed humans' relationship to and representations of the environment. Selected authors may include William and Dorothy Wordsworth, Henry David Thoreau, Rachel Carson, and Michael Pollan.

Crosslisted as: ENG 363.

ENV 365 - Climatology (3)

This course explores the physical, chemical, and biological phenomena that affect and are affected by Earth's climate system and climate changes. The course also includes applications of climate science to energy-efficient architecture, water management, ecology, forestry, precision agriculture, solar power, wind power, analysis of paleoclimates, and modeling of future climate change, along with anthropogenic climate-change impacts and mitigation strategies.

ENV 373 - Constructing & Flying RC Aircraft (1)

This course focuses on students learning how to fly various types of fixed-wing and rotary-wing remotely controlled aircraft. They will construct and test types of new low-cost remotely controlled aircraft. Students will also learn to acquire low-altitude imagery of field sites using these aircraft. Aerial imagery is rapidly becoming a critical part of the scientific toolkit in the sciences. Fee: \$60

ENV 382 - Air Pollution (3)

The course investigates the sources, distribution and impacts of atmospheric pollutants. Specifically, the role of air pollution in climate change, human health, and environmental impacts will be covered in detail. The course will also discuss the natural background chemistry of the atmosphere, photochemistry, and urban air pollution.

Prerequisite: CHM 207, CHM 277.

ENV 383 - Environmental Geoscience (3)

This course investigates the interrelationships between the inanimate Earth and life forms, with special emphasis on environmental interactions between the Earth and humans. Topics include the environmental significance of natural resources (including energy, minerals, soil, and water), natural hazards (including earthquakes, mass wasting, subsidence, and volcanoes), ocean processes (including basins and coastlines), and waste management (including burial, movement, remediation). Fee: \$30

ENV 384 - Remote Sensing and Geographic Information Systems (3)

This course investigates environmental applications of multispectral remote sensing (RS) and geographic information systems (GIS). RS topics include sensor systems, digital image processing, and automated information extraction. GIS topics include spatial database management systems, data analysis, and environmental modeling. Emphasis is placed on biological applications including vegetation mapping, habitat identification and field data mapping.

Crosslisted as: BIO 384, CE 458.

ENV 385 - Environmental Microbiology (3)

Morphology, physiology, and ecology of microorganisms, emphasizing their role in environmental processes such as nutrient cycling, bioremediation, waste treatment, and food production.

Prerequisite: CHM 207, CHM 208.

ENV 386 - Environmental Chemistry (3)

This course takes the perspective of environmental chemistry to address topics including: energy forms, the atmosphere, the hydrosphere, the biosphere, transport of materials, chemical transformations, and modeling.

Prerequisite: CHM 208. Crosslisted as: CHM 386.

ENV 387 - Environmental Laboratory (1)

This lab involves outdoor measurements of environmental variables around campus using professional-grade equipment, plus indoor analysis of the data that students collect. Fee: \$60.

Prerequisite: ENV 361 or ENV 365.

ENV 400 - Integrating Seminar in Environmental Studies (3)

A project-oriented seminar in which student teams with varying backgrounds in environmental studies develop action plans to deal with regional environmental issues.

Prerequisite: ENV 200 or ENV 310 or permission of the instructor.

ENV 408 - Innovation for Sustainability (3)

Leaders in sustainability must be able to understand rapid changes in environmental and social conditions, innovate to adapt to those changes, collaborate to envision transitions to sustainable futures, and engage with others to realize those visions. To build these capacities, this course develops systems thinking skills using readings and case studies drawn from environmental, social, and business contexts.

Prerequisite: Any ENV course or CE 367 or permission of instructor. Crosslisted as: BUS 408, EGR 408.

ENV 482 - Theology in Ecological Perspective (3)

This course investigates the relationship between theology and science, the science of ecology and the related field of environmental science, the major aspects of our current environmental crisis, underlying historical and social reasons for this crisis, and current attempts to reformulate Christian theology from the perspective of ecology. The course also explores possible solutions for a sustainable future.

Crosslisted as: THEP 482.

ENV 493 - Environmental Research (1-3)

Faculty-directed student research. Before enrolling, a student must consult with an environmental studies faculty member to define the project.

ENV 497 - Environmental Internship (Variable)

Practical field experience working with governmental agencies, corporations, or environmental organizations. Students will be required to do appropriate readings and an appropriate report. Students may receive an IP (In Progress) grade until the completion of their internship.

Graduate Courses

ENV 501 - Innovation for Sustainability (3)

Ecosystems, communities and enterprises are examples of complex systems. Sustainability, as it applies to each of these examples requires a systems thinking approach for its implementation and management. This course develops systems thinking perspectives and skills through a series of case studies drawn from environmental, social, and business contexts, using a participatory approach.

FA - Fine Arts

FA 107 - The Creative Process in Visual Art (3)

Students will engage with the visual arts through exploration, analysis and discussion, and by considering global influences, developments and intersections between the visual arts across cultures. Artistic disciplines to be covered include, but are not limited to painting, architecture, sculpture and photography. Students will learn how creativity and imagination expressed in visual arts shape ideas in historical and contemporary life. Fee: \$70

FA 108 - The Creative Process in Performative Art (3)

Students will engage with the performative arts through exploration, analysis and discussion, and by considering global influences, developments and intersections between the performative arts across cultures. Artistic disciplines to be covered include, but are not limited to music, theatre, dance and film. Students will learn how creativity and imagination expressed in performative arts shape ideas in historical and contemporary life. Fee: \$70

FA 125 - Basic Design (3)

A course designed to involve students in the creative process while concentrating on the fundamental concepts of design through a series of exercises using a variety of art media. Fee: \$55.

FA 203 - Development of the Fine Arts In Europe (3)

Western culture through the study of art forms from Roman-Hellenistic times to the Renaissance. (Salzburg only.)

FA 226 - Painting I (2)

Studio supervision in basic design and painting techniques. Class is conducted by a series of seminar conferences and projects. Students are expected to provide all necessary materials. May not be audited. Fee: \$55.

FA 228 - Ceramics I (2)

Introduction to both wheel and hand-building techniques using cone 6 clay. Glazing and firing procedures and the use of clay as both a functional and expressive medium will be demonstrated. May not be audited. Fee: \$55.

FA 242 - Drawing I (2)

Studio training in the observation of objects. Basic drawing of inanimate objects in graphite and ink. Course also includes application of the principles of object drawing to sketching. May not be audited. Fee: \$55.

FA 244 - Sculpture I (2)

Introductory studio course examines historical and contemporary issues relevant to creating a personal visual vocabulary and communicating through sculptural forms. Classes will be structured around presentations, demonstrations, ongoing group discussions, critiques, and studio work in various media. May not be audited. Fee: \$55.

FA 304 - Development of the Fine Arts In Europe (3)

Western culture through the study of art forms from the Renaissance to the twentieth century. (Salzburg only.)

FA 307 - The Arts in Portland (3)

An exploration of the arts in Portland, including music, theatre, film, visual arts, and architecture. A majority of the class sessions are field trips to experience the arts in person. May be substituted for FA 107 or 108. Fee: \$120.

FA 308 - Screenwriting (3)

Study of the aesthetics and techniques involved in the written dramatic form for video and film production. Emphasis upon writing, workshop critiques, and discussion of students' screenplays.

Crosslisted as: ENG 308.

FA 310 - The Fine Arts Through the Film Medium (3)

A study of the Fine Arts as they have been perceived and explored through the lens of both Narrative and Documentary Film Makers. Students will study various means to crafting a personal response to various Director's approaches to capturing the Fine Arts in Film, as well as, crafting their own film about the Fine Arts. Course Substitutes for FA 107 or 108.

Prerequisite: Transfer student, Junior standing or higher or permission of instructor.

FA 315 - Black and White Photography II (3)

Students will expand their knowledge of traditional black and white photographic processes with a wide range of materials and techniques. May be repeated for a maximum of 6 credit hours. May not be audited. Fee: \$100.00.

Prerequisite: FA 215, FA 216 or permission of instructor.

FA 318 - Digital Photography (3)

An introduction to digital photography: basic digital camera operations, digital photographic techniques for adjusting and manipulating images in Adobe Photoshop, and fundamentals of digital image capture, output, and workflow management including scanning, printing, and preparing images for the Internet. Course consists of lectures, demonstrations, lab exercises, field trips, weekly shooting assignments, critiques, and a final project/portfolio. Fee \$40.

FA 320 - Digital Video and Moving Media (3)

The course introduces students to the conceptual and technical facets of the moving image. Class participants will learn about narrative cinema, explore documentary works and view examples from contemporary video artists. Demonstrations will feature best practices in camera operation, sound recording and simple lighting technique. Students will use Adobe Premiere Pro 6 to organize, edit and publish projects. Fee: \$40.

FA 325 - 3-D Design (3)

Helps the student to build his/her own unique language as an expressive tool for art making. The creation of 3-D objects will be made from a variety of materials such as wood, clay, found objects, and mache. Enhances skills in perception, balance, and composition. Fee: \$40.

FA 327 - Painting II (2)

Studio supervision in advanced design and painting techniques. Class is conducted by a series of seminar conferences and projects. Students are expected to provide all necessary materials. May be repeated for a maximum of 4 credit hours. May not be audited. Fee: \$55.

Prerequisite: FA 226 or permission of instructor.

FA 329 - Ceramics II (2)

Advanced methods of forming and glazing pots. Individual exploration of clay is encouraged. May be repeated for a maximum of 4 credit hours. May not be audited. Fee: \$55.

Prerequisite: FA 228 or equivalent, or permission of instructor.

FA 330 - Mixed Media Experimental Painting (2)

This course is designed to lay a foundation for students in developing an aesthetic and conceptual framework for creating and analyzing artwork built of a variety of media within a single artistic composition. Students will be encouraged to experiment in ways that depart from what is considered as the traditional art of painting. Fee: \$40

Prerequisite: FA 125 or FA 226, or instructor permission.

FA 343 - Drawing II (2)

Advanced studio training in figure drawing and mixed media in graphite and ink. Course also includes application of the principles of object drawing and sketching to outdoor settings. May be repeated for a maximum of 4 credit hours. May not be audited. Fee: \$55.

Prerequisite: FA 242 or permission of instructor.

FA 344 - Figure Drawing (2)

Advanced studio training in the techniques of drawing the human form, including the use of live models. May not be audited. May be repeated for a maximum of 4 credits. Fee: \$40

Prerequisite: FA 242 or permission of instructor.

FA 345 - Sculpture II: Stone Carving (2)

This advanced studio class focuses entirely on stone carving. Skills and concepts learned in FA 244 will be strengthened while furthering a personal visual vocabulary using stone. May be repeated for a maximum of 4 credit hours. May not be audited. Fee: \$55.

Prerequisite: FA 244 or permission of instructor.

FA 346 - Printmaking (2)

Introduction to the art of printmaking. A studio course in which students will make prints using a variety of techniques. May not be audited. May be repeatable for a maximum of 4 credits. Fee: \$100

FA 350 - Art History I (3)

Study art in its cultural context from ancient times to the early Renaissance. Topics include Paleolithic art and artifacts; the art and architecture of the ancient civilizations of Egypt, the Near East, Greece and Rome; plus works and issues arising from the Christian tradition and its dialogue with the ancient world. Visual resources include slides and video.

FA 351 - Art History II (3)

Study works of art and architecture from the High Renaissance to Postmodernism. Emphasis is on individual artists, art movements, and significant works studied in their cultural context.

FA 418 - Digital Photography II (3)

Continuation of Digital Photography. May be repeated for a maximum of 4 credits. Fee: \$40

Prerequisite: FA 318 or permission of instructor.

FA 445 - Sculpture III - Wood Carving (2)

An advanced level sculpture course where students will examine issues relevant to carving a three-dimensional form in wood. Students will create works that are based on concepts, and personal insights while obtaining technical skills with tools and materials. This class is structured around presentations, demonstrations, discussions, group critiques and studio time. May be repeated for a maximum of 4 credits. Fee: \$40

Prerequisite: FA 244 or instructor permission.

FRN - French

FRN 101 - Elementary French (3)

Acquisition of vocabulary and structures necessary to execute basic communicative tasks. Elementary readings and simple compositions. Courses must be taken in sequence.

FRN 102 - Elementary French (3)

Acquisition of vocabulary and structures necessary to execute basic communicative tasks. Elementary readings and simple compositions. Courses must be taken in sequence.

Prerequisite: FRN 101 or permission of instructor.

FRN 201 - Intermediate French (3)

Intensive review and further development of oral and written proficiency skills. Short oral presentations on cultural topics.

Prerequisite: One year of college French, two years of high school French or equivalent, or permission of instructor.

FRN 202 - Intermediate French Language and Culture (3)

This course offers an intensive review and further development of oral and written proficiency skills by working with the textbook, reading primary texts, and through short oral presentations on cultural topics. By the end of the 201-202 sequence, students will be able to identify components of other cultural perspectives and value worldviews other than their own.

Prerequisite: FRN 201 or permission of the instructor.

FRN 205 - Accelerated Intermediate French Language and Culture (6)

This intensive course combines French 201 and 202 into a summer course of six weeks. It immerses students in the language and strengthens their linguistic and cultural proficiency by working with a textbook and primary texts. By the end of this sequence, students will be able to identify components of other cultural perspectives and value worldviews other than their own.

FRN 301 - Advanced French Conversation and Culture (3)

Students further develop their reading skills and accuracy in oral expression through an advanced review and expansion of grammar and vocabulary as well as a wide variety of activities and reading cultural and literary texts. By the end of the 301-302 sequence, students will be able to recognize other cultural perspectives and use them in interactions in the target language.

Prerequisite: Two years of college French, four years of high school French, or equivalent.

FRN 302 - Advanced French Conversation, Composition and Culture (3)

This course builds reading, writing and speaking skills while broadening cultural background through a wide variety of activities, texts (including a complete work of fiction), the media, presentations on cultural topics, compositions and class discussions. By the end of the 301-302 sequence, students will be able to recognize other cultural perspectives and use them in interactions in the target language.

Prerequisite: FRN 301.

FRN 403 - Survey of French Literature (3)

Representative works and authors from the Middle Ages to the twentieth century. Reading, discussion, and text analysis. Papers and reports. Taught in French.

Prerequisite: FRN 302 or equivalent.

FRN 404 - Survey of French Literature (3)

Representative works and authors from the Middle Ages to the twentieth century. Reading, discussion, and text analysis. Papers and reports. Taught in French.

Prerequisite: FRN 302 or equivalent.

FRN 411 - French Phonetics (3)

Systematic study of the pronunciation, articulation, and intonation of modern French. Exercises in phonetic transcription. French songs, radio broadcasts, and TV news on the internet. Taught in French.

Prerequisite: FRN 302 or permission of instructor.

FRN 417 - Advanced French Grammar and Conversation I (3)

Thorough review and refinement of the essentials of French grammar in order to enhance writing, reading, and speaking skills. Conducted in French.

Prerequisite: FRN 302 or permission of instructor.

FRN 418 - Advanced French Vocabulary and Conversation Workshop (3)

Extensive practice in speaking the language with emphasis on the acquisition and use of new vocabulary and more complex idiomatic phrases.

FRN 419 - Advanced French Grammar and Conversation II (3)

Continued in-depth study of advanced French grammar. Application of the new, more complex structures in conversation. Conducted in French.

Prerequisite: FRN 302 or permission of instructor.

FRN 421 - Advanced French Culture and Civilization (3)

Study of the social, artistic, philosophical, and political currents of France and other French-speaking countries. Taught in French.

Prerequisite: FRN 302 or permission of instructor.

FRN 423 - Contemporary France (3)

Study and discussion of the main social and cultural issues in France from the 1960s to the present. Exploration and evaluation of current events covered in the French media. The material used will come from French cultural texts, newspapers, radio and television, as well as movies, advertising, and songs. Taught in French.

Prerequisite: FRN 302 or permission of instructor.

FRN 490 - Directed Study (Variable)

Credit arranged.

GEO - Geography

GEO 373 - Cultural Geography (3)

A survey of global cultures and interrelationships between environment and culture. Focus on language, religion, migrations and cultural transformation in an increasingly interdependent world. Salzburg Only. Approval of Studies Abroad Director Required.

GRM - German

GRM 101 - Elementary German (3)

Acquisition of vocabulary and structures necessary to execute basic communicative tasks.

GRM 102 - Elementary German (3)

Acquisition of vocabulary and structures necessary to execute basic communicative tasks.

Prerequisite: GRM 101 or permission of instructor.

GRM 105 - Accelerated Elementary German (6)

This class provides students with the opportunity to learn a full year of German in one semester with the advantage of intensive study, which promotes greater retention. It provides a solid foundation for second-year German at the University of Portland or for students planning to study in Salzburg.

GRM 201 - Intermediate German (3)

Review and further development of proficiency skills.

Prerequisite: Six credit hours of beginning college German, two years of high school German, or equivalent.

GRM 202 - Intermediate German Language and Culture (3)

This course furthers the development of written and oral proficiency by working with the textbook and primary texts. By the end of the 201-202 sequence, students will be able to identify components of other cultural perspectives and value other worldviews in comparison to their own.

Prerequisite: GRM 201 or permission of instructor.

GRM 207 - Accelerated Intermediate German Language and Culture (6)

This intensive course combines GRM 201 and 202 into one semester. It immerses students in the language and strengthens their linguistic and cultural proficiency by working with a textbook and primary texts. By the end of this sequence, students will be able to identify components of other cultural perspectives and value other worldviews in comparison to their own.

GRM 301 - Advanced German Conversation, Composition, and Culture (3)

Students engage with a broad variety of activities, topics, and primary texts to develop conversational proficiency, accuracy in writing and speaking, and expand active and passive vocabulary. By the end of the 301-302 sequence, students will be able to recognize other cultural perspectives and use them in interactions in the target language.

Prerequisite: GRM 202 or GRM 207 or four years of high school German.

GRM 302 - Advanced German Conversation, Composition, and Culture (3)

Students engage with a broad variety of activities, topics, and primary texts—including one complete work of fiction—to develop conversational proficiency, accuracy in writing and speaking, and expand active and passive vocabulary. By the end of the 301-302 sequence, students will be able to recognize other cultural perspectives and use them in interactions in the target language.

GRM 311 - Advanced German Conversation, Composition, and Culture (3)

Students will increase the proficiency of their receptive and productive skills in German through a variety of activities and materials, including tasks allowing students to engage with local culture and customs. By the end of the 311-312 sequence, students will be able to recognize other cultural perspectives and use them in interactions in the target language. (Salzburg only.)

Prerequisite: GRM 202 or GRM 207 or equivalent.

GRM 312 - Advanced German Conversation, Composition, and Culture (3)

Students will increase the proficiency of their receptive and productive skills in German through a variety of activities and materials, including tasks allowing students to engage with local culture and customs. By the end of the 311-312 sequence, students will be able to recognize other cultural perspectives and use them in interactions in the target language. (Salzburg only.)

Prerequisite: GRM 202 or GRM 207 or equivalent.

GRM 353 - Introduction to Literary and Cultural Analysis (3)

This course is intended as a scaffold between the GRM 301 - GRM 302 sequence and the 400-level. By reading a variety of texts, students will strengthen their reading skills, practice close analysis, and begin to work with literary theory. This course will continue to build on students' existing vocabulary and grammar knowledge with the goal of greater precision in writing in preparation for the 400-level.

Prerequisite: GRM 301 or GRM 311.

GRM 354 - Introduction to Literary and Cultural Analysis (3)

This course is intended as a scaffold between the GRM 301 - GRM 302 sequence and the 400-level. By reading a variety of texts, students will strengthen their reading skills, practice close analysis, and begin to work with literary theory. This course will continue to build on students' existing vocabulary and grammar knowledge with the goal of greater precision in writing in preparation for the 400-level.

Prerequisite: GRM 301 or GRM 311.

GRM 355 - Advanced Conversation and Composition and Austrian Images (3)

This course allows students who have completed two 300-level courses prior to study in Salzburg to improve the accuracy of their written and spoken proficiency in German. Along with classroom activities, students will engage with the local culture and customs. (Salzburg only.)

Prerequisite: GRM 302 or equivalent.

GRM 356 - Advanced Conversation and Composition and Austrian Images (3)

This course allows students who have completed two 300-level courses prior to study in Salzburg to improve the accuracy of their written and spoken proficiency in German. Along with classroom activities, students will engage with the local culture and customs. (Salzburg only.)

Prerequisite: GRM 302 or equivalent.

GRM 370 - Intercultural Competence in an Austrian Context I (3)

Examines the cultural and linguistic heritage of Austria by focusing on the music, history/politics, and language of the region through an interdisciplinary and intercultural lens. Students will develop their knowledge, skills, attitudes, and second language proficiency as outlined in the Global and Intercultural Learning Outcomes, and as pertinent to the Austrian context. Course taught in Salzburg.

GRM 371 - Intercultural Competence in an Austrian Context II (3)

Examines the cultural and linguistic heritage of Austria by focusing on the music, history/politics, and language of the region through an interdisciplinary and intercultural lens. Students will develop their knowledge, skills, attitudes, and second language proficiency as outlined in the Global and Intercultural Learning Outcomes, and as pertinent to the Austrian context. Course taught in Salzburg.

GRM 390 - Directed Study (Variable)

Credit arranged.

GRM 401 - Multicultural Society in Germany (3)

Germanness is often equated with whiteness, but this no longer reflects the reality of German society. In this course we engage with historical events that complicate the idea of Germanness as well as current creative works that revise Germany's national identity as based on race. Together we investigate national identity, belonging, and the politics of integration and inclusion.

Prerequisite: GRM 301 or GRM 311.

GRM 403 - Topics in Austrian Literature and Culture (3)

Students in this course will explore an aspect of Austrian literature and culture as it relates to depictions of nature, boundaries, identity, spirituality, or the legacy of the past and will also refine their receptive (listening, reading) and productive (speaking, writing) skills in German through summary, description, comparison, and narration.

Prerequisite: GRM 301 or GRM 311.

GRM 405 - German Women's Writing (3)

In this supposedly post-feminist age, gender nonetheless shapes lived experience. This course introduces students to the literature and thematic concerns of women's writing in German. Taking an intersectional approach to identity, we consider gender as one facet that shapes life and literary production.

Prerequisite: GRM 301 or GRM 311.

GRM 407 - Text and Image in the First World War (3)

This course focuses on visual and textual cultural products in the German-speaking world during the First World War, including public documents, such as Kaiser Franz Josef's declaration of war, and private documents, such as letters written between war front and home front. Along with content goals, this course focuses on practicing and increasing German language skills appropriate for this level.

Prerequisite: GRM 301 or 311.

GRM 408 - German Play Reading and Performance (3)

German plays will be read in a reader's theater format, discussed in the context of current social/cultural events, and performed in German. Emphasis upon expanding vocabulary and improving pronunciation, intonation, and expression. Conducted in German.

Prerequisite: GRM 301 or GRM 311.

GRM 411 - Remembering Divided Germany (3)

Using a variety of cultural products (films, poetry, memoirs, essays, newspaper articles, and museum exhibits) created after German unification, we consider the ways that Germans remember their divided past and how it shapes their current understanding of the German nation. Ultimately we ask whether it is possible yet to speak of a unified Germany.

Prerequisite: GRM 301 or GRM 311.

GRM 412 - Nature, German Romanticism and its Legacy (3)

In this course, we will describe characteristics of German Romanticism focusing on nature and spirituality and explore how the depiction of nature in Romanticism is a vehicle for discussions about environmental degradation and solutions in contemporary Germany. We will engage with a variety of images and text genres, including literature, public debate, and political posters.

Prerequisite: GRM 301 or GRM 311.

GRM 422 - Art and Media of German-Speaking Countries (3)

Students will investigate a variety of media or a single medium (such as art, theater, film, and music) to analyze depictions of nature, boundaries, identity, spirituality, or the legacy of the past in German-speaking cultures. Concurrent with refining their German language skills, students will learn specific vocabulary to analyze each medium.

Prerequisite: GRM 301 or GRM 311.

GRM 499 - Senior Thesis (Variable)

Research, study, or original work under the direction of a faculty mentor, leading to a scholarly thesis document with a public presentation of results. Requires approval of thesis director, department chair, dean, and the director of the honors program, when appropriate.

Prerequisite: Senior standing; 3.0 GPA in the thesis area or good standing in the honors program.

HON - Honors

HON 101 - Colloquium (2)

This course introduces students to issues surrounding food sustainability, food safety, the locavore movement, and the politics of food. The course is an intensive investigation that features classroom work, field trips, and experiential opportunities for incoming Honors students. It provides an introduction to multi-disciplinary approaches to a common issue. Course is graded P/NP. Fee: \$425

Prerequisite: Honors program participant.

HON 201 - Inventing the Future (1)

This one-credit hour course aids students in clarifying their future and determining how to make it a reality. Students develop personal statements that can be modified for major scholarships or applications for graduate school and gain knowledge about interviews and how to prepare for them. The course culminates in a retreat where students present drafts of their personal statements.

Prerequisite: Honors program participant.

HON 301 - Defining the World (1)

This one-credit hour course sees students investigate the parameters of their fields of study and understand how different fields relate to and differ from each other. Through interviewing experts in the fields, students gain an understanding of the ways in which each field is transforming and what they will need to prepare for as they enter their career.

Prerequisite: Honors program participant.

HON 391 - Seminar (Variable)

Credit arranged.

HPE - Health and Physical Education

HPE 107 - Introduction to the Sport of Rowing (3)

Introduction to the sport of Rowing; designed for the novice (beginner). Includes basic technique and terminology, cardiovascular training (erging, rowing, running) and strength training. Emphasis will also be placed on learning land and water safety, attention to details with equipment on and off the water, and rowing terminology. All sessions will include both land and water training. Course is graded P/NP.

HPE 108 - Life Skills for Student Athletes (1)

Recognizes the unique demands of college student athletes and assists them in acquiring skills which will allow them to respond to those challenges. Course content will reflect issues relevant to adjustment to college life; social, academic, and athletic performance demands.

HPE 109 - Personal Fitness (1)

Development of personal fitness goals in strength, muscular endurance, flexibility, and cardio-respiratory endurance using a variety of exercise techniques, anaerobic and aerobic activities, and run/walk programs.

HPE 110 - Beginning Weight Training (1)

Introduction to weight training techniques for the development of muscular strength and endurance. The course includes the development of an individualized program.

HPE 111 - Leadership Skills for Student Athletes (1)

Recognizes the unique demands of college student athletes and assists them in acquiring skills which will allow them to respond to the challenges. Course content will focus student athletes' attention to athletic leadership, personal development, and peer mentoring.

HPE 115 - Swimming Skill Improvement (1)

Development of swimming techniques focusing on stroke improvement and achievement of personal goals.

HPE 116 - Swim Conditioning (1)

Development of fitness for swimming using a variety of training techniques to achieve individual goals.

HPE 117 - Water Aerobics (1)

Development of strength, endurance, flexibility, balance, and feelings of well-being through aerobics in the water.

HPE 120 - Beginning Taekwondo/Hapkido (1)

An introduction to the Korean martial arts of Taekwondo and Hapkido, this class will cover basic stances, blocking, striking, kicking, forms, joint-locking, and self-defense. Through physical practice, we'll look at similarities and differences in the two styles, while also learning about the Korean culture. Course is graded P/NP.

HPE 121 - Introduction to Filipino Martial Arts (1)

A primer on the Filipino arts of Kali/EsKrima (using a rattan stick for defense/attack), Panantukan ("dirty boxing"), Pananjakman (kicking), and Dumog (grappling/off balancing). Course is graded P/NP.

HPE 122 - Jeet Kune Do (1)

A class based on Bruce Lee's philosophy of martial training, this course combines mainly kickboxing and trapping skills. Cooperative/instructional rather than competitive. Course is graded P/NP.

HPE 204 - Introduction to Athletic Training (3)

Designed to provide a working knowledge of the prevention, care, treatment, and rehabilitation of athletic injuries. Basic principles of taping and use of modalities will be presented.

Prerequisite: BIO 103 or equivalent.

HPE 210 - Lifetime Health and Fitness (3)

Students will develop a solid foundation of life skills needed to maintain personal physical, mental, emotional, and spiritual health and fitness. Nutrition, hydration, exercise, psychological health, family health, financial health, environmental health, along with local, national, and global health issues will be studied. CPR and First Aid certification will also be completed.

HPE 405 - Kinesiology for Physical Educators (3)

Students apply their knowledge of human anatomy to the study of movement with major emphasis placed upon the action of bones, joints, and muscles and the role of the nervous system in relation to body control. The applicable mechanical principles to gross motor activities are stressed.

Prerequisite: HPE 204, BIO 307, BIO 377.

HPE 406 - Medical Aspects of Athletic Injuries (3)

Equips the student with the knowledge, procedure, and techniques an athletic trainer uses to perform joint evaluations, apply therapeutic modalities, and rehabilitate athletic injuries. Students will be expected to complete a project involving procedures used in specific athletic injuries.

Prerequisite: HPE 204.

HPE 408 - Exercise Physiology for Physical Educators (3)

Provides the student with a workable knowledge of human physiological response to exercise and other environmental stresses. Students will be involved in such practices as the use of graded exercise testing to determine physical fitness levels.

Prerequisite: HPE 204, BIO 308, BIO 378.

HST - History

Introductory Surveys**HST 210 - Who is America: The Early U.S. (3)**

This history explores concepts of citizenship and belonging in the United States through the Civil War. The course begins with pre-colonial indigenous history and moves through colonization, nation-forming, slavery, and abolitionism. Students learn about inclusion, exclusion, and belonging, particularly as related to race, gender, and diversity in the physical and metaphorical space that is/becomes "America".

HST 211 - Who is America: The Modern U.S. (3)

This history explores concepts of citizenship and belonging in the United States from the end of the Civil War through the twentieth century. The course begins with the end of slavery, moves through Reconstruction, racial segregation, imperialism, and civil rights movements. Students learn about inclusion, exclusion, and belonging, particularly as related to race, gender, and diversity in the physical and metaphorical space that is "America".

HST 220 - The Search for Justice in the Western Tradition (3)

Through an examination of canonical texts that span three continents and two millennia (500 BCE- 1600 CE), students will learn how ancient, medieval, and early modern ideas of justice and the common good have played a crucial role in shaping modern societies, institutions, and values. Students will also explore how notions of diversity, gender, and belonging have evolved since antiquity.

HST 221 - Modern Western Civilization (3)

Development of Western civilization from the sixteenth century to the present and its impact on the non-Western world.

HST 251 - Modern East Asia (3)

This course examines East Asia from about 1400 to the present, analyzing the region's early modernity and its violent transformations in the modern era. Students will learn how empires and nations used ethnicity, race, and distinct views of civilizations to legitimate themselves from ca. 1400 to the present. Students will also explore the connections between history and contemporary affairs.

HST 254 - Colonial Latin America (3)

The "discovery" of the Americas is one of the most important historical events. The collision between "old" and "new" worlds brought about the creation of several multi-ethnic societies that comprise Latin America. This course will examine Latin America from pre-Colombian period, conquest, and three hundred years of European rule.

HST 256 - Modern Latin America (3)

From the Wars of Independence in the nineteenth century to the various revolutions, dictatorships, and social movements of the twentieth century. Latin American societies have gone through upheavals and changes. This course will examine how these 200 years of transformations have worked to form modern Latin America.

Upper-Division Courses

HST 300 - Introduction to Historical Methods (3)

A required course for history majors that provides an introduction to the discipline of history and how it is practiced by historians. Students will examine various types of evidence used by historians and the methods of analysis that they apply to construct historical arguments through primary document collection and analysis, review of historiography, and peer discussion.

Prerequisite: One 200-level history course or permission of the department chair.

HST 310 - Colonial North America (3)

Study of the exploration and colonization of North America by Spain, France, and Britain. Emphasis will be placed on interactions with Native Americans, the development of unique societies and political institutions, and a comparison of the establishment of the independent nations of Canada, Mexico, and the United States.

HST 311 - The American Revolution (3)

Examines the era of the American Revolution from 1750 through 1820. Special emphasis on the imperial politics and protests, the military, diplomatic, and political history of the war, and the political, economic, and foreign policy crises caused by the break from the British Empire.

HST 312 - Plains Indians History (3)

This course will survey the major aspects of Plains Indian culture and history from the earliest archaeological evidence to the present day. Special emphasis will be given to traditional Plains Indian cultures and the interaction between Plains Indians and the U.S. culture and government in the nineteenth and twentieth centuries.

HST 313 - United States: Civil War Era (3)

Study of the US from the Jacksonian era through the Civil War to the emergence of a modern state.

HST 314 - American Expansion (3)

This course covers the expansion of American borders, trade, and leadership from the colonial period to the British Empire, through the western and Pacific frontiers, and into the age of globalization following World War II. The course examines the causes of expansion, and the development of American society as influenced by its experience of broad-ranging expansion.

HST 316 - US in Depression and War, 1920-1945 (3)

This course will examine key issues in American social and cultural history from the Jazz Age through the Great Depression and New Deal Era, to US involvement in World War II. Through texts, oral history, art, literature, and popular culture, the course will explore the effects of Depression and War on ordinary Americans.

HST 318 - Cold War America (3)

Study of the causes and effects of the Cold War in American domestic and foreign affairs. Emphasis will be placed on social, cultural, economic, and political movements within the United States, as well as America's role in world events after World War II.

HST 321 - Modern American Women's History (3)

This course examines the history of American women from 1890 to the present. Special emphasis will be placed on the diversity of this group called "women" particularly by race and class, the construction of American gender ideologies, and women's participation in social reform movements of the twentieth century.

Crosslisted as: 912.

HST 322 - American Protest and Reform (3)

This course traces the history and development of American movements for social justice in the twentieth century. Examining race, gender, and class-based social inequalities, the course highlights individuals and organizations that have worked to correct social injustice throughout the past century. The course emphasizes cultural forms of protest (literature and art) in addition to social and political reform.

HST 323 - African American History (3)

This course explores African American history from Reconstruction through the present. Highlighting important African American intellectuals and other leaders, the course explores the changing nature of race in America as well as the history of Civil Rights.

HST 325 - American Military History (3)

This course is designed to meet the American military history requirement for Army ROTC commissioning but is open to anyone interested in military history. Special attention will be given to battle analysis and the lessons learned from battle, the evolution of American warfare 1775 to present, the professionalization of the American military, and the place of the military in American history.

HST 330 - Ancient Mediterranean World (3)

This course examines the political, social, cultural, religious and intellectual history of the ancient Mediterranean World. After a quick study of the earliest civilizations of Mesopotamia and Egypt, this class proceeds through the Bronze Age, archaic, and classical Greece before finishing with the most stable of ancient civilizations, Rome.

HST 332 - Saints and Sinners in the Middle Ages (3)

Using primary texts (including martyrdom accounts, inquisition records, and biographies of medieval men and women) and works by leading medievalists, this course examines the relationship between religion and culture by studying changing notions of sanctity and heresy in the medieval West.

HST 333 - Medieval Europe (3)

A broad study of the history of Medieval Europe, from St. Augustine to the Hundred Years' War, with special emphasis on politics and culture.

HST 334 - The Age of the Crusades (3)

What role did the crusades play in the history of Europe and the broader Mediterranean World? Why did so many Christians go on crusade? How did Muslims understand the crusading movement? How did the idea of crusade evolve over time? We will consider these questions, the evolution of the crusading movement as well as its modern legacy.

HST 335 - Europe in the Age of Religious Wars (3)

This course will examine European history from 1500 to 1688. This period runs from the Reformation to the birth of the modern state system. Special emphasis on intellectual, artistic, and cultural developments as well as the theological and military transformations in European life during this time.

HST 336 - Europe in the Age of Enlightenment (3)

Course covers the history of Europe between England's Glorious Revolution in 1688 and the French Revolution of 1789. Special focus on the personalities and ideas of the Enlightenment and their influence on European governments and politics.

HST 342 - Europe in the Age of Nationalism (3)

Study of the major personalities, institutions, and movements which shaped the modernization of Europe in the century after 1815, as the region changed under the impact of economic and political revolutions.

HST 343 - Europe in the Age of Dictatorship (3)

A broad study of the European continent from 1900 to the revolutions of 1989 and their aftermath, emphasizing the political, social, and cultural significance of the century's major events.

HST 346 - Modern Germany (3)

Study of the varying political forms of German life over the past two centuries with emphasis on the war and the Nazi dictatorship.

HST 347 - Modern France (3)

Study of the major political, social, economic, and cultural forces since the Revolution of 1789 with emphasis on the intellectual ideas and governmental issues shaping modern France.

HST 351 - Modern Japan (3)

Study of Japan since approx 1800. Emphasis on the political, social, intellectual, and cultural developments of Japan from the last decades of the Tokugawa Shogunate through the country's economic dominance and stagnation in the late 20th century.

HST 352 - The United States and the Pacific Rim (3)

This course will focus on the historic social, economic, and political development and diplomatic relations of the United States and the nations of the Pacific Rim from roughly 1500 to the present. Major emphasis will be given to the geopolitical struggles over time between the United States and the Spanish and British empires, Japan, China, and Russia.

HST 354 - History of Modern Cuba (3)

The name Cuba evokes a broad range of images and emotions. This class will examine Cuban history from the 19th century to the present including slavery, independence, US intervention, the Cuban Revolution, Castro, exiles, and the "Special Period" utilizing a variety of sources to trace the trajectory of Modern Cuban history.

HST 355 - History of Mexico (3)

This course will trace the principal economic, social, cultural, and political transformations in Mexico from pre-contact to present. The class will explore the trajectory of modern Mexican history including conquest, resistance, independence, US intervention, the revolution, tourism, immigration, and the "Drug Wars."

HST 356 - Latin American History Through Popular Culture (3)

Bull fighting to baseball, Ricky Ricardo to Ricky Martin, Salsa Dancing to Chips and Salsa, Latin America's history is filled with a cornucopia of sights, sounds, tastes, and experiences. This course explores the contours of modern Latin American history--nationalism, imperialism, borderlands, transculturalism, and hybridity-- through the lens of pop culture.

HST 357 - Environmental History of the Americas and the World (3)

This course will examine the exploitation of natural resources in modern global society, from the beginnings of the Industrial Revolution to the modern day. Special emphasis is placed on the intersection of technology, culture, and the environment in modern life.

HST 358 - Disease and Medicine in World History (3)

This course will examine the role disease, medicine, and culture have played in human history from ancient times to the 20th century. Areas of particular focus will include major epidemics, the rise of germ theory, and the intersection between economic development and human health.

HST 359 - The Modern City (3)

Course examines the emergence of modern urbanization in various parts of the world from approximately 1800 to the present emphasizing similarities and differences in urban development across countries and cultures. Course addresses the built environment of cities as well as the political, social, and economic forces that have shaped urbanization and their effects.

HST 364 - World War I (3)

World War I from the geopolitical background to the peace settlements. The global conflict from military, political, economic, and cultural perspectives. Includes discussion of the Easter Rising in Ireland, the Russian revolutions of 1917, and the fragmentation of the Middle East.

HST 365 - History of the Second World War (3)

Study of World War II from immediate causes to Cold War conclusions with a balanced treatment of military, political and social (Homefront) events and issues.

HST 370 - Early Modern Europe (3)

Study of Europe from 1600 to approximately 1815 with emphasis on absolutism in France, constitutionalism in England, the emergence of Prussia and Russia, the Enlightenment, and the French Revolution. (Salzburg only.)

HST 372 - Modern Britain, 1800 - Present (3)

Study of special topics in British history.

HST 373 - British Empire 1815-1997 (3)

At its height, the British Empire controlled a quarter of the world and a fifth of the world's population while dominating most of the major waterways. From the victory over Napoleon at Waterloo to the return of Hong Kong to China in 1997 we will study the means of acquisition, cultural diversity, and the lasting impact of British institutions and the English language around the world.

HST 374 - The Great global Rivalry: Britain vs. France 1688-1815 (3)

From William of Orange and James II at the Battle of the Boyne to Wellington and Napoleon at the Battle of Waterloo, The British and French engaged in a global rivalry that determined the fates of North America and India, while giving the British worldwide naval supremacy.

HST 375 - History of Modern Ireland (3)

This course will focus on the emergence and development of modern Irish and Irish-American cultural identities: What does it mean to be Irish? This course will mix lectures, group discussions, and research (by groups and individuals) to examine the military, political, economic, social, religious, and intellectual developments that have shaped the contrasting versions of Irish identity.

400-Level Courses**HST 420 - Seminar in American History (3)**

In-depth seminar on history and historiography of a selected topic in American history. Designed for history major and minor students. May be repeated once for credit.

Prerequisite: One 200 or 300 level history course.

HST 430 - Seminar in European History (3)

In-depth seminar on history and historiography of a selected topic in European history. Designed for history major and minor students. May be repeated once for credit.

Prerequisite: One 200 or 300 level history course.

HST 450 - Seminar in Non-Western History (3)

In-depth seminar on history and historiography of a selected topic in non-Western history. Designed for history major and minor students. May be repeated once for credit.

Prerequisite: One 200 or 300 level history course.

HST 470 - The Practice of History (3)

The first of two courses in the senior thesis sequence required for history majors. Students gain practice in historiography, primary documents collection and analysis, historical argumentation, and public presentation through developing and identifying a thesis topic.

Prerequisite: HST 300 and one 400-level seminar (HST 420, HST 430, or HST 450).

HST 471 - Senior Seminar (3)

Study of the advanced techniques of research and writing of a senior thesis based on original research. Includes public presentation of results. Required for history majors.

Prerequisite: HST 470.

HST 499 - Senior Thesis (Variable)

Research, study, or original work under the direction of a faculty mentor, leading to a scholarly thesis document with a public presentation of results. Requires approval of thesis director, department chair, dean, and the director of the honors program when appropriate.

Prerequisite: Senior standing, 3.0 in the thesis area, and/or good standing in the honors program.

IHW - Integrative Health & Wellness

IHW 101 - Introduction to Integrative Health in Populations (3)

Students explore foundational concepts of the Integrative Health and Wellness Studies major, including the professional health educator role. Concepts of health and well-being are investigated through academic inquiry, self-reflection, and self-care practice. Students are introduced to the threads associated with the major: Integrative, Spiritual, Mental, Physical, Social and Population Health Promotion.

IHW 116 - Health and Wellness Across the Lifespan I (3)

Students explore foundations of integrative health and wellness in this introductory course. A population health framework is used to explore theories and principles of health and wellness, nutrition, genetics, and the determinants of health.

IHW 204 - Anatomy of Wellness (3)

This course focuses on structure and function of the human body from the viewpoint of wellness through homeostatic balance. Cells, tissues, systems and the organism are studied, emphasizing interrelationships among systems and physiological function regulation involved in balancing the holistic body. At course completion students will answer: What is structure? What is its function? What causes physiological imbalance?

Prerequisite: BIO 205/005 or BIO 207/277.

IHW 214 - Physiology of Wellness & Strategies for Healthy Living (3)

In this evidence-based biology focused course, students explore lifestyle impact on physiology, deepening their understanding of how implementing daily wellness habits can support normal physiology. Students will contrast normal and abnormal physiology, illustrating how health is balanced through lifestyle choices. The positive effects of integrative health approaches will be evaluated and applied to maintain and/or restore health.

Prerequisite: IHW 204 or BIO 305/365.

IHW 216 - Health and Wellness Across the Lifespan II (3)

Students in this advanced course apply the foundations of integrative health and wellness to a variety of populations across the lifespan. Students build upon knowledge from IHW 116 course, applying population health frameworks to further explore theories and principles of health, wellness, nutrition, genetics, and determinants of health.

IHW 224 - Integrative Health Promotion with Populations (3)

This course establishes a foundation of population health concepts from an integrative health perspective. Students will explore the healthcare system and identify what drives illness and wellness in communities. They will learn to identify relationships among behavioral, environmental, and other factors that influence health.

IHW 301 - Mind/Body/Energy Perspectives (3)

Students will learn about the interconnectedness of mind/body/energy and how that positively and negatively influences health. They will explore various modalities and practices that support resilience and diminish allostatic load. They will adopt a personal mindfulness practice.

Prerequisite: IHW 204 or BIO 305/365.

IHW 305 - Approaches to Care: Systems of Medicine (3)

Students will explore a variety of whole systems approaches—including but not limited to Oriental Medicine, Ayurveda, naturopathic, functional, homeopathic, chiropractic, and indigenous medicine—becoming informed regarding practitioner education, standards and approaches to care. Emphasis in this course is on foundational knowledge upon which to build collegial relationships with integrative health providers.

IHW 307 - Integrative Health Coaching I – Concepts of Individual Wellness (3)

This course provides the theoretical foundation for working with individual clients/learners in coaching practice. Integrating change and wellness theories, students will explore coaching methods for supporting the individual. Students will gain a full understanding of the psychodynamics of the therapeutic relationship as they practice simulated coaching sessions.

IHW 310 - Foundations of Health Education and Health Promotion (3)

This course examines principles of adult learning and learner-centered teaching. Students explore learning theories, learning styles and teaching methods to address diverse learning needs. Students integrate information technology supporting the teaching-learning process and modify teaching strategies to effectively communicate to diverse populations.

IHW 312 - Research Design and Analysis: Understanding and Utilizing Evidence (3)

This course explores the research process, including: study design, collection and analysis of data, and interpretation of results. This course prepares students to implement evidence-based interventions in health and wellness practice.

Prerequisite: MTH 161.

IHW 316 - Nature's Pharmacy: Foods, Herbs and Supplements that Support Health (3)

Established in biological science, students explore evidence for plant based foods, herbs, and supplements to understand how they support health. Following the idea of *food as medicine*, students will begin with plant foods, including herbs and spices, discovering how they impact cell health. Students will explore herbal remedies, including essential oils, that support balance well-being in body, mind, and spirit. Fee \$25

Prerequisite: IHW 204, IHW 214.

IHW 317 - Restorative Nutrition (3)

Intermediary nutrition course detailing nutrients and how the body utilizes them in physiology; dietary planning principles that support good health with emphasis on cultural and lifestyle diversity; the special nutrient needs of people throughout the life cycle and with specific disease states; and practical applications to use nutrition as part of a wellness plan in health coaching, practitioner education, and patient care.

IHW 325 - Community Organizing I: Introduction (3)

This course focuses broadly on the history of social movements, social change efforts and community organizing, both in U.S. and other countries. Exploring theory and practice, coursework focuses on the ways that race, class, gender, sexuality, indigeneity and other forms of difference shape privilege and power. Students will interact directly with communities and their representatives.

IHW 326 - Community Organizing II: Advanced Applications (3)

This course builds on IHW 325 to elucidate the professional role of community organizer. Students will evaluate models of social change through a mix of skills-based workshops, guest speakers from local social justice groups, and theoretical readings. In practicum-based work, students will apply community organizing concepts within the context of population health promotion and integrative health and wellness.

Prerequisite: IHW 325.

IHW 407 - Integrative Health Coaching II: Supporting Individual Wellness (3)

Building upon Integrative Health Coaching I students refine coaching skills through case study analysis and simulation role play. Students apply coaching skills to working with people with chronic illness. Students develop an individualized teaching plan that integrates lifestyle modifications and integrative health modalities with their treatment plan to promote wellness and improve health outcomes.

Prerequisite: IHW 307.

IHW 411 - Resilience and the Human Condition (3)

This course examines resilience in response to trauma and to acute/chronic health issues. Guided by emotional intelligence, palliative care, and trauma-informed care frameworks, students will appraise evidence supporting best practice interventions enhancing resilience and empowerment for persons in crisis. Facilitating long-term recovery toward wellness, students explore how people experience resilience in response to health promotion.

Prerequisite: IHW 301.

IHW 417 - Integrative Health and Wellness Seminar I: Project Design and Management (3)

This course provides the infrastructure for managing an integrative health promotion/education project for a population. Students will learn the process of assessing, planning, implementing, managing, and evaluating projects as applied to a specific community.

IHW 418 - Integrative Health and Wellness Seminar II: Leadership (3)

Utilizing case studies, this course builds upon the processes implemented in the Seminar I and prepares the student for a professional role as an integrative health promotion educator.

Prerequisite: IHW 417.

IHW 422 - Nonprofit Management for Community Organizations (3)

This course supplies the student with a foundation for working within the nonprofit sector. Students explore interactions between nonprofit organizations and the community. They acquire skills in the business aspects of fundraising, marketing, and the financial management necessary to support effective nonprofit functioning.

IHW 427 - Integrative Health & Wellness Practicum (3)

This practicum provides students with an opportunity to apply integrative health education/promotion concepts in the field practice setting. Students will work with their targeted population/organization in collaborative relationship to identify needs and create and implement proposal for integrative health promotion/education. Fee: \$50

Corequisite: IHW 417.

ILC - International Languages and Cultures

ILC 181 - Maximizing Study Abroad (1)

Maximizing Study Abroad helps students approach and enrich the study and/or sojourning abroad experience from the perspectives of intercultural communication, cultural adjustment, and practical language-learning strategies prior to departing for their target cultures. Participants are applicants to UP Study Abroad programs and UP students sojourning abroad. This course counts toward meeting requirements of the Sojourner Scholars Program.

ILC 496 - Immersion School Practicum (1)

Course provides students an opportunity to improve their target language learning and use by assisting teachers in language immersion programs in Portland-area schools at pre-K and elementary levels. Work includes interacting with children in target language of study, supporting teachers with transitions, and potentially leading small or whole-class groups. In on-campus classes, students learn about language-learning strategies.

ILC 497 - Tutor Training Internship (1)

Language tutor internships are available for qualified students (3.0 GPA; 3.25 GPA in the target ILC language, or by permission of instructor). Internships provide job experience pertinent to the study of the target ILC language and may lead to ITTPC Level 1 tutor certification. The language tutor internship may be taken for one credit hour. Students may receive an IP (In Progress) grade until the completion of their internship.

INV -Innovation

INV 100 - What is Innovation? (1)

A contextual inquiry and qualitative research into the definition of innovation at University of Portland. Students will be introduced to open ended methods of design ethnography and qualitative research to explore creative modes of community engagement to determine the shifting and contextual definitions of innovation. The course culminates in the presentation of a documented process and a report of their findings.

INV 200 - Introduction to Creativity, Design, and Innovation (3)

This course introduces the student to the innovative mindset as the art of empathy-driven design, making, & collaboration for the creation of ideas and the ability to act upon them. Students will discover creative and empathetic methods to discover and reframe problems. In addition to reviewing various methods for collaboratively generating ideas and how to communicate and constructively critique them.

Prerequisite: Permission of the instructor.

INV 300 - Empathy, Observational Research and Human-Centered Design (3)

Students gain experience with models that improve their empathy and design for human interaction. Students will use a variety of techniques derived from a broad variety of disciplines to develop approaches to solving contemporary social problems. Reading and theory are integrated with observational fieldwork.

Prerequisite: INV 200.

INV 350 - Making, Sketching, Prototyping (3)

Introduction to the basics of concept visualization through iteration and physical prototyping. The class covers the design process, problem solving, interdisciplinary team work, current industrial practice, manufacturing process capabilities using accessible materials, and simple drawing techniques to build models that are tangible representations of concepts for new designs. Fee: \$50

Prerequisite: INV 200.

INV 400 - Collaborative Innovation Practicum (3)

This practicum allows students in the Innovation Minor to direct the innovation processes and methods to solve big problems in a human-centered way for real-world partners in the Portland community and beyond. Students must demonstrate an awareness of prominent issues in their chosen fields and develop a rigorous design process that identifies opportunities for creative intervention and innovative problem solving.

Prerequisite: INV 300, INV 350.

LDR - Leadership

LDR 225 - Foundations of Leadership (1)

This course introduces students to the University of Portland Leader Certificate Program. During this course students explore what it means to be a leader using the Common Leadership Vocabulary, assess and understand their strengths, explore several leadership theories, and create a personalized leader development action plan. Fee: \$250.

LDR 325 - Leadership Practice

This one credit course is the experiential component of the University of Portland's Leader Certificate Program. During this course a Dexheimer Leader Habit Coach guides each student along his or her journey consisting of three leader habit development opportunities. You will receive an IP (In-Progress) grade until the completion of all course requirements. Course is graded P/NP. Fee: \$750.

Prerequisite: LDR 225 and permission of instructor.

LDR 375 - Residential Learning and Leadership (1)

This one credit course focuses on building upon the framework of Hall Staff as educators, ministers, and professionals. During this course, through dialogue, reflection, and action, Resident Assistants explore what it means to be a leader and peer educator in the context of a residential community.

Prerequisite: LDR 225.

LDR 387 - Sojourner Scholars Seminar (1)

Seminar on special topics in global and intercultural learning. Required for sojourner scholars program. Course is graded P/NP.

LDR 425 - Applied Leadership Reflection (1)

This is the capstone course for the University of Portland's Leader Certificate Program. It is taken by students during their final semester in the program. During this course students will update their leader development plan, write a personal values statement, explore leadership outcomes and competencies in depth, and write a leadership philosophy.

Prerequisite: LDR 225 and LDR 325.

MTH - Mathematics

MTH 105 - Mathematics for Elementary Teachers I (3)

Rational numbers and subsystems, probability and statistics, real numbers and geometry, algebraic structures. Emphasis on problem solving. (Does not fulfill the core requirement.)

MTH 106 - Mathematics for Elementary Teachers II (3)

Rational numbers and subsystems, probability and statistics, real numbers and geometry, algebraic structures. Emphasis on problem solving. (Does not fulfill the core requirement.)

Prerequisite: MTH 105 with a grade of C- or higher.

MTH 112 - Precalculus II (3)

Review of exponential and logarithmic functions, their graphs, trigonometric and inverse trigonometric functions. Analytic geometry, sequences, and series. (Does not fulfill the core requirement.)

MTH 121 - Calculus for Business and Social Science (3)

Introduction to differential and integral calculus with emphasis on applications to business and economics.

MTH 141 - Finite Mathematics (3)

Matrices, systems of linear equations, linear programming. Sets and counting, probability.

MTH 160 - Quantitative Reasoning (3)

Students will be able to understand, process, and interpret statistical information arising in everyday life using real world examples and case studies from a variety of disciplines. Critical thinking and quantitative decision-making skills will be taught. This course focuses on being a consumer of statistics, interpreting research studies, and learning how statistics are used in the real world.

MTH 161 - Elementary Statistics (3)

Elementary statistical calculations and statistical thinking. Examples will be chosen from various disciplines. Topics include sampling, normal distribution, central limit theorem, hypothesis testing, and simple regressions.

MTH 201 - Calculus I (4)

The study of the differential and integral calculus with emphasis on applications in the natural and physical sciences.

Prerequisite: MTH 112 with a grade of C- or better or a passing score on the math placement test.

MTH 202 - Calculus II (4)

Techniques of integration, numerical integration, applications of integration, sequences and series, including Taylor series.

Prerequisite: MTH 201 with a grade of C- or higher or permission of instructor.

MTH 290 - Directed Study (Variable)

Credit arranged.

MTH 301 - Vector Calculus (4)

The study of functions in several variables: vectors, matrices, partial derivatives, gradients, optimization, and integration. Differentiation and integration of vector-valued functions, line integrals, surface integrals, curl, divergence, Green's Theorem, and Stokes' Theorem.

Prerequisite: MTH 202 with a grade of C- or higher or permission of instructor.

MTH 303 - Computational Methods in Physical Sciences (3)

Computational techniques for solving physics and chemistry problems as well as for simulating, analyzing, and graphically visualizing physical systems and processes. Offered fall of odd years.

Prerequisite: PHY 204 or PHY 201, MTH 202 with a grade of C- or higher. Crosslisted as: CHM 303, PHY 303.

MTH 304 - Complex Variables (3)

Complex numbers and functions of a complex variable; limits, differentiability; Cauchy's theorem; power series, Laurent series, residue theorem with applications, maximum modulus theorem, Liouville's theorem; conformal mapping and applications.

Prerequisite: MTH 301 with a grade of C- or higher.

MTH 311 - Discrete Structures (3)

Topics may include: set theory, logic, methods of proof, combinatorics, recurrence relations, graphs, and Boolean algebra.

Prerequisite: MTH 202 with a grade of C- or better.

MTH 321 - Ordinary Differential Equations (3)

Introduction to elementary ordinary differential equations with applications to physical processes with emphasis on first and second order equations, systems of linear equations, and Laplace transforms.

Prerequisite: MTH 202 with a grade of C- or higher or permission of instructor.

MTH 322 - Partial Differential Equations (3)

Fourier series. Inner product spaces. Solutions to heat, wave, and Laplace's equations. Green's functions.

Prerequisite: MTH 301 with a grade of C- or higher.

MTH 323 - Nonlinear Dynamics (3)

This course introduces the basic concepts and techniques in the study of dynamical systems, including nonlinear ordinary differential equations, difference equations, and systems of equations. Using a wide variety of applications from the physical sciences, we will cover analytical methods such as linear stability, bifurcations, phase plane analysis, limit cycles, Lorenz equations, chaos, iterated maps, period doubling, and fractals.

Prerequisite: MTH 321.

MTH 332 - Graph Theory (3)

This course surveys many of the ideas, methods and applications of graph theory. Topics may include: connectivity, matchings, graph algorithms, network flows, graph colorings, planarity, circuits, cycles, and tournaments.

Prerequisite: MTH 311 with a grade of C- or higher.

MTH 341 - Introduction to Linear Algebra (3)

Systems of linear equations and matrices, determinants, vector spaces, linear transformations, eigenvalues and eigenvectors.

Prerequisite: MTH 202 with a grade of C- or higher.

MTH 345 - Number Theory (3)

An introduction to the study of the integers and related objects. Topics are taken from among the following: divisibility, primes and the Euclidean algorithm, the Euler phi function, special primes and perfect numbers, congruences mod n , quadratic residues, continued fractions, quadratic forms, Diophantine equations.

Prerequisite: MTH 311 with a grade of C- or higher.

MTH 356 - Mathematical Methods for Science and Engineering (3)

Ordinary differential equations, complex variables and matrices are developed and illustrated through applications in physics with emphasis on examples from the fields of vibrations and waves.

Prerequisite: MTH 202. Crosslisted as: PHY 356.

MTH 361 - Applied Statistics I (3)

An introduction to statistical methods utilized across disciplines. Topics include experimental design, randomization and sampling distributions, tests of statistical significance, normal model, confidence intervals, t-procedures, two-sample comparisons, one-way analysis of variance, simple linear regression, and bootstrapping. The course makes substantial use of programming in a statistical software package.

Prerequisite: MTH 201 with a grade of C- or higher.

MTH 381 - Math Modeling (3)

Survey of applied mathematics with an emphasis on modeling problems from science and engineering. Process of formulating the model, solving/simulating, and analyzing/interpreting results. Applications may include: continuous- and discrete-time population models, models of physical and biological phenomena, and statistical models.

Prerequisite: MTH 321 with a grade of C- or higher.

MTH 390 - Directed Study (Variable)

Credit arranged.

MTH 392 - Seminar (Variable)

Credit arranged.

MTH 393 - Research in Mathematics (Variable)

Faculty-directed student research. Before enrolling, a student must consult with a faculty member to define project. May be repeated for credit. Credit arranged.

MTH 397 - Internship (Variable)

Practical field experience in selected industries or agencies. Department permission and supervision is required. Students may receive an IP (In Progress) grade until the completion of their internship.

Credit arranged.

MTH 401 - Real Analysis I (3)

A rigorous treatment of properties of the real numbers and functions of a single real variable. Topics include completeness, limits, continuity, differentiation, integration, and sequences. Additional topics may include series, an introduction to Euclidean or metric spaces.

Prerequisite: MTH 311 with a grade of C- or higher.

MTH 402 - Real Analysis II (3)

A rigorous treatment of properties of the real numbers and functions of a single real variable. Topics include completeness, limits, continuity, differentiation, integration, and sequences. Additional topics may include series, an introduction to Euclidean or metric spaces.

Prerequisite: MTH 401 with a grade of C- or higher.

MTH 431 - Modern Geometry (3)

A foundations course in elementary geometry discussing the following: incidence geometries; finite, metric, and synthetic geometries; Euclidean, hyperbolic, and elliptical geometries; and some axiomatic theory.

Prerequisite: MTH 311 with a grade of C- or higher.

MTH 435 - Topology (3)

An introduction to fundamental concepts in point-set topology. Topics are taken from the following: open and closed sets, continuity, connectedness, compactness, separability, metric spaces.

Prerequisite: MTH 311 with a grade of C- or higher.

MTH 441 - Group Theory (3)

The study of algebraic structures that are like the integers, polynomials, and the rational numbers. The integers and their properties. Groups: examples, properties, and counting theorems. Rings: examples and properties. Fields: roots of polynomials and field extensions.

Prerequisite: MTH 311, MTH 341 with a grade of C- or higher.

MTH 442 - Rings and Fields (3)

Unique factorization in special rings. Field theory and the use of groups to understand field extensions: finite fields, Galois theory. Classical construction problems, solution of n-th degree polynomials.

Prerequisite: MTH 441, MTH 311 or MTH 341 with a grade of C- or higher.

MTH 443 - Cryptography (3)

Cryptography is the science of encoding and decoding information for the purpose of secure communication. With an emphasis on utilization of both modern and classical cryptosystems, this course introduces students to the mathematical underpinnings of cryptography.

Prerequisite: MTH 311 with a grade of C- or higher; MTH 341 strongly recommended.

MTH 451 - Numerical Methods in Computing I (3)

Numerical techniques for computer-aided solution and analysis of systems using MATLAB. Emphasis on applications from engineering and the physical sciences. Topics covered may include non-linear equations, systems of equations, interpolation, integration and differentiation, and ordinary and partial differential equations.

Prerequisite: MTH 321 or MTH 341. Corequisite: MTH 321 or MTH 341. Crosslisted as: EGR 551.

MTH 461 - Probability and Statistics I (3)

Probability, discrete and continuous random variables, expectation, important probability distributions, introduction to sampling, estimation, and hypothesis testing.

Prerequisite: MTH 202 and MTH 311 with a grade of C- or higher.

MTH 490 - Directed Study (Variable)

Credit arranged.

MTH 491 - One Time Course Offering (Variable)

Carries a title reflecting the subject or subjects studied and/or the nature of the class structure. May be repeated for credit.

MTH 493 - Research in Mathematics (Variable)

Faculty-directed student research. Before enrolling, a student must consult with a faculty member to define project. May be repeated for credit. Credit arranged.

MTH 497 - Internship (Variable)

Practical field experience in selected industries or agencies. Department permission and supervision is required. Students may receive an IP (In Progress) grade until the completion of their internship.

Credit arranged.

MTH 497I - Industrial Mathematics Internship (3)

Math 497 is a course for students with strong mathematical preparation. Students will work in teams on a project from an industrial or governmental firm. Student success will depend on realistic industry evaluations such as teamwork, communication, individual initiative, and final products.

Prerequisite: Instructor permission.

MTH 499 - Senior Thesis (3)

Research, study, or original work under the direction of a faculty mentor, leading to a scholarly thesis document with a public presentation of results. Requires approval of thesis director, department chair, dean, and the director of the honors program, when appropriate.

Prerequisite: Senior standing; 3.0 G.P.A. in the thesis area or good standing in the honors program.

ME - Mechanical Engineering

ME 072 - Fluids Laboratory - Lecture (0)

Lecture session for Fluids Laboratory.

Prerequisite: None. Corequisite: Corequisite ME 372.

ME 074 - Fluids Laboratory - Lecture (0)

Lecture session for Fluids Laboratory.

Corequisite: ME 374.

ME 083 - ME Capstone Workshop I (0)

Students work with faculty adviser to complete the first phase of a capstone project.

Corequisite: ME 483.

ME 084 - ME Capstone Workshop II (0)

Students work with faculty adviser to complete the second phase of a capstone project.

Corequisite: ME 484.

ME 222 - Engineering Graphics (2)

Introduces graphical communication of engineering design using traditional sketches and drawings coupled with computer modeling. An introduction to engineering drawings, dimensioning, and tolerances. Three dimensional modeling introduced using commercial software. Visualization and manipulation of existing models will be performed by generating drawings, building assemblies, and creating engineering drawings. Fee: \$50

ME 272 - Fabrication & Assembly Processes Lab (1)

Hands-on experience to gain familiarity with common manufacturing and assembly processes for mechanical devices. Fee: \$50

ME 301 - Mechanical Engineering Analysis (2)

Numerical methods applied to engineering problems: interpolation and curve fitting of experimental data, matrix analysis, and approximation methods in structural, thermal, and fluid systems.

Prerequisite: EGR 111.

ME 303 - Numerical Methods (3)

Numerical methods applied to engineering problems: interpolation and curve fitting of experimental data, matrix analysis, numerical differentiation/integration, Fourier transforms and approximation methods in structural, thermal, and fluid systems.

ME 304 - Finite Element Analysis (3)

Course builds on the concepts learned in strength of materials and introduces finite element analysis (FEA). Topics include elasticity, 3-dimensional Hooke's law, and failure theories. FEA is introduced mathematically beginning with springs, trusses, and beams. A commercial FEA software package is used to model plane stress and three-dimensional geometry. Individual projects are used to introduce three dimensional analysis. Fee: \$40.

Prerequisite: ME 222, EGR 322 with a grade of C- or better.

ME 305 - Stress Visualization (2)

Course builds on EGR 322. Both analytical and numerical modeling of stresses in tensile, bending, and torsional members. Basics to the Finite Element method (linear static analysis) with and training in computer modeling software, integrated with classical failure theories (Tresca, von Mises, and maximum principle stresses).

Prerequisite: EGR 322 and ME 222.

ME 307 - Dynamic Systems and Control (2)

An introduction to the modeling and control of mechanical systems in both the time and frequency domain. Fundamentals of vibration, free and forced vibration of (undamped/damped) single degree of freedom systems. Stability, analysis and design of PID, other forms of controllers in time and frequency domains. This course is the lecture portion to accompany the laboratory course ME377.

Prerequisite: EGR212 with grade C- or better, MTH 321 or Corequisite. Corequisite: ME 377, MTH 321 or Prerequisite.

ME 312 - Mechanics of Fluids II (2)

Application of fluid mechanics principles to laminar and turbulent duct flows; head losses through pipes including minor losses; compressible flows; measurement and turbomachinery.

Prerequisite: EGR 311.

ME 328 - Machine Design (4)

Theoretical and practical aspects of the design of various machine components and simple systems. The design criteria are based on stress analysis, manufacturing issues, materials, and fatigue considerations.

Prerequisite: EGR 221, ME 304.

ME 331 - Fundamental Thermodynamics (3)

Classical treatment emphasizing the first and second laws of thermodynamics and their application to open and closed systems undergoing steady and unsteady processes. Tabular and graphical data, as well as ideal gas properties, are used in analytical work.

Prerequisite: MTH 202.

ME 332 - Applied Thermodynamics (2)

Application of thermodynamic principles in analyzing power and refrigeration systems, non-reacting gas mixtures, psychrometrics, and combustion.

Prerequisite: CHM 207, ME 331.

ME 336 - Heat and Mass Transfer (3)

Fundamental course in the study of heat and mass transfer. Conduction, convection, radiation, and mass transfer are studied in context to real engineering systems involving multiple modes of heat and mass transfer. Numerical solutions are emphasized for the many problems for which analytical solutions cannot be easily obtained.

Prerequisite: ME 331, MTH 321.

ME 348 - Machine Design (3)

Theoretical and practical aspects of the design of various machine components and simple systems will be studied. Design criteria are based on stress analysis, manufacturing issues, materials, and fatigue considerations.

Prerequisite: EGR 221, ME 304 or ME 305. Corequisite: ME 368.

ME 351 - Mechanical Systems Laboratory (2)

An introduction to control systems with an emphasis on industrial motion control. Theoretical and experimental studies will familiarize students with PID control, control system hardware and software, stepper motors, servo motors, sensors, simulation, and data acquisition systems.

Prerequisite: EGR 212 with a grade of C- or better, MTH 321 or corequisite. Corequisite: MTH 321 or prerequisite.

ME 368 - Mechanical Design Project (1)

Students will conduct a modest sized machine design project to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors. Students will use both analysis and experimentation to make engineering decisions. Fee: \$50

Corequisite: ME 348.

ME 372 - Fluids Laboratory (2)

Experimental analysis of fluid mechanics principles including pressure losses through pipes and fittings, pump turbine characteristics, drag force measurements, compressible flow, boundary layers etc. Fee: \$50

Prerequisite: ME 312 or corequisite. Corequisite: ME 312 or prereq., ME 072.

ME 374 - Fluids Laboratory (1)

Experimental analysis of fluid mechanics principles including pressure losses through pipes and fittings, pump turbine characteristics, drag force measurements, compressible flows, boundary layers, etc. Fee: \$50

Prerequisite: ME 312 or corequisite. Corequisite: ME 312 or prerequisite, ME 074.

ME 376 - Thermal Systems Laboratory (1)

Experimental studies of thermal systems including compressors, steam turbine power cycles, refrigeration, air-conditioning, Otto engine cycle, evaporative cooling towers, and heat exchangers.

Prerequisite: ME 332 or corequisite, ME 336 or corequisite. Corequisite: ME 332 or prerequisite, ME 336 or prerequisite.

ME 377 - Dynamic Systems & Control Lab (1)

An introduction to control systems with an emphasis on industrial motion control. Experimental studies will familiarize students with PID control, control system hardware and software, sensors, actuators, simulation, and data acquisition systems. This course is the lab portion to accompany the lecture course ME 307. Fee: \$50

Prerequisite: EGR212 with grade C- or better, MTH 321 or corequisite. Corequisite: MTH 321 or prerequisite, ME307.

ME 403 - Engineering Design: Product Realization (3)

Study of processes and knowledge used to create an engineered product. Topics include design for manufacturing and assembly, materials, and material selection, Lean Manufacturing, and Design of Experiments (DOE) for design and manufacturing.

Prerequisite: Upper division standing.

ME 415 - Turbomachinery (3)

Dimensional analysis and similitude; applications of fluid flow and thermodynamics to the study of turbomachinery. Characteristics and performance of different types of compressors, turbines, and pumps.

Prerequisite: EGR 311.

ME 421 - Failure Analysis (3)

Methods to identify and prevent failures in design and manufacturing. Topics include: applied fracture mechanics, non-destructive testing, root cause analysis, and forensic engineering case studies.

Prerequisite: EGR 221, EGR 322.

ME 432 - Combustion (3)

Theory and application of the chemical and physical processes of high temperature chemical reactions. Includes combustion theory (equilibrium and chemical kinetics), fuel chemistry, operational combustion in engines, and environmental effects.

Prerequisite: ME 332. Crosslisted as: ME 532.

ME 434 - Energy Efficiency in Buildings (3)

Analysis and design necessary to plan and specify equipment for heating, refrigeration, and air conditioning systems. Includes heat transfer analysis of the structure, psychrometric analysis of inside and ventilating air, and thermodynamic and economic analysis of the necessary equipment.

Prerequisite: ME 331, ME 332 or corequisite, ME 336 or corequisite. Corequisite: ME 332 or prerequisite, ME 336 or prerequisite.

ME 436 - Design of Thermal Systems (3)

Review of the analysis and design of components of thermal systems such as heat exchangers, pumps and blowers, and drive units. Review of computer methods for analyzing systems. At least two design projects applying thermal systems design procedures will be completed.

Prerequisite: ME 332, ME 336.

ME 438 - Renewable Energy (3)

Study of renewable energy systems including photovoltaic, wind, geothermal systems, biofuels, and tidal energy. Overview of renewable energy credits, sustainability definitions, life cycle assessment, and exergy assessment techniques.

Prerequisite: ME 331. Crosslisted as: EE 424.

ME 443 - Systems and Measurement (3)

Systems approach to engineering with application to measurement. Time and frequency analysis of first and second order systems. Calibration, data acquisition, analog to digital conversion, filtering, and modulation will be addressed in both theory and experiment.

Prerequisite: EGR 212 with a grade of C- or better or EGR 214 with a grade of C- or better.

ME 447 - Propulsion (3)

Introduction to the operation, analysis, and design of air-breathing and space propulsion engines and systems. Application of thermodynamics, compressible fluid flow and combustion fundamentals to the design of gas turbine and rocket engines and components, including turbomachines, combustors, nozzles and diffusers.

Prerequisite: ME 331, EGR 311. Crosslisted as: ME 547.

ME 449 - Aircraft Dynamics and Control (3)

Analysis of the motion of aircraft. Topics include aerodynamics, equations of motion, dynamic and static stability, handling qualities and automatic control for aircraft. Simulation and analysis of aircraft will be performed using Matlab and Simulink.

Prerequisite: EGR 212, ME 301, ME 351. Crosslisted as: ME 549.

ME 453 - Mechanical Vibrations (3)

Analysis and prediction of the dynamic behavior and response of mechanical systems. Various types of oscillations and physical properties such as damping and stiffness are explained.

Prerequisite: EGR 212 with a grade of C- or better or EGR 214 with a grade of C- or better, MTH 321 or corequisite.

Corequisite: MTH 321 or prerequisite.

ME 454 - Noise and Vibration Control (3)

Industrial application of noise control criteria, measurements, materials, and design. Vibration control is comprised of source identification, system isolation, and testing. Extensive laboratory program also includes spectral and signal analysis. Fee: \$50

Prerequisite: EGR 212 with a grade of C- or better or EGR 214 with a grade of C- or better, MTH 321 or corequisite.

Corequisite: MTH 321 or prerequisite.

ME 483 - Mechanical Engineering Capstone Project I (3)

A major design experience based on the knowledge and skills acquired in earlier course work and incorporating appropriate standards and multiple realistic constraints. Projects have some combination of the following characteristics: realism, communication, exposure, teamwork, learning, and related opportunities.

Prerequisite: EGR 351 or EGR 352 or corequisites, EGR 300. Corequisite: EGR 351 or EGR 352 or prerequisites, ME 083.

ME 484 - Mechanical Engineering Capstone Project II (3)

Continuation of a major design experience based on the knowledge and skills acquired in earlier course work and incorporating appropriate standards and multiple realistic constraints. Projects have some combination of the following characteristics: realism, communication, exposure, teamwork, learning, and related opportunities.

Prerequisite: ME 483. Corequisite: ME 084.

ME 490 - Directed Study (Variable)

Selected study or project in mechanical engineering for upper-division students. Must be arranged between the student and an individual faculty member and subsequently approved by the dean of engineering. No more than three hours of directed study taken at the University may be used for elective credits to satisfy degree requirements.

ME 491 - One Time Course Offering (Variable)

Credit arranged.

ME 492 - One Time Course Offering (Variable)

Credit arranged.

ME 493 - Research (1-3)

Faculty-directed student research. Before enrolling, a student must consult with a faculty member to define the project. May be repeated for credit.

Prerequisite: Upper division standing.

Graduate Courses

ME 503 - Engineering Design: Product Realization (3)

Study of processes and knowledge used to create an engineered product. Topics include design for manufacturing and assembly, materials, and material selection, Lean Manufacturing, and Design of Experiments (DOE) for design and manufacturing. Special project to be completed.

ME 515 - Turbomachinery (3)

Advanced dimensional analysis and similitude; advanced applications of fluid flow and thermodynamics to the study of turbomachinery. Characteristics and performance of different types of compressors, turbines, and pumps. Special project required. Knowledge of fundamental fluid mechanics required.

ME 521 - Failure Analysis (3)

Study of failures in design and manufacturing with methods to identify and prevent them. Topics include: applied fracture mechanics, non-destructive testing, root cause analysis, and forensic engineering case studies. Knowledge of metallurgy or materials science, and fundamental stress analysis is required. Special project required.

ME 532 - Combustion (3)

Theory and application of the chemical and physical processes of high temperature chemical reactions. Advanced topics in combustion theory (equilibrium and chemical kinetics), fuel chemistry, operational combustion in engines, and environmental effects. Basic knowledge thermodynamics and chemistry is required.

ME 534 - Energy Efficiency in Buildings (3)

Advanced study of renewable energy systems including photovoltaic, wind, geothermal systems, biofuels, and tidal energy. Study of renewable energy credits, sustainability definitions, life cycle assessment, and energy assessment techniques. Applied knowledge of thermodynamics required, including thermodynamics properties and psychrometrics.

ME 536 - Design of Thermal Systems (3)

Analysis and design of components of thermal systems such as heat exchangers, pumps and blowers, and drive units. Advanced computer methods for analyzing systems. At least two advanced design projects applying thermal systems design procedures will be completed. Advanced knowledge of thermodynamics required, including thermodynamics properties, psychrometrics, and modeling techniques.

ME 538 - Renewable Energy (3)

Advanced study of renewable energy systems including photovoltaic, wind, geothermal systems, biofuels, and tidal energy. Study of renewable energy credits, sustainability definitions, life cycle assessment, and energy assessment techniques. Applied knowledge of physics and thermodynamics required, including thermodynamics properties, entropy, and exergy.

ME 543 - Systems and Measurement (3)

Systems approach to engineering with application to measurement. Time and frequency analysis of first and second order systems. Calibration, data acquisition, analog to digital conversion, filtering, and modulation will be addressed in both theory and experiment. Students will complete a project on advanced topics. Knowledge of engineering dynamics required.

ME 547 - Propulsion (3)

Introduction to the operation, analysis, and design of air-breathing and space propulsion engines and systems. Application of thermodynamics, compressible fluid flow and combustion fundamentals to the design of gas turbine and rocket engines and components, including turbomachines, combustors, nozzles and diffusers. Includes a propulsion system design project. Prior knowledge of fluid mechanics, thermodynamics required.

Crosslisted as: ME 447.

ME 549 - Aircraft Dynamics and Control (3)

Analysis of aircraft motion. Topics incl. aerodynamics, equations of motion, dynamic and static stability, handling qualities and automatic control for aircraft. Simulation and analysis of aircraft will be performed using Matlab/Simulink. Grad level students must research a topic related to aircraft independently and present in a lecture to the class. Prior knowledge in dynamics, numerical methods and mechanical systems required.

Crosslisted as: ME 449.

ME 553 - Mechanical Vibrations (3)

Analysis and prediction of the dynamic behavior and response of mechanical systems. Various types of oscillations and physical properties such as damping and stiffness are explained. Students will work a project on advanced topics. Knowledge of engineering dynamics and differential equations required.

ME 554 - Noise and Vibration Control (3)

Industrial application of noise control criteria, measurements, materials, and design. Vibration control is comprised of source identification, system isolation, and testing. Extensive laboratory program also includes spectral and signal analysis. Students will work on a project on advanced topics. Knowledge of engineering dynamics and differential equations required. Fee: \$50

ME 590 - Directed Study (Variable)

Credit arranged.

ME 591 - One Time Course Offering (Variable)

Credit arranged.

ME 592 - One Time Course Offering (Variable)

Credit arranged.

ME 593 - Research (1-3)

Faculty-directed student research. Before enrolling, a student must consult with a faculty member to define the project. May be repeated for credit.

ME 599 - Thesis (Variable)

Credit arranged.

MSL - Military Science and Leadership

MSL 101 - Introduction to the Army and Critical Thinking (1)

Introduces cadets to the personal challenges that are critical for effective leadership. Cadets learn how the personal development of life skills such as critical thinking, goal setting, time management, physical fitness, and stress management relate to leadership, officership, and the Army profession.

Corequisite: MSL 121. MSL 131 optional.

MSL 102 - Introduction to the Profession of Arms (1)

Overviews leadership fundamentals such as setting direction, problem-solving, listening, presenting briefs, providing feedback, and using effective writing skills. Cadets explore dimensions of leadership values, attributes, skills, and actions in the context of practical, hands-on, and interactive exercises.

Corequisite: MSL 122. MSL 132 optional.

MSL 121 - Leadership Laboratory (1)

Open only to (and required of) students in MSL 101. Series with different roles for students at different levels in the program. Learn and practice basic leadership and development skills. Build self-confidence and team-building leadership skills that can be applied throughout life.

Corequisite: MSL 101.

MSL 122 - Leadership Laboratory (1)

Open only to (and required of) students in MSL 102. Learn and practice basic leadership and development skills. Build self-confidence and team-building leadership skills that can be applied throughout life.

Corequisite: MSL 102.

MSL 131 - Basic Course Physical Fitness (1)

Open to all students. Participate in and learn to lead a physical fitness program. Emphasis on the development of an individual fitness program and the role of exercise and fitness in one's life.

MSL 132 - Basic Course Physical Fitness (1)

Open to all students. Participate in and learn to lead a physical fitness program. Emphasis on the development of an individual fitness program and the role of exercise and fitness in one's life.

MSL 201 - Leadership and Decision Making (2)

Explores the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and two historical leadership theories that form the basis of the Army leadership framework (trait and behavior theories). Cadets practice aspects of personal motivation and team building in the context of planning, executing, and assessing team exercises and participating in leadership labs.

Corequisite: MSL 221, MSL 231.

MSL 202 - Army Doctrine and Team Development (2)

Examines the challenges of leading tactical teams in the complex contemporary operating environment (COE). The course highlights dimensions of terrain analysis, patrolling, and operation orders. Further study of the theoretical basis of the Army leadership framework explores the dynamics of adaptive leadership in the context of military operations.

Corequisite: MSL 222, MSL 232.

MSL 221 - Leadership Laboratory (1)

Open only to (and required of) students in MSL 201. Learn and practice basic leadership and development skills.

Corequisite: MSL 201, MSL 231.

MSL 222 - Leadership Laboratory (1)

Open only to (and required of) students in MSL 202. Build self-confidence and team-building leadership skills that can be applied throughout life.

Corequisite: MSL 202, MSL 232.

MSL 231 - Basic Course Physical Fitness (1)

Open to all students. Series with different roles for students at different levels in the program. Participate in and learn to lead a physical fitness program. Emphasis on the development of an individual fitness program and the role of exercise and fitness in one's life.

Corequisite: MSL 201, MSL 221.

MSL 232 - Basic Course Physical Fitness (1)

Open to all students. Participate in and learn to lead a physical fitness program. Emphasis on the development of an individual fitness program and the role of exercise and fitness in one's life.

Corequisite: MSL 202, MSL 222.

MSL 240 - Basic Leadership Internship (3)

A five-week basic leadership training course conducted at Fort Knox, Kentucky. Student receives pay. Travel, lodging, and most meal costs are defrayed by the Army. The environment is rigorous. Introduction to leadership and self and team development. Individual leads groups of 9-40 students to learn and apply principles of effective leadership. Develops communication skills to improve individual and group performance.

MSL 301 - Training Management and the Warfighting Functions (3)

Challenges cadets to study, practice, and evaluate adaptive leadership skills as they are presented with challenging scenarios related to squad tactical operations. Cadets receive systematic and specific feedback on their leadership attributes and actions. Based on such feedback, as well as their own self-evaluations, cadets continue to develop their leadership and critical thinking abilities.

Corequisite: MSL 321, MSL 331.

MSL 302 - Applied Leadership in Small Unit Operations (3)

Uses increasingly intense situational leadership challenges to build cadet awareness and skills in leading tactical operations up to platoon level. Cadets review aspects of combat, stability, and support operations. They also conduct military briefings and develop proficiency in garrison operation orders.

Corequisite: MSL 322, MSL 332.

MSL 321 - Advanced Leadership Laboratory (1)

Open only to students in the associated MSL 301. Involves leadership responsibilities for the planning, coordination, execution, and evaluation of various training and activities with basic course students and for the ROTC program as a whole. Students develop, practice, and refine leadership skills by serving and being evaluated in a variety of responsible positions.

Corequisite: MSL 301, MSL 331.

MSL 322 - Advanced Leadership Laboratory (1)

Open only to students in the associated MSL 302. Students develop, practice, and refine leadership skills by serving and being evaluated in a variety of responsible positions.

Corequisite: MSL 302, MSL 332.

MSL 331 - Advanced Course Physical Fitness (1)

Required of students in MSL 301. Participate in and learn to plan and lead physical fitness programs. Develops the physical fitness required of an officer in the Army. Emphasis on the development of an individual fitness program and the role of exercise and fitness in one's life.

Corequisite: MSL 301, MSL 321.

MSL 332 - Advanced Course Physical Fitness (1)

Required of students in MSL 302. Participate in and learn to plan and lead physical fitness programs. Develops the physical fitness required of an officer in the Army. Emphasis on the development of an individual fitness program and the role of exercise and fitness in one's life.

Corequisite: MSL 302, MSL 322.

MSL 340 - Leadership Development and Assessment (3)

A five-week course conducted at Fort Knox, Kentucky. Only open to students who have completed MSL 301 and MSL 302. Student receives pay. This advanced leadership course is highly structured and demanding, stressing small unit leadership under varying conditions. Students focus on communication skills and apply ethics-based leadership skills that develop individuals and teams. Individual leadership performance is evaluated.

Prerequisite: MSL 301, MSL 302.

MSL 401 - The Army Officer (3)

Develops cadet proficiency in planning, executing, and assessing complex operations, functioning as a member of a staff, and providing performance feedback to subordinates. Cadets assess risk, make ethical decisions, and lead fellow ROTC cadets. Lessons on military justice and personnel processes prepare cadets to make the transition to Army officers.

Corequisite: MSL 421, MSL 431.

MSL 402 - Company Grade Leadership (3)

Explores the dynamics of leading in the complex situations of current military operations in the contemporary operating environment (COE). Cadets examine differences in customs and courtesies, military law, principles of war, and rule of

engagement in the face of international terrorism. They also explore aspects of interacting with non-government organizations, civilians on the battlefield, and host nation support.

Corequisite: MSL 422, MSL 432.

MSL 421 - Advanced Leadership Laboratory (1)

Open only to students in the associated MSL 401. Involves leadership responsibilities for the planning, coordination, execution, and evaluation of training activities with the ROTC program as a whole. Students develop, practice, and refine leadership skills by serving and being evaluated in a variety of responsible positions.

MSL 422 - Advanced Leadership Laboratory (1)

Open only to students in the associated MSL 402. Involves leadership responsibilities for the planning, coordination, execution, and evaluation of training activities with the ROTC program as a whole. Students develop, practice, and refine leadership skills by serving and being evaluated in a variety of responsible positions.

MSL 431 - Advanced Course Physical Fitness (1)

Participate in and learn to plan and lead physical fitness programs. Develops the physical fitness required of an officer in the Army. Emphasis on the development of an individual fitness program and the role of exercise and fitness in one's life.

MSL 432 - Advanced Course Physical Fitness (1)

Participate in and learn to plan and lead physical fitness programs. Develops the physical fitness required of an officer in the Army. Emphasis on the development of an individual fitness program and the role of exercise and fitness in one's life.

MSL 441 - Advance Course ROTC Physical Fitness Trainer (1)

For students who desire to develop themselves as future Army Leaders who are ready to meet any physical challenge sent their way. Focusing more of their efforts on teaching and instructing the new physical fitness training standards to successfully execute the physical missions of the Army.

Prerequisite: MSL 132, MSL 232, MSL 332, MSL 432.

MSL 442 - Advanced Leadership Laboratory (1)

Open only to students who have taken MSL 421, MSL 422. Involves increased leadership responsibilities for the planning, coordination, execution, and evaluation of training activities with the ROTC Program as a whole. Students will refine their leadership skills by being assigned more demanding roles within the army leadership responsible positions, and utilize those skills to develop their subordinates.

Prerequisite: MSL 421, MSL 422.

MSL 451 - Advance Course ROTC Physical Fitness Trainer (1)

For the student who desires to develop themselves as future Army Leaders who are ready to meet any physical challenge sent their way. Focusing more of their efforts on teaching and instructing the new physical fitness training standards to successfully execute the physical missions of the Army.

Prerequisite: MSL 132, MSL 232, MSL 332, MSL 432.

MSL 452 - Advanced Leadership Laboratory (1)

Open only to students who have taken MSL 421, MSL 422. Involves increased leadership responsibilities for the planning, coordination, execution, and evaluation of training activities with the ROTC Program as a whole. Students will refine their leadership skills by being assigned more demanding roles within the army leadership responsible positions, and utilize those skills to develop their subordinates.

Prerequisite: MSL 421, MSL 422.

MSL 461 - Leadership in the Army Profession (3)

Selected study or project in military science and leadership for upper-division students who have completed Army ROTC Advanced Courses. Students will gain an understanding and appreciation of the challenges of leading as a member of the Army profession through current global challenges.

Prerequisite: MSL 401, MSL 402.

MSL 462 - Leadership Ethics in the Army Profession (3)

Selected study or project in military science and leadership for upper-division students who have completed Army ROTC Advanced Courses. Students will gain an understanding and appreciation of the challenges of ethical leadership as a member of the Army profession through analysis of current global challenges.

Prerequisite: MSL 401, MSL 402, MSL 461.

MSL 493 - Leadership Research and Analysis (1)

For the student who desires to conduct and in-depth analysis in the practical application of Army leadership principles and values on the modern battlefield. The goal of this class is that students gain an understanding and appreciation of the challenges of leading by comparing and contrasting the actions of key U.S. leaders during the Battle of the Ia Drang Valley during the Vietnam War with today's Army values and leadership principles. Goal accomplishment is through meeting with a Military Science Advisor on an every other week basis and by writing a 8-10 page research paper.

MSL 494 - Leadership Research and Analysis (1)

For the student who desires to conduct and in-depth analysis in the practical application of Army leadership principles and values on the modern battlefield. The goal of this class is that students gain an understanding and appreciation of the challenges of leading by comparing and contrasting the actions of key U.S. leaders during the Battle of the Ia Drang Valley during the Vietnam War with today's Army values and leadership principles. Goal accomplishment is through meeting with a Military Science Advisor on an every other week basis and by writing a 8-10 page research paper.

MUS - Music

MUS 001 - Performance Attendance (0)

Registration required for music majors each semester, except during the final semester of the professional year. Successful completion required for graduation. Course is graded P/NP.

MUS 101 - Music Theory I (3)

Detailed study of musical concepts and elements, with an emphasis on foundations.

Corequisite: MUS 103 or permission of instructor.

MUS 102 - Music Theory II (3)

Continued study of concepts of music emphasizing the diatonic vocabulary.

Prerequisite: MUS 101. Corequisite: MUS 104 or permission of instructor.

MUS 103 - Aural Skills I (1)

Direct and computerized instruction in the development of pitch, interval, chord, and rhythm discrimination. This class is coordinated with MUS 101 through simultaneous enrollment. Open to all students. Required of music majors and minors.

Corequisite: MUS 101 or permission of instructor.

MUS 104 - Aural Skills II (1)

This course continues to a more advanced level of the training begun in MUS 103. It is coordinated with MUS 102.

Prerequisite: MUS 103. Corequisite: MUS 102 or permission of instructor.

MUS 130 - Class Piano I (1)

Beginning piano level course open to all students regardless of major. Basic class instruction at the piano emphasizing keyboard facility through literature, harmonizing melodies, sight reading and improvising.

MUS 131 - Piano Proficiency I (1)

For music majors and minors. Basic class introduction to piano emphasizing keyboard facility through literature, harmonizing melodies, sight reading and improvising.

Prerequisite: Permission of instructor.

MUS 201 - Music Theory III (3)

Emphasis on chromatic harmony, analysis, listening, and creative work.

Prerequisite: MUS 102 or permission of instructor.

MUS 202 - Music Theory IV (3)

Extensions of the common practice period. Introduction to twentieth century practice.

Prerequisite: MUS 201.

MUS 203 - Development of Music In Europe (1)

Survey of music history from Bach to Beethoven. (Salzburg only.)

MUS 230 - Class Piano II (1)

Continuation of beginning piano level instruction open to all students, regardless of major, who have completed MUS 130 or who have recent, previous piano experience. The class will emphasize keyboard facility through literature, harmonizing melodies, sight reading and improvising.

Prerequisite: MUS 130 or permission of instructor.

MUS 231 - Piano Proficiency II (1)

For music majors and minors. Development of focused skills in accompanying and score reading.

Prerequisite: MUS 131.

MUS 235 - Group Voice Workshop (1)

Study of the basic methods, principles, and techniques of singing both solo and as a group in a safe environment. Students will learn about the voice as an instrument, learn the process of singing, and gain experience singing with and for others. Open to all students. Required for music education majors.

MUS 236 - Beginning Guitar (1)

Emphasis upon fundamental classical techniques, basic chords, strums and varied accompaniments, notation. Literature drawn from all historical periods including contemporary, folk, and flamenco sources.

MUS 237 - Intermediate Guitar (1)

This course is designed to be a continuation of the beginning level of guitar. Emphasis will build up on those fundamental classical techniques, accompaniments and notations of the beginning level. Literature will come from modern, folk and flamenco sources.

Prerequisite: MUS 236 or permission of instructor.

MUS 239 - Group Voice Workshop II (1)

Continuing study of basic methods, principles, and techniques of singing both solo and as a group in a safe environment. Open to all students. Required of music education majors.

Prerequisite: MUS 235 or permission of instructor.

MUS 242 - Guitar Ensemble (1)

An ensemble experience for guitar players of sufficient skill. Literature of all style periods will be performed. Enrollment by permission of instructor.

MUS 285 - Private Lessons 1/2 Hour (1)

Individual instruction in music performance and literature. For students who are not majoring or minoring in music. May be repeated four times for credit. Fee: \$280 per semester.

MUS 290 - Directed Study (Variable)

For the student who demonstrates the ability to do individual study and research in selected areas of the curriculum. Selection of the area must be made in consultation with and approval of the appropriate faculty to be involved.

MUS 301 - Music History I (3)

A study of the people, events, and elements of musical performance-practice which contributed to the development of the various style trends before 1820. Required for music majors. Open to others with permission of instructor.

Prerequisite: MUS 102.

MUS 302 - Music History II (3)

A continuation of Music 301. A further study of musical style trends and their practitioners from 1800 to present. Required for music majors. Open to others with permission of instructor.

Prerequisite: MUS 102.

MUS 303 - Introduction to Classical Music (3)

A survey of classical music, from the Middle Ages to the present, that examines landmark styles, genres, and composers. Class includes live performance attendance. Fee: \$100

MUS 304 - Development of Music In Europe (1)

Survey of music history from Beethoven to the present (Salzburg only.)

MUS 307 - Scoring and Arranging (3)

A study of the basic techniques in effective scoring and arranging for various instrumental and vocal ensembles.

Prerequisite: MUS 202 or permission of instructor.

MUS 309 - World Music (3)

A study of the music and musical idioms of a variety of non-Western cultures. With use of aural and visual examples, the student will develop both an understanding and an appreciation of the enriching role of music in diverse cultures of the world. Required of music majors. Open to all students.

MUS 310 - Fundamentals of Music Technology (3)

Complete basic course in the understanding of electronic music. Topics include history, analog theory, methods of synthesis, digital theory, music instrument digital interface (MIDI), computers, audio recording, and digital sampling. Lab activities to be completed weekly. Open to all students with instructor approval. Fee: \$30.

MUS 331 - Conducting (3)

Techniques of conducting choral and instrumental ensembles with practical experience in laboratory situations. Required of all music majors. Open to all students by permission of instructor.

MUS 332 - Brass and Percussion Instrument Pedagogy (1)

Study of the basic methods, principles, and techniques of playing brass and percussion instruments. Open to all students with instructor approval, and as a component of the Pre-Music Education track within the Bachelor of Arts in Music program.

MUS 333 - Woodwind Instrument Pedagogy (1)

Study of the basic methods, principles, and techniques of playing woodwind instruments. Open to all students with instructor approval, and as a component of the Pre-Music Education track within the Bachelor of Arts in Music program.

Prerequisite: MUS 101, MUS 102, MUS 201, MUS 202.

MUS 334 - String Instrument Pedagogy (1)

Study of the basic methods, principles, and techniques of playing string instruments. Open to all students with instructor approval, as a component of the Pre-Music Education track within the Bachelor of Arts in Music program.

MUS 336 - Lyric Diction (3)

Study of Italian, French and German as it relates to pronunciation in singing. Study will employ the use of International Phonetic Alphabet. Class is required for Music Majors with Voice Performance Emphasis and recommended for Pre-Music Education track students who wish to conduct choirs.

MUS 337 - Vocal Pedagogy (1)

Explores the anatomy and physiology of the vocal instrument and how to teach singing in both choral and solo settings. This course is for Music Majors with Voice Performance Emphasis or Pre-Music Education track students.

Corequisite: MUS 486.

MUS 341 - Fundamentals of Music Education (3)

Examines the role of the music educator within a K-12 framework, with individual units and field observations at the elementary, middle, and high school levels. The course is designed to help students understand the needs and expectations of a music-specific classroom.

MUS 409 - Composition (3)

Contemporary techniques of composition as applied to vocal and instrumental media.

Prerequisite: MUS 202 or permission of instructor.

MUS 411 - History of Rock and Roll (3)

A survey of Rock and Roll from its roots to the present day, including styles, performers, composers, and culture.

MUS 412 - History of Musical Theatre (3)

An exploration of this American art form, from operetta and music comedy to contemporary musical theatre. Open to all students.

MUS 413 - Liturgical Music (3)

A study of Catholic liturgical music, including Church documents and liturgical books, music repertoire and liturgical performance and historical context.

MUS 414 - History of Jazz (3)

A study of Jazz from its roots to the present day, including styles, performers, composers, and culture.

MUS 442 - Guitar Ensemble (1)

An ensemble experience for guitar players of sufficient skill. Literature of all style periods will be performed. Enrollment by permission of instructor.

Prerequisite: 2 semesters of MUS 242.

MUS 443 - Wind Symphony (1)

Ensemble for the reading and performing of all styles of band literature. Open to all University students by audition. May be taken 8 times for credit.

MUS 444 - University of Portland Singers (1)

The University Singers is a mixed-voice choral ensemble open to all students via audition. The group is dedicated to exploring the choral art with repertoire from all time periods performed at the highest artistic level.

MUS 445 - University of Portland Orchestra (1)

Open to University students by audition. Devoted to the performance of a wide variety of orchestral literature. Opportunities for solo performance. May be taken 8 times for credit.

MUS 446 - Chapel Music Ensemble (1)

The ensemble of singers and players meets once per week with the express purpose of preparing music for the chapel services. It is open without audition to any University student regardless of major. May be taken 8 times for credit. Does not fulfill ensemble requirement for music majors/minors.

MUS 447 - Chamber Ensembles (1)

Small groups that rehearse and perform music in a variety of styles. May be repeated 8 times for credit. Registration by permission of instructor.

MUS 452 - University of Portland Bel Canto (1)

A women's choir, open to all students by audition. Participants need not be music majors. Repertoire drawn from wide variety of musical styles. May be taken 8 times for credit.

MUS 453 - University Jazz Ensemble (1)

Performance of contemporary literature for this medium. Open to all University students with permission of the director. May be taken 8 times for credit. Does not fulfill ensemble requirement for music majors.

MUS 455 - Lyric Theater Workshop (3)

Study of theatrical singing and acting techniques as applicable to all varieties of theatrical music, including cabaret, music-theater, and opera. Students are expected to participate in various performances prepared by the class. Open to all students with instructor's permission. Email for an audition.

Prerequisite: Instructor audition required prior to registration. Crosslisted as: THTR 355, THTR 555.

MUS 484 - Performance Workshop (1)

This course is an optional addition for those concurrently enrolled in MUS 486. Students will perform repertoire being learned in their private lessons in front of their peers and instructor with the goal of improving their stage presence and learning to better convey text through music to an audience.

Corequisite: MUS 486.

MUS 485 - Private Lesson - Music Coaching (1)

This course is designed reinforce concepts introduced in private voice/instrumental lessons; to practice correct pitch, rhythm, style, diction, phrasing, expression, memorization, and other elements of a successful musical performance; to gain experience working with a pianist and/or other collaborative musicians. Fee: \$280

Corequisite: MUS 486 or MUS 455 or Instructor Permission.

MUS 486 - Private Lessons (1)

Third and fourth-year individual instruction, performance, and literature. See MUS 286 for particular instruments. May be repeated four times for credit. See Music Study Handbook for specific requirements. Fee: \$400

Prerequisite: 2 semesters of MUS 286 and/or MUS 235.

MUS 487 - Advanced Conducting (1)

Individual, advanced conducting study, including score preparation, rehearsal techniques, stylistic interpretation, gesture and development of a pedagogical and philosophical approach to conducting. Students will be assigned as a student conducting associate to one of the major ensembles and will conduct pre-assigned repertoire with that ensemble in rehearsal and in concert. May be repeated for a maximum of 4 credits.

Prerequisite: MUS 101, MUS 102, MUS 103, MUS 104, MUS 331, Approval of Instructor.

MUS 488 - Advanced Composition (1)

Individual, advanced study in music composition, including advanced exploration of compositional styles, form and expression, advanced analysis of existing works and advanced study of notational software in order to produce performance-ready musical scores and parts. May be repeated for a maximum of 4 credits.

Prerequisite: MUS 307 or MUS 409, Approval of Instructor.

MUS 490 - Directed Study (Variable)

For the student who demonstrates the ability to do individual study and research in selected areas of the curriculum. Selection of the area must be made in consultation with and approval of the appropriate faculty to be involved.

MUS 491 - One Time Course Offering (Variable)

Credit arranged.

MUS 498 - Senior Capstone (1)

All music majors are required to prepare and present a project during the last semester of their residence. Projects include a research or creative component. Examples include recitals, lecture recitals, performances of compositions, conducting etc. Guidance will be provided by various faculty members as assigned.

Graduate Courses

MUS 599X - Thesis in Progress (0)

Registration for any graduate student who has received the grade of IP in MUS 599 is required while the thesis is in progress. Fee: \$50.

NRS - Nursing

NRS 104 - Nursing Professionalism and Practice (3)

Students are introduced to professional nursing and health care delivery. Academic expectations, foundational principles for the nursing major, and the process of active inquiry into health care issues are explored. Students investigate health perspectives, social justice, care of self and others, scientific basis for nursing, and professional socialization. Fee: \$110

NRS 116 - Health and Wellness Across the Lifespan I (3)

Students explore foundations of health and wellness across the lifespan focusing specifically on the concepts of nutrition, development, health promotion and resilience. They learn to access research evidence about healthy lifestyle patterns and risk factors, work with others in a respectful and culturally sensitive manner, explore the role of the nurse in promoting optimum health and use reflection to assess their practice as nursing students.

Prerequisite: NRS 104.

NRS 200 - Nursing Licensure Lab I (1)

Nursing Licensure Lab I will provide students with an introduction to self-guided learning in preparation for success on the NCLEX-RN exam. Students will work in an online environment utilizing various types of quizzing and testing techniques designed to assess testing skills and develop self-awareness of content mastery. Course is graded P/NP. Fee: \$90

Corequisite: NRS 204.

NRS 204 - Foundations in Health Assessment (3)

Students learn foundational nursing knowledge, attitudes, values, and health assessment skills to promote health and wellness across the lifespan. Students learn the complexity of the health care delivery system and the role of the professional nurse in that system. Students integrate and apply principles developed in NRS 116 and NRS 216 in delivering basic nursing care.

Prerequisite: NRS 216. Corequisite: NRS 200, NRS 206, NRS 207.

NRS 206 - Professional Practice: Health Assessment (1)

Students learn foundational knowledge about health and wellness across the lifespan. Students acquire foundational nursing knowledge, skills and attitudes to provide ethical, evidence-based care. Students begin to integrate nursing theory, communication, collaboration, critical thinking, and integrative health principles in combined skills laboratory and simulation experiences. Fee: \$425

Prerequisite: NRS 216. Corequisite: NRS 026, NRS 204, NRS 207.

NRS 207 - Clinical Reasoning Seminar: Health Assessment (1)

Students in this seminar course will synthesize health assessment didactic and clinical learning. Students will participate in health assessment clinical reasoning learning activities. Evidence-based practice, quality improvement, and informatics will be incorporated.

Prerequisite: NRS 216. Corequisite: NRS 204, NRS 206.

NRS 208 - Transition into Professional Nursing (6)

Students new to the University of Portland School of Nursing learn supportive knowledge and skills attained by four-year students in NRS 104, NRS 116, and NRS 216. Foundational cognitive and affective learning strategies will be incorporated to provide transfer students the necessary knowledge to enter upper division nursing.

Corequisite: NRS 204, NRS 206, NRS 207.

NRS 216 - Health and Wellness Across the Lifespan II (3)

Students continue their exploration of foundations of health and wellness across the lifespan beginning with self and expanding to clients, families, and populations with specific focus on culture, diversity, gender identity, sexuality, and social determinants of health. Students learn to examine their own assumptions, approach human interactions with curiosity and humility, and work with others in a culturally sensitive manner. Fee: \$110

Prerequisite: NRS 116.

NRS 300 - Nursing Licensure Lab II (1)

Nursing Licensure Lab II will provide students with an opportunity to improve self-guided learning in preparation for success on the NCLEX-RN exam. Students will continue work in an online environment utilizing more sophisticated levels of quizzing and testing techniques designed to strengthen testing skills and increase self-awareness of content mastery. Course is graded P/NP. Fee: \$90

Corequisite: NRS 316.

NRS 302 - Nursing Licensure Lab III (1)

Nursing Licensure Lab III will provide students with an opportunity to continue to improve self-guided learning in preparation for success on the NCLEX-RN exam. Students will continue work in an online environment utilizing increasingly sophisticated levels of quizzing and testing techniques designed to strengthen testing skills. The student will increase focus on content mastery techniques. Course is graded P/NP. Fee: \$90

Corequisite: NRS 317.

NRS 306 - Professional Practice: Population Health and Wellness (4)

Students in this course learn to use health promotion and prevention strategies in nursing practice to promote holistic health and wellness across the lifespan. Emphasis is on assessment, safety, and lifestyle management across the lifespan. This course includes 180 hours of combined on-campus and off-campus clinical experiences. Fee: \$110

Prerequisite: NRS 204, NRS 206, NRS 207. Corequisite: NRS 307, NRS 316, NRS 325.

NRS 307 - Clinical Reasoning Seminar: Population Health and Wellness (3)

Students in this seminar course will have the opportunity to synthesize didactic and clinical learning. Students apply the concepts of vulnerability, stress, coping, empowerment, and addiction in developing clinical reasoning skills for nursing practice. Students engage in the application of evidence-based practice with an emphasis on identifying and critically appraising evidence for nursing care of populations.

Prerequisite: NRS 204, NRS 206, NRS 207. Corequisite: NRS 306, NRS 316, NRS 325.

NRS 308 - Professional Practice: Acute Illness Management (4)

Students in this course learn to manage care of diverse patients with acute illness across the lifespan. Emphasis is on application, interpretation of client information, prioritization, and recognition of acute alterations of health status. This course includes 180 hours of combined on-campus and off-campus clinical experiences. Fee: \$60

Prerequisite: NRS 306, NRS 307, NRS 316, NRS 325. Corequisite: NRS 309, NRS 317, NRS 326.

NRS 309 - Clinical Reasoning Seminar: Acute Illness Management (3)

Students in this seminar course will have the opportunity to synthesize didactic and clinical learning. Students are introduced to the concepts of clinical reasoning based on nursing research, evidence-based practice, quality improvement, and informatics. These concepts are explored for the influence they have in clinical decision making in acute care settings of nursing practice. Fee: \$30

Prerequisite: NRS 306, NRS 307, NRS 316, NRS 325. Corequisite: NRS 308, NRS 317, NRS 326.

NRS 316 - Population Health and Wellness Across the Lifespan (3)

Students learn management of patients and families across the lifespan with a focus on the principles of health and wellness promotion and disease prevention. Emphasis is on assessment, analysis, client education, client health trajectory, and levels of prevention. Fee: \$110

Prerequisite: NRS 204, NRS 206, NRS 207. Corequisite: NRS 300, NRS 306, NRS 307, NRS 325.

NRS 317 - Acute Illness Management Across the Lifespan (3)

Students learn management of patients and families across the lifespan with a focus on the principles of acute illness management and acute exacerbations of chronic illnesses. Emphasis is on assessment, analysis, education, client health trajectory, and levels of prevention. Fee: \$360

Prerequisite: NRS 306, NRS 307, NRS 316, NRS 325. Corequisite: NRS 302, NRS 308, NRS 309, NRS 326.

NRS 325 - Pathophysiology and Pharmacology I (3)

Students learn the nursing management of clients across the lifespan experiencing multi-system health care problems. Emphasis is on clinical reasoning in the planning, implementation, and evaluation of nursing care. Students examine alterations in physiological states and principles of pharmacotherapeutics. This course provides a foundation for application to nursing practice to promote health and wellness for individuals and populations.

Prerequisite: BIO 205, BIO 359, BIO 379, BIO 305, BIO 365, BIO 306, BIO 366, NRS 204, NRS 206, NRS 207. Corequisite: NRS 306, NRS 307, NRS 316.

NRS 326 - Pathophysiology and Pharmacology II (3)

Students learn the nursing management of clients across the lifespan experiencing multi-system health care problems. Emphasis is on clinical reasoning in the planning, implementation, and evaluation of nursing care. Students examine alterations in physiological states and principles of pharmacotherapeutics. This course continues to build on previous concepts, to continue promoting health and wellness for individuals and populations.

Prerequisite: NRS 325.

NRS 400 - Nursing Licensure Lab IV (1)

Nursing Licensure Lab IV will utilize self-guided learning and remediation in preparation for student success on the NCLEX-RN exam. Students will continue work in an online environment utilizing increasingly sophisticated levels of quizzing and testing techniques designed to strengthen testing skills. The student will focus on remediation of identified areas of weakness in content mastery. Course is graded P/NP. Fee: \$90

Corequisite: NRS 416.

NRS 401 - Preparation for Re-entry to Professional Practice (1)

This course prepares students for re-entry into professional practice courses. Students will practice and demonstrate competency in fundamental knowledge, skills and attitudes required for successful progression. Course is graded P/NP. Fee: \$115

Prerequisite: NRS 206, permission from associate dean is required.

NRS 402H - Project Development & Implementation (Honors) (2)

Evidence-based research foundations, scholarly inquiry, data collection methods, and ethical issues are explored to guide students' active role in a research project based on their area of interest for a select client population. Faculty supervise student groups' evidence search and synthesis, project proposal, IRB project approval, and project launch. This course is restricted to nursing majors participating in the university honors program.

Prerequisite: Honors program participant and Senior standing.

NRS 403H - Project Analysis & Dissemination (Honors) (1)

Students will sustain their role in active scholarly inquiry and project engagement through the completion of the project data analysis and dissemination process. A project report and professional presentation are required; manuscript preparation is optional. This course is restricted to nursing majors participating in the university honors program.

Prerequisite: NRS 402H; Honors program participant and Senior standing.

NRS 406 - Professional Practice: Chronic Illness Management (4)

Students will manage care for diverse patients with chronic illnesses across the lifespan. Emphasis is on care transitions, care coordination, case management, prioritization, and delegation of care, as well as chronic illness management. Students will work with community partners to identify and utilize community assets to meet population needs. This course includes 180 hours of combined on-campus and off-campus clinical experiences. Fee: \$110

Prerequisite: NRS 308, NRS 309, NRS 317, NRS 326. Corequisite: NRS 407, NRS 416, NRS 440.

NRS 407 - Clinical Reasoning Seminar: Chronic Illness Management (3)

Students in this seminar course will have the opportunity to synthesize didactic and clinical learning. Students apply the concepts of cognition, mood and affect, professional engagement, chronic illness trajectory, palliation and care coordination in developing clinical reasoning skills for nursing practice. Students engage in the application of evidence-based practice with an emphasis on quality improvement in professional practice settings.

Prerequisite: NRS 308, NRS 309, NRS 317, NRS 326. Corequisite: NRS 406, NRS 416, NRS 440.

NRS 408 - Transition to Professional Practice (4)

Students in this course will demonstrate successful completion of all School of Nursing program outcomes while working with multiple clients or a population typical of those that would be assigned to a beginning professional nurse. This course includes 180 hours of combined on-campus and off-campus clinical experiences. Fee: \$60

Prerequisite: NRS 406, NRS 407, NRS 416. Corequisite: NRS 409, NRS 460, NRS 480.

NRS 409 - Clinical Reasoning Seminar: Transition to Professional Practice (3)

Students in this course have the opportunity to synthesize didactic and clinical learning. Students engage in the application of healthy work environment, health care policy, and health care law concepts into clinical reasoning for nursing practice. Evidence-based practice, advocacy at the state/federal level, and clinical decision making in nursing practice in care settings across the health care continuum are explored.

Prerequisite: NRS 406, NRS 407, NRS 416, NRS 440. Corequisite: NRS 408, NRS 460, NRS 480.

NRS 416 - Chronic Illness Management Across the Lifespan (3)

Students learn management of patients with chronic illnesses across the lifespan with a focus on the principles of complex case management, care coordination, and care transitions. Emphasis is on assessment, analysis, education, client health trajectory, and levels of prevention. Fee: \$360

Prerequisite: NRS 308, NRS 309, NRS 317, NRS 326. Corequisite: NRS 400, NRS 406, NRS 407, NRS 440.

NRS 440 - Social Justice and Population Health (3)

Students in this course will be prepared to provide nursing care to populations through the lens of social justice. Framed in the ecological model, students will apply the nursing process to the care of vulnerable populations and design evidence-based interventions for equitable health outcomes.

Prerequisite: NRS 308, NRS 309, NRS 317, NRS 326. Corequisite: NRS 406, NRS 407, NRS 416.

NRS 460 - Advancing the Culture of Health (3)

Students in this course will realize the full scope of baccalaureate nursing practice. Students will expand their understanding of nursing in promoting a culture of health. Students will explore interprofessional practice to lead sustainable change for improving health outcomes.

Prerequisite: NRS 406, NRS 407, NRS 416, NRS 440. Corequisite: NRS 408, NRS 409, NRS 480.

NRS 480 - Life-Long Learning (3)

Students will create a road map for advancement of the individual nurse, populations served and profession of nursing. Students will be exposed to multiple pathways for professional growth and practice and will develop methods to maintain resilience and balance, and establish a pattern of reflection and life-long learning.

Prerequisite: NRS 406, NRS 407, NRS 416, NRS 440. Corequisite: NRS 408, NRS 409, NRS 460.

NRS 490 - Directed Study (Variable)

Credit arranged.

NRS 491 - Seminar (Variable)

Credit arranged.

NRS 492 - Nursing Electives (Variable)

These courses involve a variety of health care topics. Some courses may be open to non-nursing students at the discretion of the instructor.

NRS 493 - Research (Variable)

This course focuses on holistic health and frameworks/strategies for leadership in health promotion and education. Interdisciplinary experts will facilitate learning about physical, mental, emotional, and spiritual well-being. Through critical reflection and applied educational strategies, students will gain proficiency in wellness promotion. Course is graded P/NP.

Graduate Courses

NRS 601 - Professional Role Development for Advanced Practice Nursing (3)

This course focuses on the role development of the nurse practitioner as an advanced practice nurse prepared at the doctor of nursing practice degree level. Historical, legal, ethical, social, and policy aspects of the role will be examined. Topics such as hallmark competencies, professional behaviors, financial relationships with health systems and interdisciplinary relationships also will be included. Fee: \$95

NRS 602 - Leadership in a Complex Health care Environment (3)

This course provides the theoretical and practical foundation that guides the formation of a DNP-prepared leader. Leadership theories and processes will be appraised for applicability within a complex health care environment. Factors that impact the leader's ability to design and evaluate safe, quality, cost-effective care will be analyzed. The development of personal leadership will be explored.

NRS 604 - Nursing Science and Ethics for Advanced Practice (3)

Scientific underpinnings from a variety of disciplines will be explored as they apply to the scholarship and practice of advanced nursing practice. Theoretical foundations of nursing and related disciplines will be applied to enhance health and health care delivery in a variety of settings among diverse populations.

NRS 605 - Analytical Methods for Practice Improvement (3)

Analytical methods will be examined to appraise multiple sources of evidence to determine its applicability for translating the evidence into practice to improve health outcomes and health delivery systems. Epidemiological concepts, statistical analyses and appraisal processes are foundational for this course.

NRS 606 - Quality Improvement Processes for Practice Improvement (3)

Quality improvement concepts, principles, models and strategies used to improve processes for health care delivery and quality of health outcomes will be explored. The process of new program development and evaluation will be examined.

NRS 607 - Advanced Pathophysiology and Genetics (4)

This course is designed to provide students with the advanced pathophysiological foundation required for understanding diseases and genetic implications across the lifespan. Focus will be placed on key pathophysiologic processes common to many diseases, specific pathophysiologic processes underlying diseases commonly encountered by nurse practitioners, and the human biopsychosocial response to these processes. Fee: \$100

NRS 608 - Advanced Pharmacotherapeutics (3)

This course focuses on the clinical application of pharmacotherapeutics commonly prescribed by nurse practitioners in primary care settings, including drug selection, dosing, monitoring, evaluation, and patient education. This course examines the nurse practitioner role as prescriber.

NRS 609 - Botanicals in Primary Care (1)

This course explores the clinical indications, potential risks, and evidence for alternative approaches to herbal and dietary supplement therapies. Conceptual approaches to herbal therapy and botanical medicine are explored. Emphasis is on the safety of herbs and supplements.

NRS 610 - Advanced Health Assessment for Primary Care Nurse Practitioners (4)

This course focuses on the development of clinical decision making skills related to physical diagnosing. The advanced health assessment process includes appropriate histories, physical exams, labs/diagnostic testing, use of screening tools, diagnosing physical variations and abnormalities, identification of health needs, and documentation for multiple patient presentations across the lifespan. Fee: \$230

Prerequisite: NRS 601, NRS 602, NRS 604, NRS 605, NRS 606, NRS 607, NRS 614, NRS 649, NRS 650. Corequisite: NRS 608.

NRS 614 - Health Organization Systems & Resource Management (3)

This course focuses on complexities of health care organizational systems and their impact on approaches to care delivery and relativeness to quality and safety outcomes. Principles of organizational culture, resource management and organizational policy will be explored.

NRS 620 - AGPCNP Clinical I (3)

In this clinical course students apply the principles of patient/family assessment, diagnosis, and management of adults with acute and simple chronic illnesses. The focused work-up format is used with an emphasis on differential diagnosis. Includes 180 hours of supervised clinical experience. Course is graded P/NP.

Prerequisite: Prerequisite: NRS 610 (or instructor permission). Corequisite: NRS 670.

NRS 621 - AGPCNP Clinical II (2)

In this clinical course students build on the competencies of AGPCNP Clinical I and incorporate assessment, management and referral of patients with gender specific conditions, mental illness, and adolescent health concerns. Includes 120 hours of supervised clinical experience. Course is graded P/NP.

Prerequisite: NRS 620, NRS 670. Corequisite: NRS 681.

NRS 623 - AGPCNP Clinical III (2)

In this clinical course, students build on the competencies of AGPCNP Clinical I and II and apply the principles of patient/family assessment, diagnosis, and management of common acute and chronic conditions in geriatric and frail elderly clients. Includes 120 hours of supervised clinical experience. Course is graded P/NP.

Prerequisite: NRS 621, NRS 681. Corequisite: NRS 683.

NRS 624 - AGPCNP Clinical IV (3)

In this clinical course students build on the competencies from AGPCNP Clinical I, II and III to apply the principles of assessment, diagnosis, and management of adults and older adults with complex and chronic illness. The expanded work-up format is used and includes assessments of self-management, living with chronic illness, and interprofessional treatment modalities. Includes 180 hours of supervised clinical experience. Course is graded P/NP.

Prerequisite: NRS 623, NRS 683. Corequisite: NRS 674.

NRS 630 - FNP Clinical I (3)

In this clinical course students apply the principles of patient/family assessment, diagnosis, and management of adults with acute and simple chronic illnesses. The focused work-up format is used with an emphasis on differential diagnosis. Students complete 180 hours of supervised clinical experience. Course is graded P/NP.

Corequisite: NRS 670.

NRS 631 - FNP Clinical II (2)

In this clinical course students build on the competencies of FNP Clinical I and incorporate assessment, management and referral of patients with acute or chronic mental illness and management of conditions specific to gender (i.e. pregnancy and lactation). Students complete 120 hours of supervised clinical experience. Course is graded P/NP.

Corequisite: NRS 681.

NRS 633 - FNP Clinical III (2)

In this clinical course students build on the competencies of FNP Clinical I and II and apply the principles of patient/family assessment, diagnosis, and management of common acute and chronic conditions in pediatric patients. Focus is placed on clinical evaluation of pediatric growth and development, providing anticipatory guidance for well-children and adolescents. Includes 120 hours of supervised clinical experience. Course is graded P/NP.

Corequisite: NRS 673.

NRS 634 - FNP Clinical IV (3)

In this clinical course students build on the competencies from FNP clinical I, II and III to apply the principles of assessment, diagnosis, and management of adults and older adults with complex and chronic illness. The expanded work-up format is used and includes assessments of self-management, living w/chronic illness, and interprofessional treatment modalities. Includes 180 hours of supervised clinical experience. Course is graded P/NP.

Corequisite: NRS 674.

NRS 649 - Policy and Politics for the Nurse Leader (2)

The influence of health care and other policies on organizations and the nursing profession will be analyzed from multiple perspectives including, ethical, social justice, financial and professional impact. The process of policy formation will be examined and applied. The roles of advocate and political activist in promoting innovative and just policies will be fostered.

NRS 650 - Informatics in a Complex Health Care Environment (2)

This course addresses the application and critical impact of informatics on health care delivery and health care systems. Health information systems and technology to improve health outcomes and approaches to health care delivery will be examined. Current and potential future issues that impact the role and use of informatics and technology in health care will be analyzed.

NRS 651 - Epidemiology and Clinical Prevention in Population Health (3)

The development, implementation and evaluation of health promotion/illness prevention programs and interventions for populations at the microsystem level are the foci of this course. Analysis of epidemiological and research data related to populations, concepts of public health including environmental, occupational health and disaster preparedness and determinants of health are examined as essential components of programs for population health.

NRS 652 - Translation Science (2)

In this course, students acquire knowledge, skills, concepts and strategies from implementation and dissemination sciences to translate evidence into practice.

NRS 654 - Primary and Specialty Palliative Care (4)

This course investigates differences between primary and specialty palliative care. Advanced practice nursing palliative care principles will be explored. This course also addresses assessment and coordination of management plans that meet the unique palliative care needs of clients.

NRS 665 - DNP Scholarly Project (1)

DNP Scholarly Project focuses on practice change in primary care, reflects the integration of coursework and DNP Essentials, and serves as a “foundation for future scholarly practice” (AACN, 2006, p.20). The project includes planning, implementation, evaluation, and dissemination. Students register a minimum of three semesters and continue registering until successful completion and dissemination of the final project. Course is graded P/NP.

NRS 670 - Management of Adults with Acute Conditions (3)

This course covers the assessment, diagnosis, and management of adults with acute conditions within a family context. The focused work-up format will be used with an emphasis on differential diagnosing. Fee: \$155

Prerequisite: NRS 610 or instructor permission. Corequisite: NRS 630.

NRS 671 - Management of Common Gender Specific Health Issues (3)

This course addresses gender specific health care needs. Biological sciences and gender theories will be examined in developing and implementing appropriate health strategies. This course includes preventative care practices, assessment, diagnosis and management of common gender specific conditions.

Prerequisite: NRS 670. Corequisite: NRS 631.

NRS 672 - Management of Common Mental Health Conditions in Primary Care (2)

This course focuses on the assessment and appropriate diagnosis of mental health conditions encountered in the primary care setting. Emphasis is on differentiating between appropriate referral to a mental health professional or management by the primary care nurse practitioner. Safety, ethical, legal and policy issues will be examined.

Prerequisite: NRS 670.

NRS 673 - Management of Pediatric Patients in Primary Care (3)

This course addresses well child and the assessment, diagnosis, and management of acute and chronic conditions from birth through middle childhood. Integrative perspectives for facilitating wellness, restoration of health, and the management of chronic and acute conditions in infants and children will also be explored.

Prerequisite: NRS 671, NRS 672. Corequisite: NRS 633.

NRS 674 - Management of Adults and Older Adults with Chronic Conditions (3)

This course covers the assessment, diagnosis, and management of adults and older adults with complex and chronic conditions. The expanded work-up format will be used and will include self-management, living with chronic illness, and multiple treatment modalities. Best practices for chronic care management will be emphasized.

Prerequisite: NRS 673 or NRS 683.

NRS 675 - Directed DNP Clinical (6)

This course prepares DNP students for independent, entry-level nurse practitioner practice. Clinical expectations include successful application of previous NP specialty, integrative health and/or palliative care courses and the progression of clinical knowledge and competencies with increasingly complex client situations. Students will also demonstrate integration and application of DNP program competencies. Includes 360 clinical hours. Course is graded P/NP.

Prerequisite: Completion of all courses of the DNP curriculum.

NRS 676 - Integrative Health: Adult Health Promotion and Acute Health Problems (3)

This course explores integrative perspectives for facilitating wellness, restoration of health, and the management of chronic and acute conditions in adults. Strategies include mind body approaches, nutrition, spirituality, complementary and alternative modalities and botanicals. The course examines opportunities for nurse practitioner students to incorporate integrative health principles into their practices.

NRS 681 - Management of Common Gender Specific & Adolescent Health Conditions (4)

This course explores gender specific health care needs of adolescents and adults and covers adolescent growth and development. Biological sciences and gender theories will be examined to create management plans for common gender specific health conditions encountered in primary care. Preventative care, assessment, diagnosis and management of common acute and chronic conditions will be explored.

Prerequisite: NRS 670.

NRS 683 - Management of Geriatric Patients in Primary Care (3)

This course addresses management of geriatric patients within primary care. It focuses on comprehensive geriatric assessment, facilitation of autonomy for patients and families, ease of comfort in frailty, and the development, implementation and evaluation of management plans that address symptoms and conditions common in the geriatric population.

Prerequisite: NRS 620, NRS 621, NRS 670, NRS 671, NRS 681. Corequisite: NRS 623.

NRS 685 - Directed DNP Clinical for Post Master's NP Students I (3)

This is the first of two residency courses. Each course is devoted to the integration and demonstration of Doctor of Nursing Practice (DNP) program competencies for post master's NP students. Students will demonstrate the most advanced level of NP practice and the application of DNP competencies within their personal NP practice and at the macrosystem level. Includes 180 residency hours. Fee: \$50

Prerequisite: NRS 601, NRS 602, NRS 604, NRS 605, NRS 606, NRS 609, NRS 614, NRS 650, NRS 651.

NRS 686 - Directed DNP Clinical for Post-Master's NP Students II (3)

This is the second of two residency courses for Post-Master's NP students. Includes 180 residency hours.

Prerequisite: NRS 685.

PHL - Philosophy

PHL 150 - Introductory Philosophy (3)

An introduction to the practice of philosophy that introduces some of the major figures and issues that have shaped the discipline. In particular, students will learn to understand and apply basic principles of logic and critical reasoning, and will be introduced to some of the central problems in metaphysics and epistemology. A writing embedded course.

PHL 220 - Ethics (3)

An introduction to some of the major theories in classical and/or contemporary moral philosophy. Particular emphasis is placed on understanding and concretely applying normative theories of moral obligation including Utilitarianism, Deontology, Social Contract Theory, Ethics of Care, Natural Law, and Virtue Theory. The course will also explore the limits of relativism and absolutism.

Prerequisite: PHL 150.

Upper-Division Requirements

PHL 313 - Socio-Political Philosophy (3)

Analysis of some major topics in contemporary socio-political thought, e.g., freedom, social justice and structural violence, equality, the relation between rights and obligations, sovereignty, authority, legitimacy, and consent.

Prerequisite: PHL 150, PHL 220.

PHL 314 - Philosophy and Feminism (3)

An investigation of the philosophical underpinnings of various feminist theories and their implications for philosophical inquiry from De Beauvoir to Irigaray.

Prerequisite: PHL 150, PHL 220.

PHL 321 - Logic (3)

This course offers an introduction to basic concepts of logic, including the nature and evaluation of arguments as well as an examination of common informal fallacies. Students will also be introduced to major systems of logic (categorical, propositional, and/or predicate logic) including ordinary-language statements into each logical system and testing arguments for validity within each system.

Prerequisite: PHL 150, PHL 220.

PHL 324 - Environmental Ethics (3)

An inquiry into our obligations to the non-human world and the philosophical basis of that obligation.

Prerequisite: PHL 150, PHL 220. Crosslisted as: ENV 324.

PHL 325 - Bioethics (3)

This course will examine ethical issues in medicine, biotechnology, and related fields. Issues to be discussed may include the concept of informed consent, stem cell research, reproductive technologies, human enhancement, end of life issues, the global AIDS epidemic, genetics, biomedical research, and justice in the distribution of healthcare.

Prerequisite: PHL 150, PHL 220.

PHL 330 - Metaphysics - A Survey (3)

This course surveys the field of metaphysics, including its basic concepts (e.g., likeness, identity, and existence), ontological categorizations (e.g., abstract and concrete objects, actual and merely possible entities, particulars and universals), and some central topical issues (e.g., free will, God, personal identity over time, and the mind-body problem). Salzburg Only. Approval of Studies abroad Director Required.

Prerequisite: PHL 150 and PHL 220 recommended.

PHL 331 - Metaphysics: Asian Philosophy (3)

This course explains the nature and source of reality in classical and contemporary Asian philosophies. It focuses on such questions as the origin and nature of ultimate reality, the nature of the self in relation to reality, freedom and causality in human existence, idealism and realism, and methodological approaches to apprehending reality.

PHL 332 - Metaphysics: Philosophy of Mind (3)

This course explains a set of conceptual problems involving the nature of mind and of psychological explanations of behavior. These range from classical discussions of the "mind-body problem" to contemporary debates concerning consciousness, mental representation, mental content, innate ideas, the nature of concepts, and the plausibility of psycho-physical reductionism.

PHL 333 - Metaphysics: Philosophy of Religion (3)

This course explains a broad range of metaphysical issues concerning the nature of God (or a god) and religious experience. It focuses on some major areas of debate such as arguments for the existence of a god, whether such a god should be conceived as a person, the problem of evil, and the relationship of faith and reason.

PHL 334 - Metaphysics: Problem of Being (3)

This course studies some major topics and approaches in the history of philosophical reflection on Being and ontology from the beginnings of metaphysical speculation in the pre-Socratics through the contemporary period. Topics may include potency and act, essence and existence, causality, the ontological foundations of logic, and the question of God.

PHL 335 - Metaphysics: Self and Identity (3)

This course studies a range of metaphysical issues relevant to the nature of personal identity and self-consciousness such as identity over time, what makes someone a person, the nature of self-consciousness, the relationship of the self to a body, freedom of the will, the development of the self in the context of society and socio-political relations.

PHL 336 - Metaphysics: Native American Philosophy (3)

This course explores Native American Philosophy with particular emphasis on Mexico or the continental US. Topically, the course focuses on metaphysical aspects of Native American thought such as the nature of reality, time, space, truth, freedom, the self and the relationship between the self and the world.

PHL 337 - Metaphysics: Freedom (3)

This course explores various philosophical conceptions of freedom and the issues that they raise. Topics may include free will and determinism, existentialism and freedom, whether freedom is related to reason, and the implications of metaphysical freedom for political liberation and moral responsibility.

PHL 338 - Metaphysics: Ancient Greek Metaphysics in Context (3)

This course explores the metaphysical views of the Ancient Greeks with particular emphasis on the broad historical, cultural, and political context out of which their views emerge. Possible topics include their conceptions of reality, change, knowledge, philosophical method, love, and friendship. The course will also explore the influence of these ideas on the Western philosophical tradition.

Prerequisite: PHL 150 and PHL 220 recommended.

PHL 339 - Metaphysics of Shakespeare (3)

A study of how the elements of text and performance in Shakespeare's plays engage metaphysical questions, including the nature of mind and agency, the distinction of truth from illusion, the significance of gender and class in personal identity, and the struggle between faith and reason. Students attend performances at the Oregon Shakespeare Festival in Ashland. Taught 2nd summer term. Fee: \$350

Prerequisite: PHL 150. Crosslisted as: THTR 405.

PHL 340 - Metaphysics and the Scientific Revolution (3)

This course explores philosophical issues regarding fundamental concepts of science that grew out of the Scientific Revolution. It asks the following questions: What metaphysical presuppositions about the world changes from the medieval world to the modern world? What conception of science grew out of this period? And what does our "modern" perspective owe to the so-called "dark ages" of the medieval period?

Prerequisite: PHL 150 and PHL 220.

PHL 371 - Ancient Philosophy (3)

The origins of Western philosophy and its development up to Plotinus, including the pre-Socratics, Plato, Aristotle, Hellenistic schools (Epicureans, Stoics, Skeptics), and Neoplatonism. Taught biennially.

Prerequisite: PHL 150, PHL 220.

PHL 372 - Medieval Philosophy (3)

The major philosophers from Augustine through late scholasticism with particular attention to Augustine, Anselm, Aquinas, Bonaventure, Scotus, and Ockham. Taught biennially.

Prerequisite: PHL 150, PHL 220.

PHL 373 - Early Modern Philosophy (3)

Philosophical figures and topics from the Renaissance through Kant: the scientific revolution, continental rationalism (Descartes, Leibniz), British empiricism (Locke, Hume, Berkeley), and Kant's transcendental philosophy. Taught biennially.

Prerequisite: PHL 150, PHL 220.

PHL 374 - Hegel and 19th Century Philosophy (3)

An examination of nineteenth-century philosophy focusing upon the work of Hegel. The course traces the roots of Hegelianism in German idealism, the British Economists, and romanticism, and its influences on subsequent involvements including Marxism, existentialism, and American pragmatism. Taught biennially.

Prerequisite: PHL 150, PHL 220.

Electives

Upper-division electives prerequisite: PHL 150 and PHL 220 must be successfully completed before taking upper-division philosophy electives.

PHL 408 - Race, Gender, and Colonialism (3)

This course provides a critical examination of “race”, gender, and colonialism in the theory and practice of “Western”/Global North philosophy and history. Metaphysical, epistemological, ontological, phenomenological, and ethical issues will be highlighted, as well as the intersectional dimensions of gender, sex, economic class, language, and other factors.

Prerequisite: PHL 150 and PHL 220.

PHL 410 - Education and Politics (3)

Inquiry into the political foundations of education and how these interface with epistemological, ethical, and metaphysical concerns. Concrete issues relating to educational injustices will also be addressed. Students will study both classical and contemporary thinkers, such as Confucius, Lao Tzu, Plato, Rousseau, Jane Addams, John Dewey, Paulo Freire, Bell Hooks, Maria Lugones.

Prerequisite: PHL 150, PHL 220.

PHL 412 - Philosophy of Law (3)

The basic philosophical principles of justice and law in the Western legal traditions: morality and law; natural and positive law; Roman law and common law traditions; logic, language, and symbols of law; Marxian concept of law; legal education.

Prerequisite: PHL 150, PHL 220.

PHL 422 - Philosophy of Science (3)

An analysis of fundamental concepts of science: fact, law, observation, theory, explanation, truth, discovery, progress, methods of scientific reasoning, science and pseudo-science, moral implications of scientific research, science and society.

Prerequisite: PHL 150, PHL 220.

PHL 430 - Advanced Ethics (3)

An inquiry into current issues and debates in the field of ethics. The course will consider the relationship of ethical debates to other areas of philosophy. Investigation may focus on issues such as autonomy, internalism, moral realism, and/or the relationship between moral philosophy and problems in social and political philosophy.

Prerequisite: PHL 150, PHL 220.

PHL 479 - Existentialism (3)

A survey of existential philosophers including Sartre, De Beauvoir, Marcel, and Merleau-Ponty; a critical study of their reflections on the nature and meaning of human existence, freedom, and authenticity.

Prerequisite: PHL 150, PHL 220.

PHL 490 - Directed Study (Variable)

Credit arranged.

PHL 499 - Senior Capstone (Variable)

Research, study, or original work under the direction of a faculty mentor, leading to a scholarly thesis document with a public presentation of results. Requires approval of thesis director and department chair.

PHY - Physics

PHY 109 - Powerful Ideas in Physical Science (3)

What is science, and how do the physical sciences help us understand the way the world works? Students will learn to create scientific models of natural phenomena and formulate scientific explanations with computer and hands-on laboratory activities while exploring topics such as energy and electromagnetism. Students will also learn practical applications of science and technology along with ways science is represented in the media.

PHY 163 - Astronomy (3)

Introductory study of observations and the application of scientific principles in their interpretation. Deduction of models for the solar system, our local galaxy, and the visible Universe. Offered each fall semester.

PHY 201 - College Physics I (3)

Algebra-based physics with life science focus. Vectors, kinematics, Newtonian mechanics, statics, dynamics. Offered each fall semester.

Corequisite: PHY 271.

PHY 202 - College Physics II (3)

Algebra-based physics with life science focus. Sound, waves, optics, electricity and magnetism. Offered each spring semester.

Prerequisite: PHY 201 or PHY 204 with a grade of C- or higher. Corequisite: PHY 272.

PHY 204 - General Physics I (3)

Calculus-based physics. Kinematics and dynamics of particles, systems of particles, and rigid bodies. Newton's laws for translational and rotational motion, conservation laws of energy, momentum, and linear momentum. Offered every semester.

Prerequisite: MTH 201. Corequisite: PHY 274.

PHY 205 - General Physics II (3)

Calculus-based physics. Electricity and magnetism; Maxwell's equations, circuits. Offered every semester.

Prerequisite: MTH 202, PHY 204 with a grade of C- or higher. Corequisite: PHY 275.

PHY 270 - Special Physics Lab and Research (Variable)

For special lower-division projects or research. Content, credit, and fee to be arranged. Available as needed.

PHY 271 - College Physics Lab I (1)

Laboratory course to accompany PHY 201. One three-hour laboratory each week. Offered each fall semester. Fee: \$60 per semester.

Corequisite: PHY 201.

PHY 272 - College Physics Lab II (1)

Laboratory course to accompany PHY 202. One three-hour laboratory each week. Offered each spring semester. Fee: \$60 per semester.

Corequisite: PHY 202.

PHY 274 - General Physics Lab I (1)

Laboratory course to accompany PHY 204. Offered every semester. Fee: \$60.

Corequisite: PHY 204.

PHY 275 - General Physics Lab II (1)

Laboratory course to accompany PHY 205. Offered every semester. Fee: \$60

Corequisite: PHY 205.

PHY 290 - Directed Study (Variable)

Content and credit to be arranged. Available as needed.

PHY 301 - Scientific Programming with Python (3)

In this course students will learn to use Python to model physical problems relevant to the fields of mathematics, science, and engineering, and will learn about relevant applications in these fields. The course is for students who have programming experience in other languages or those who have never programmed before but want to learn Python. This elective course is offered primarily as a summer course offering.

Prerequisite: PHY 204, MTH 201.

PHY 303 - Computational Methods in Physical Sciences (3)

Computational techniques for solving physics and chemistry problems as well as for simulating, analyzing, and graphically visualizing physical systems and processes. Offered fall of odd years.

Prerequisite: PHY 204 or PHY 201, MTH 202. Crosslisted as: CHM 303, MTH 303.

PHY 306 - Modern Physics (3)

Special relativity, quantum theory, atomic and nuclear physics. Offered each spring semester.

Prerequisite: PHY 204, PHY 205, MTH 201, MTH 202.

PHY 322 - Optics (3)

Geometrical and physical optics, imaging and aberrations; interference, diffraction, and polarization; applications to instrumentation and lasers. Offered spring semester of odd years.

Prerequisite: PHY 201, PHY 202 or PHY 204, PHY 205, MTH 202.

PHY 323 - Nonlinear Dynamics (3)

This course introduces the basic concepts and techniques in the study of dynamical systems, including nonlinear ordinary differential equations, difference equations, and systems of equations. Using a wide variety of applications from the physical sciences, we will cover analytical methods such as linear stability, bifurcations, phase plane analysis, limit cycles, Lorenz equations, chaos, iterated maps, period doubling and fractals. Offered spring semester of even years.

Prerequisite: MTH 321. Crosslisted as: MTH 323.

PHY 356 - Mathematical Methods for Science and Engineering (3)

Ordinary differential equations, complex variables and matrices are developed and illustrated through applications in physics with emphasis on examples from the fields of vibrations and waves. Offered each fall semester.

Prerequisite: MTH 202, PHY 204. Crosslisted as: MTH 356.

PHY 370 - Special Physics Laboratory and Research (Variable)

For special upper-division projects or research. Content, credit, and fee to be arranged. Available as needed.

PHY 371 - Analog and Digital Electronics (3)

Instruction in electronic circuits and computer software, circuit design, and device physics for use in data acquisition and instrument control. Offered fall semester of even years. Fee: \$120.

Prerequisite: PHY 205, PHY 356 or MTH 321.

PHY 372 - Optics Laboratory (1)

Laboratory course to accompany PHY 322 for non-majors. Experiments in geometric and physical optics. Offered spring semester of odd years. Fee: \$60.

Corequisite: PHY 322.

PHY 376 - Modern Physics Lab (1)

Laboratory course to accompany PHY 306. Experiments in acoustic waves, optics, photo electric effect. One three-hour laboratory each week. Offered each spring semester. Fee: \$60.

Corequisite: PHY 306.

PHY 391 - Seminar (Variable)

Credit arranged.

PHY 404 - Advanced Mechanics (3)

Kinematics and dynamics of classical particles and systems of particles in stationary and moving frames of reference. The equations of Lagrange and Hamilton are introduced. Offered spring semester of odd years.

Prerequisite: PHY 202 or PHY 205. Corequisite: MTH 321.

PHY 405 - Advanced Electrodynamics (3)

Electric and magnetic fields and potentials, their interactions with matter, and Maxwell's equations. Offered fall semester of even years.

Prerequisite: PHY 201, PHY 202 or PHY 204, PHY 205. Corequisite: MTH 321.

PHY 411 - Introduction to Quantum Mechanics (3)

Experimental basis for the quantum theory and the fundamental ideas of non-relativistic and relativistic quantum mechanics. Offered fall semester of odd years.

Prerequisite: MTH 322 or PHY 356, PHY 306.

PHY 412 - Introduction to Quantum Mechanics II (3)

Continuation of PHY 411. Topics to include perturbation theory, angular momentum, and scattering theory with application to atomic, solid state, and particle physics. Offered spring semester of even years.

Prerequisite: PHY 411.

PHY 422 - Solid State Physics (3)

Lattices and crystal structures; mechanical, thermal and electrical properties. Offered on an occasional basis.

Prerequisite: PHY 202 or PHY 205, MTH 321 or PHY 356. **PHY 441 - Thermal and Statistical Physics (3)**

Fundamentals of statistical mechanics, entropy, partition functions, kinetic theory. Applications to classical and quantized systems. Thermodynamics developed from the basis of statistical mechanics. Offered spring semesters of even years.

Prerequisite: PHY 201, PHY 202 or PHY 204, PHY 205, MTH 321 or PHY 356.

PHY 470 - Special Physics Laboratory and Research (Variable)

For special upper-division projects or research. Content, credit, and fee to be arranged. Fee: \$60 per credit.

PHY 471 - Advanced Laboratory (2)

Laboratory work in atomic and nuclear physics; electricity and magnetism, modern physics, and undergraduate experimental research. Offered spring semester of even years. Fee: \$120.

PHY 472 - Advanced Optics Laboratory (2)

Laboratory course to accompany PHY 322 for Physics majors. Laboratory work in geometric and physical optics including independent projects and analysis. Offered spring semester of odd years. Fee: \$120.

PHY 490 - Directed Study (Variable)

Offered as needed.

PHY 491 - Physics Seminar (Variable)

Offered as needed.

PHY 492 - Physics Seminar (Variable)

Offered as needed.

PHY 497 - Internship (Variable)

Academic internships are available for qualified students (3.0 GPA; 3.25 GPA in Physics). Internships provide students with job experience pertinent to the study of Physics. Students may receive an IP (In Progress) grade until the completion of their internship. The internship may be taken for one to three credit hours.

PHY 499 - Senior Thesis (Variable)

Research, study, or original work under the direction of a faculty mentor, leading to a scholarly thesis document with a public presentation of results. Requires approval of thesis director, department chair, dean, and the director of the honors program, when appropriate.

Prerequisite: Senior standing; 3.0 G.P.A. in the thesis area or good standing in the honors program.

POL - Political Science

Introductory Courses

POL 200 - Introduction to United States Politics (3)

This course offers an overview of the United States political system and the role of the people in a democracy. Students will learn about the constitutional framework, formal and informal political institutions, and the evolving conception of individual freedom and civil rights. Research and theory from political science will illuminate patterns and principles underlying prominent social problems and political dynamics in the United States.

POL 203 - Introduction to Political Theory (3)

What is Justice? What is Freedom? What are the goals and institutions of diverse political communities? This course will wrestle with these questions while comparing political philosophies including: democratic theory, liberalism, conservatism, libertarianism, socialism, and fascism. Students will learn about the history of political thought and how it relates to globally relevant contemporary issues.

POL 205 - World Politics (3)

Why do international events unfold in certain ways? Why is power a driver of political interactions? How do global affairs shape our lives? These are among the questions examined through learning key concepts, theories, and discourses within global politics and policies. Students will develop a global consciousness in understanding how societies do or don't function, cooperate, conflict, evolve, and endure over time.

POL 250 - Political Inquiry and Analysis (3)

Learning to conduct research from a disciplinary perspective is key to mastering the discipline. Course introduces students to theoretical and methodological components necessary to conduct academic research. Students explore a variety of research methods, learning their strengths and limitations, critique existing research, and practice skills essential to conducting valid and reliable research in political science.

POL 270 - Development of European Political Systems (3)

Historical study of political systems from the French Revolution to World War II. (Salzburg only.)

POL 290 - Directed Study (Variable)

Credit arranged.

POL 292 - University Mock Trial Team (1)

Collegiate mock trial competitions. Students are instructed in the how and why of case preparation as an advocate for either side; role playing as witnesses and trial attorney; understanding and using the rules of evidence; actual trial advocacy; research and delivering arguments.

Political Theory and Methodology**POL 302 - Perspectives on Social Justice (3)**

Introduction to social justice theory and practice. Course engages theoretical and empirical connections between social justice concerns and capitalism, governance and religion. Several social justice frameworks are explored and critiqued. We analyze tensions and opportunities for furthering the common good within existing societal systems in both the US and the world.

POL 305 - Ancient and Medieval Political Thought (3)

This course covers the major classics of political thought from Western antiquity through the Medieval period. It explores the origins of western political philosophy in ancient Greece in the writings of Thucydides, Plato, and Aristotle, and then charts its further development in Christendom in the works of St Augustine and St Thomas Aquinas.

POL 306 - Modern Political Thought (3)

This course covers the major classics of political thought of the Modern Era through the 19th century. It begins with the Renaissance writings of Machiavelli and moves through the political works of such modern thinkers as Hobbes, Locke, Rousseau, Marx, Nietzsche, and Mill.

POL 307 - Contemporary Political Theory (3)

Constitutional liberal democracy has established itself as the only legitimate form of political organization in the developed West. This course examines contemporary theories and critiques of liberal democracy.

POL 314 - American Political Thought (3)

A survey of writings representative of American political theory, including selections from colonial and revolutionary political thought, the constitutional debates, Federalist, Jeffersonian, and Jacksonian thought, theories of slavery, abolitionism, reconstruction and Social Darwinism, progressivism and post World War II thought, and contemporary theories of liberalism, conservatism and communitarianism.

POL 317 - Resistance, Social Movements, and Revolution (3)

This course explores resistance, social movements, and revolutions in a global context. We examine contemporary forms of resistance, explore strategies of social movements, and study revolutionary leaders as a means of understanding how collective action can lead to change.

POL 319 - Politics and Identity (3)

This course explores the relationship between politics and identity through the lens of intersectionality. We study a range of collective identities including nationality/citizenship, class/status, race/ethnicity, gender/sexuality, religion/belief, migration/indigeneity, and political interests to understand how identities are formed, framed, and practiced.

American Politics**POL 321 - Politics of Hip Hop (3)**

This course views hip hop music as an expression of minority politics in the United States. Specifically, students will investigate the arguments made in the lyrics of hip hop artists about the causes and consequences of the racial inequalities and group differences in the United States.

POL 335 - American Public Policy (3)

This course analyzes policy-making in the United States. Special attention is given to selected domestic policies to illustrate how policies are developed and adopted and the role played by administrative organizations in implementing them.

POL 344 - Constitutional Law I: Federalism and Separation of Powers (3)

This course examines the major, and often controversial, U.S. Supreme Court cases interpreting the Constitutional allocation of power between the legislative, executive, and judicial branches of the national government, and between the national government and state governments.

POL 345 - Constitutional Law II: Civil Liberties and Rights (3)

This course examines the major, and often controversial, U.S. Supreme Court cases interpreting the Constitution's protection of our rights and freedoms as U.S. citizens, especially, of course, as they are found in the Bill of Rights and the 14th Amendment.

POL 346 - Constitutional Criminal Procedure (3)

This course covers seminal Supreme Court cases interpreting the 4th, 5th, and 6th Amendments to the US Constitution, including the prohibition on unreasonable searches and seizures, warrant requirements, Miranda rights and interrogations and the right to counsel.

POL 347 - The American Court System (3)

This course provides understanding of the role of law to the United States. It focuses particularly on the structure of our court systems at the national level, and to a lesser degree, the state and local levels and will emphasize the many political variables that affect our laws, the courts, and the appointment process.

POL 348 - Geopolitics of Energy and the Environment (3)

This course addresses questions such as: What is the relationship between the biophysical environment and international security? Does competition over resources cause conflict? Does environmental scarcity cause conflict? How will global warming affect relations among great powers and the political stability of the developing world?

Crosslisted as: ENV 348.

POL 349 - Environmental Policy (3)

This course will consider how environmental problems arise, looking at how a progression of natural and human circumstances becomes an "environmental problem." It will survey the law, politics, and institutions that manage pollution. The course will also look closely at a handful of environmental policy issues particularly in the Columbia River, and the interplay of science, risk, and uncertainty.

International Relations

POL 350 - American Foreign Policy (3)

This course is designed to give students a broad understanding of role of the U.S.'s role within the international system. To understand current U.S. foreign policy, we must also understand the past. This is especially important in understanding how international actors perceive the U.S., how we have related to these actors over time, and how to think about ethics and foreign policy.

POL 351 - International Law in Theory and Practice (3)

Can international law help bring about a more cooperative and secure world? Explore how international law has developed over time, expanded in scope, and is limited in its effectiveness by powerful states and monied interests. Students will analyze case studies that uncover tensions that exist between the normative ideals of international law in theory and the limitations of it in practice.

POL 352 - Survival (3)

What are the most dangerous threats to human survival on planet Earth and what can be done? Students will use the methods of risk management, threat assessment, and scenario planning to answer these questions as we take on topics like global warming, asteroid strikes, nuclear war, and peak oil.

POL 353 - Strategies of War and Peace (3)

This course focuses on the range of strategies that countries use to solve problems and pursue goals. We address when, why, and how some strategies are more effective than others. Lessons are drawn from business, war, diplomacy, and politics.

POL 354 - American Way of War (3)

What role does American culture play in shaping how and why the United States goes to war? Over the course of American history, what are the continuities and changes in how and why the United States has fought its wars? What is the relationship between how the US fights its conventional wars and irregular wars?

POL 355 - The Arab-Israeli Conflict (3)

Students apply concepts and theories of political science to the Arab-Israeli Conflict, both to demonstrate how to apply the concepts and theory, but also to explain the roots and dynamics of the conflict.

POL 360 - Combating Terrorism (3)

Students will learn to assess threats from terrorist groups and learn strategies for combating terrorism. Students will apply threat assessment methodology and combating terrorism strategies to current and historical threat groups like ISIS, al Qaeda, the KKK and the IRA, among others.

POL 371 - Politics of Central Europe (3)

Explores how countries of central Europe, Germany, Austria, Czech Republic, Slovakia, Hungary, and Poland managed the transition to democracy within the context of the European Union. Attention is given to how these countries have dealt with the demise of communism and the challenges of setting up markets, creating civil societies and establishing democratic cultures and institutions.

Comparative Politics**POL 372 - Politics of the EU and Contemporary Europe (3)**

This course explores politics of the EU and contemporary Europe in a comparative manner. We examine a range of European countries to understand different institutional, political, societal, and economic structures. The course also explores the history of the EU and investigates contemporary developments within the union.

POL 375 - Gender, Migration, and Displacement (3)

This course explores global migration and displacement from gendered perspectives. We study migration theories, migratory movements, displacement, and selected themes in migration through gendered analysis. Students emerge from the course with the analytical skills and knowledge to contextualize, critically assess, and comparatively analyze contemporary developments in global migration and displacement as it pertains to gender.

POL 376 - Politics of Africa (3)

Why has the African continent had some of the fastest economic growth of any world region over the past decade while it continues to struggle with good governance? Understanding the continent necessitates exploring the influences of colonialism, globalization and national movements for reform. Students will utilize a comparative lens to explore and analyze economic and political trajectories of African states.

POL 377 - Politics of the Middle East (3)

Events in the Middle East often influence global affairs, including US foreign policy. At the same time, outside powers often influence internal events in the Middle East. This course introduces students to the basic historical, religious, cultural, and economic factors that shape politics and economics in the region, as well as interrogates why Middle Eastern politics are so important globally.

POL 378 - Muslims and Islam in Europe and the U.S. (3)

This course traces histories of Muslims and Islam in Europe and the US in a comparative manner. For the US, we proceed chronologically, beginning with the early traces of Muslims and Islam up to recent migratory movements. For Europe, we examine histories and contemporary debates on Muslims and Islam in Germany, Sweden, Great Britain, France, the Netherlands, Italy, Spain, Greece.

POL 391 - Special Topics (Variable)

These courses involve special topics in different areas of political science and are offered periodically.

POL 392 - Special Topics (Variable)

These courses involve special topics in different areas of political science and are offered periodically.

POL 471 - Global Advocacy and Activism (3)

This course explores global advocacy and activism through politics from below. We study the role of transnational advocacy networks and non-state actors in achieving global change. Students emerge from the course with the analytical skills and knowledge to conduct policy analysis, write policy briefs, and make advocacy calls to key stakeholders.

Prerequisite: POL 205, or Permission of Instructor.

American Politics

Prerequisite: POL 200 or permission of instructor.

POL 415 - Congress and Legislative Process (3)

An analysis of the role, structure, and policies of the American Congress. This course focuses on the creation, evolution, and powers of the United States congress, congressional elections, the relationship between legislators and constituents, the organization and workings of Congress, changes in the legislative process, and congressional interaction with interest groups, the media, the executive branch, and the Courts.

Prerequisite: POL 200 or permission of the instructor.

POL 419 - The US Presidency (3)

An examination of the presidency in the American political system. This course examines the founding, development, and institutionalization of the presidency, the growth of presidential power, presidential selection, the role of the president in the executive branch, and the interactions between the president, the media and the other institutions of government.

Prerequisite: POL 200 or permission of the instructor.

Political Theory

Prerequisite: POL 203 or permission of instructor.

POL 421 - Seminar in Political Theory (3)

This course is an advanced seminar that will focus intensely on a particular issue in political theory or on a particular political thinker or group of political thinkers.

Prerequisite: POL 203 or permission of the instructor.

POL 423 - Jurisprudence and Constitutional Interpretation (3)

This seminar explores influential theories of American Constitutional interpretation.

Corequisite: POL 203 or permission of the instructor.

International Relations

Prerequisite: POL 205 or permission of instructor.

POL 450 - Frontline of Global War (3)

This course covers the political and military history of South Asia with a focus on Afghanistan and Pakistan since 1979. Students will understand and analyze the recent security challenges facing those two countries--insurgency and counter-insurgency, terrorism, political Islamism, militarized international peace building and reconstruction, and externally-supported democratization.

POL 457 - The Rise of China (3)

How should we interpret the rise of China? Is China a threat to international peace and stability? Is it a model for economic development? Is Chinese hegemony inevitable? This course seeks to answer these questions by exploring international relations theory, historical examples, and contemporary analysis.

POL 462 - Globalization and its Discontents (3)

The benefits and harms of globalization have been unevenly distributed across the globe leading to growing inequities within and across countries. This course explores the intersection of political and economic actors, civil society organizations, social

movements, and international institutions to understand the driving forces of globalization as well as its outcomes. The global neoliberal economic agenda is critically interrogated.

Prerequisite: POL 250.

Comparative Politics

Prerequisite: POL 205 or permission of instructor.

POL 465 - Democratization and Its Challenges (3)

Does Democracy matter to outcomes in individual countries and within international relations? We explore theories and practice of democratic transition, erosion and/or consolidation within specific country cases as well as within the international system. Course interrogates cultural and civic elements of democratic consolidation as well as institutional elements that shape its character, effectiveness, and legitimacy.

Prerequisite: POL 250.

POL 470 - Global Migration and Displacement (3)

This course explores politics of migration in a global context. We study migration theories, migratory movements, displacement, and selected themes in migration. Students emerge from the course with the analytical skills and knowledge to contextualize, critically assess, and comparatively analyze contemporary developments in global migration and displacement.

Prerequisite: POL 205 or instructor permission.

POL 490 - Directed Study (Variable)

Individual study under the direction of a member of the political science department, with the approval of the chairman.

POL 491 - Seminar (Variable)

Credit arranged.

POL 492 - Seminar (Variable)

Credit arranged.

POL 495 - Workshop (Variable)

Credit arranged.

POL 496 - Workshop (Variable)

Credit arranged.

POL 497 - Internship (Variable)

Internships are individually arranged and may be done at the national, state, or local levels of government. Students will be required to supplement their field experience with appropriate readings arranged with the instructor prior to registration along with a required research project in the area of the internship. Students may receive an IP (In Progress) grade until the completion of their internship.

POL 499 - Senior Thesis (Variable)

Research, study, or original work under the direction of a faculty mentor, leading to a scholarly thesis document with a public presentation of results. Requires approval of thesis director, department chair, dean, and the director of the honors program, when appropriate.

Prerequisite: Senior standing; 3.0 G.P.A. in the thesis area, or good standing in the honors program.

PSY - Psychology

PSY 101 - Psychological Science (3)

How does the mind work, and how can science help us better understand human experience and human behavior? This course approaches such questions through an overview of major topics in contemporary psychology and through an integration of biological, cognitive, and sociocultural perspectives. Students will deploy a scientific lens in the exploration of human nature and examination of contemporary social problems.

PSY 214 - Research Methods: Design (3)

Principles and methods of research on human behavior. Scientific method as an approach to problem identification, analysis, and solution. How to evaluate methods and findings. How to design studies relevant to a given problem.

Prerequisite: MTH 161 and PSY 101 or permission of instructor. Crosslisted as: SOC 214, SW 214.

PSY 215 - Research Methods: Analysis (3)

Introduction to psychological and sociological research with emphasis on quantitative methods. Topics include sampling, hypothesis testing, statistical analysis, and computer usage.

Prerequisite: MTH 161, PSY 101 and PSY/SOC/SW 214 or permission of instructor. Crosslisted as: SOC 215.

PSY 301 - Behavioral Neuroscience (3)

Structure and function of the nervous system, with implications for both normal and abnormal development and behavior. How the function of the brain is related to behavior.

Prerequisite: PSY 101.

PSY 311 - Sensation and Perception (3)

In this course we will discuss how external stimuli are detected and perceived by the nervous system. We will study the anatomy, physiology and circuitry that mediate vision, audition, touch, taste and olfaction.

Prerequisite: PSY 101.

PSY 321 - Psychology of Learning (3)

The course introduces students to the history, methods, and findings in the areas of habituation, classical conditioning, operant conditioning, declarative memory and procedural learning. We will discuss the neural basis of these changes and learn the anatomical circuits involved. Finally, we will also discuss how these processes influence pathological behavior as well as how they alter our daily lives.

Prerequisite: PSY 101.

PSY 331 - Cognition (3)

Examines the higher mental processes of attention, learning, memory, language, concept formation, problem solving, and reasoning. Students will participate in simulations of classic experiments in cognitive psychology.

Prerequisite: PSY 101.

PSY 341 - Evolutionary Psychology (3)

In this course we will examine the evolutionary basis of human behavior and cognition. The ways in which natural and sexual selection have shaped human nature will be explored. Selected topics include evolutionary explanations of human mating systems, jealousy, interpersonal and sexual attraction, warfare, and cognition. A special emphasis will be placed on exploring the evolutionary basis of male-female differences.

Prerequisite: PSY 101.

PSY 351 - Health Psychology (3)

Considers the implications of combined medical, psychological, and pastoral care models on health and recovery. Special attention given to influences in health of personality, social context, belief and meaning, and mind-body connection.

Prerequisite: PSY 101.

PSY 356 - Perspectives on Human Sexuality (3)

This course will provide students with varying perspectives on human sexuality. Through film, reading class discussion, and guest lectures, student will explore sexuality from historical, biological, psychological, developmental, sociological, and cultural contexts. Attention will be given to how different perspectives on sexuality may affect individuals and the larger society.

Prerequisite: PSY 101 or permission of instructor. Crosslisted as: SW 356.

PSY 361 - Life Span Development (3)

Examines psychosocial aspects of human development from birth through death. Focuses on major psychological, social, and cognitive topics as relevant to the stages of the life span.

Prerequisite: PSY 101.

PSY 365 - Personality (3)

Examines diverse perspectives on human personality. The focus is on asking what we know when we know a person. This involves analyzing basic assumptions, postulates, and research related to major personality theories including: trait, psychoanalytic, humanistic, cultural, biological, and cognitive.

Prerequisite: PSY 101.

PSY 371 - Social Psychology (3)

Psychological behavior of an individual as a member of a group; the influence of culture and society on attitudes, personality, and behavior; the dynamics of group interaction.

Prerequisite: PSY 101. Crosslisted as: SOC 371.

PSY 373 - Positive Psychology (3)

This course provides an introduction to positive psychology, understood as a strengths-based approach to psychological science. Specific topics will usually include resilience, happiness, gratitude, flow, optimism, wisdom, positive affect, emotional regulation, and interpersonal relationships, along with organizational, clinical, developmental, and academic applications. The course will also discuss techniques and interventions towards the promotion of positive aspects of human experience.

Prerequisite: PSY 101.

PSY 375 - The Self (3)

This course will examine the social self; competing needs for uniqueness and similarity; the meaning of self-identity and self-concept; individual coping strategies; attributional analyses; social influence and defining gender.

Prerequisite: PSY 101.

PSY 381 - Abnormal Psychology (3)

Examination of problem behavior, its causes, its treatment, and its social and legal ramifications. Emphasis is given to personal and societal understanding of abnormality as well as to psychological and medical considerations.

Prerequisite: PSY 101.

PSY 385 - Child and Adolescent Mental Health (3)

This course is designed to familiarize students with the symptoms, causes, and treatments of psychological disorders in children. This includes particular focus on developmental factors that influence the onset, course, and treatments of psychological problems in young people, and the cultural, social, psychological, emotional, and biological factors that influence our understanding of mental health and illness in children.

Prerequisite: PSY 101.

PSY 391 - Seminar (Variable)

Credit arranged.

PSY 392 - Special Topics in Psychology (3)

This course is a survey of specialty areas within contemporary psychological sciences. Different topics and areas will be featured in different semesters.

Prerequisite: PSY 101.

PSY 398 - Junior Seminar (1)

This course is an option for psychology majors of junior class status. This course will offer opportunities to engage with professional development and discuss possibilities for life after college, prepare students for senior capstones, and expose

students opportunities across sub-fields of contemporary psychology. This course includes discussions with all regular psychology faculty, and is offered as pass/no pass.

Prerequisite: Psychology majors with junior status only.

PSY 400 - History of Psychology (3)

Psychological ideas and theories from their philosophical origins to the present. Discussion of five main schools of psychology and how they influence current thought in psychology.

Prerequisite: PSY 101.

PSY 410 - Drugs and Behavior (3)

Examination of how therapeutic, illicit, and recreational drugs associate with human behavior. Topics may include historical and societal views of drug use, drugs in food, environmental toxins; theories of why drugs are used and reasons for prescribing psychoactive drugs; and the relationship between chemical processes occurring in the nervous system and behaviors including abuse and addiction.

Prerequisite: PSY 101.

PSY 430 - Psychology of Language (3)

Study of the nature of language, how humans use language, how humans learn language, the psychological factors in language use, and the neural basis of language. Students will study the knowledge and processes that underlie a person's ability to produce and understand language.

Prerequisite: PSY 101.

PSY 432 - Psychology of Negotiations (3)

We negotiate every day at home, work, and play. This course explores the psychology, art, and science of negotiations. The core of the course is a series of eleven simulations that allow students to experiment with negotiation techniques and develop as negotiators, learning through experience and feedback. Debriefings and discussions of negotiations and behavioral research complement the situations.

Prerequisite: PSY 101.

PSY 435 - Judgment and Decision Making (3)

Judgments affect our choices ranging from what brand of cereal to whom to marry. This course examines how we define rationality as well as cognitive, affective, and motivational processes that underlie how we encode and evaluate options. Students are expected to engage with primary sources in the course packet through written weekly responses, class discussion, and a final paper.

Prerequisite: PSY 101.

PSY 450 - Cross Cultural Psychology (3)

Explores relationships between cultural variables and human behavior. The development of cross cultural psychology and research methodologies used by cross cultural researchers in examined. Theories that reflect the cultural, social, and developmental perspectives on behavior are considered.

Prerequisite: PSY 101.

PSY 453 - Psychosocial Aspects of Sport and Physical Activity (3)

This course will engage psychological and sociological perspectives toward understanding sports and physical activity as both personal engagements and social phenomena. Topics will include sport-based youth development, mental health and physical activity, performance enhancement, and sport and social issues. The course will emphasize reflective, analytic, critical, and interdisciplinary perspectives based on engaging with scholarly readings and material.

Prerequisite: PSY 101.

PSY 461 - Introduction to Gerontology (3)

This course introduces students to the field of gerontology. The course examines the aging process and its impact upon the individual, the family, and society. The course also covers various social, cultural, political, and economic issues for older adults in our society.

Prerequisite: PSY 101 or SOC 101 or SW 205 or permission of instructor. Crosslisted as: SOC 461, SW 461.

PSY 462 - Group Counseling (3)

Introduction to group dynamics, contemporary models of group counseling, and the development of group skills.

Prerequisite: PSY 101 or SW 205 or permission of instructor. Crosslisted as: SW 462.

PSY 463 - Children, Youth, and Society (3)

This course is about child and youth development as embedded in social and cultural contexts. The particular emphasis will be on early childhood through the transition into adulthood, and on thinking about childhood and youth as social phenomena. The course is reading/discussion intensive and involves a community-based learning project.

Prerequisite: PSY 101. Crosslisted as: SOC 463.

PSY 464 - Interventions with Children and Youth (3)

This course examines theory, practice, and evaluation of interventions for children and youth across family, community, and institutional contexts. Students will critically analyze areas such as prevention, resilience, and positive youth development and develop specific skills through experiential practice laboratory sessions. Attention will be paid to effective and culturally appropriate programs and strategies for traditionally marginalized and oppressed populations.

Prerequisite: PSY 101. Crosslisted as: SW 464.

PSY 465 - Living with Grief, Dying, and Death (3)

This course provides an overview of death, dying, loss, grief, and bereavement processes from multiple disciplinary perspectives. Emphasis will be placed on the diversity of experiences of dying persons and their loved ones and the role and function of organizations and systems in the experience of death, dying, and bereavement. Implications for social work practice and policy will be discussed.

Prerequisite: SW 205 or SOC 101 or PSY 101 or permission of instructor. Crosslisted as: SW 465.

PSY 470 - Psychology of Aggression (3)

Major theories which account for aggressive behavior or violence. Emphasis given to personality, social, biological, and environmental determinants of aggression and violence.

Prerequisite: PSY 101.

PSY 480 - Clinical and Counseling Psychology (3)

Review of major theories and techniques of psychotherapy; issues in the contemporary practice of psychotherapy.

Prerequisite: PSY 101.

PSY 490 - Directed Study (Variable)

Guided inquiry for superior students by arrangement with the psychology faculty.

PSY 491 - Seminar (Variable)

Credit arranged.

PSY 492 - Seminar (Variable)

Credit arranged.

PSY 494 - Research (Variable)

Participate directly in the research process with a faculty member. Before enrolling a student must consult with a faculty member to define project.

Prerequisite: PSY 214, PSY 215.

PSY 497 - Internship (Variable)

Practical field experience working within a human service organization. Internships are individually arranged and may be done in a wide array of settings. Students will be required to supplement their experience with a classroom seminar. Psychology

majors may take up to 6 credits in internships. Students may receive an IP (In Progress) grade until the completion of their internship.

Prerequisite: SW 205 or PSY 101 or SOC 101. Crosslisted as: SW 497, SOC 497.

PSY 498A - Senior Capstone: Applied Projects (3)

This course is a senior capstone option for psychology majors in their final year of studies who have interests in applying psychological science in community-based settings. The course will integrate skills and concepts from the psychology major, and be oriented by a project related to mental health work, youth work/education, business, or other related areas of applied psychology.

Prerequisite: PSY 214, PSY 215, senior standing, or permission of the instructor.

PSY 498S - Senior Capstone: Seminar (3)

A capstone seminar for psychology majors designed to help the student integrate major contemporary psychological methods, theories, and research findings. Restricted to senior psychology majors.

Prerequisite: PSY 214, PSY 215.

PSY 499 - Senior Capstone: Thesis (3)

Research, study, or original work under direction of a faculty mentor, leading to a scholarly thesis document with a public presentation of results. Requires approval of the thesis director (and department chair or director of the honors program when appropriate), along with a minimum 3.0 GPA in the major.

Prerequisite: PSY 214, PSY 215, senior standing; 3.0 G.P.A. in the thesis area or good standing in the honors program.

RELI - Religious Studies

RELI 501 - Studies in Old and New Testament (3)

An introduction to the scholarly issues concerning the theological interpretation and pastoral application of the Old and New Testament.

RELI 502 - Studies in Theology (3)

A survey of methods, issues, and patterns of questioning that are typical of theological inquiry. Included are introductions to theological ethics, systematic theology, sacramental theology, and spirituality.

RELI 514 - Theological Exploration of the Gospels (3)

An exploration of who Jesus was, how his message was received and developed by the early Church and how that message continues to be relevant for the Church today.

RELI 520 - Theological Ethics (3)

A critical and practical (applied) examination of natural law, human freedom, conscience, authority, moral and rational capacity and social justice from a Catholic theological perspective.

RELI 538 - Sacramental and Liturgical Theology (3)

An exploration of the Church's theological heritage in the areas of sacramental and liturgical theology. Includes writings, methods, and issues in both fields as well as an investigation of how these fields relate to Canon Law.

RELI 541 - Theology of Ministry (3)

A theological foundation for ministry in the Church including historical roots and contemporary experience. Attention will be given to both the theory and practice of ministry. Assignments in theological reflection will provide the method of inquiry and the direction for collaborative pastoral response.

RELI 542 - Pastoral Care (3)

A study of theological models, methodology, and practice crucial to basic pastoral care in a ministerial setting.

RELI 546 - Faith Formation (3)

An investigation of the philosophical and theological foundations of faith formation including Christian religious education, the RCIA process, and relevant topics of Canon Law.

RELI 548 - Christian Spirituality (3)

A contemporary exploration of human relationships, the self, community, the world, and God through the lens of Christian spirituality.

RELI 552 - Christology (3)

An introduction to systematic reflection on the mystery of Jesus the Christ. The course is divided into three parts: Biblical Christology, Classical (Patristic, Doctrinal, and Medieval) Christology, and Contemporary Christology.

RELI 555 - Contemporary Ecclesiology (3)

An exploration of contemporary trends and practices in the post-Vatican II Church. Will access several critical issues in the light of Church teaching, conciliar documents, directions, and contemporary cultural realities.

RELI 560 - Church History (3)

An examination of the Church's development from an obscure Jewish sect through its renewal and engagement with the modern world. Includes an emphasis on the Second Vatican Council, its documents, and its implementations.

RELI 570 - Practicum/Internship (3)

A field-based experience to develop and demonstrate competence in ministry.

Prerequisite: Permission of instructor.

RELI 590 - Directed Study (Variable)

Credit arranged.

SW - Social Work

SW 101 - Social Work and Social Justice (3)

This course provides an overview of social problems and social welfare through an introduction to social work. The course considers experiences of vulnerable populations and ways that systems of oppression operate to marginalize and exclude. Students will learn about the use of social science to advance social justice, equity, and human dignity in communities and society.

SW 214 - Research Methods: Design (3)

Principles and methods of research on human behavior. Scientific method as an approach to problem identification, analysis, and solution. How to evaluate methods and findings. How to design studies relevant to a given problem.

Prerequisite: SW 101 and MTH 161, or permission of instructor. Crosslisted as: PSY 214, SOC 214.

SW 313 - Social Welfare Policy (3)

Utilizes a focus on the history and process of social welfare in the United States and other countries to help the students learn how social welfare policy is organized and developed. Students also learn strategies and techniques to analyze current policy and influence future policy.

Prerequisite: SW 101 or permission of instructor.

SW 325 - Power, Oppression, and Critical Consciousness (3)

Drawing on critical theory and practice perspectives, this course examines how social forces operate to marginalize non-dominant groups and introduces methods for dismantling oppressive systems. Students will engage models for liberation and anti-oppressive practice across interpersonal, institutional, and societal levels. Special emphasis will be placed on addressing white supremacy, heterosexism/cis-sexism, ableism, and their intersections.

Prerequisite: SW 101 or SOC 101 or permission of instructor. Crosslisted as: SOC 325.

SW 343 - Human Behavior in the Social Environment (3)

This course analyzes human behavior as it's impacted by the social environment from a lifespan developmental approach. Students examine the effects of social structures, social policies, and cultural patterns on individuals from a variety of theoretical perspectives to better understand social conditions and problem areas in society.

Prerequisite: SW 101 or permission of instructor.

SW 356 - Perspectives on Human Sexuality (3)

This course will provide students with varying perspectives on human sexuality. Through film, reading class discussion, and guest lectures, student will explore sexuality from historical, biological, psychological, developmental, sociological, and cultural contexts. Attention will be given to how different perspectives on sexuality may affect individuals and the larger society.

Prerequisite: PSY 101 or permission of instructor. Crosslisted as: PSY 356.

SW 357 - Perspectives on Gender and the Body (3)

This course will help students critically analyze biopsychosocial and cultural meanings of gender and body image, change (i.e., disability, illness, aging), and variations through interdisciplinary lenses. Students will explore the social construction of gender and the body as well as the consequences that differing meanings of "gender" and "body" can have on individuals in our society.

Prerequisite: SOC 101 or permission of instructor. Crosslisted as: SOC 357.

SW 386 - Interviewing and Counseling (3)

This course focuses on interviewing skills that are fundamental to the helping professions. Students will understand theories, concepts, and skills behind relationship building, active listening, and the interviewing process as well as how to apply knowledge and skills to affect change with various populations, problems, and settings.

Prerequisite: SW 101 or permission of instructor.

SW 391 - Seminar (Variable)

Credit arranged.

SW 456 - Environmental Social Work (3)

This course examines the role of professional social work in a achievement of sustainability at the individual, community, regional, national, and global levels. Using a multidisciplinary perspective, the social, environmental, economic, and cultural aspects of sustainability are considered theoretically and practically, with a focus on issues of equity and justice across these dimensions. This course includes community-based, action-oriented learning projects.

Prerequisite: SW 101 or permission of instructor.

SW 460 - Local and Global Social Justice Practice (3)

This course explores how theories of social justice are implemented in practice in local and global contexts. Students are required to complete a 50-hour community-based learning experience at an organization of their choice. The course culminates in an integrative paper and presentation on a social justice issue. Capstone course for Social Justice Minor.

Prerequisite: POL 302 or permission of instructor.

SW 461 - Introduction to Gerontology (3)

This course introduces students to the field of gerontology. The course examines the aging process and its impact upon the individual, the family, and society. The course also covers various social, cultural, political, and economic issues for older adults in our society.

Prerequisite: PSY 101 or SOC 101 or SW 101 or permission of instructor. Crosslisted as: PSY 461, SOC 461.

SW 462 - Group Counseling (3)

Introduction to group dynamics, contemporary models of group counseling, and the development of group skills.

Prerequisite: PSY 101 or SW 101 or permission of instructor. Crosslisted as: PSY 462.

SW 464 - Interventions with Children and Youth (3)

This course examines theory, practice, and evaluation of interventions for children and youth across family, community, and institutional contexts. Students will critically analyze areas such as prevention, resilience, and positive youth development and develop specific skills through experiential practice laboratory sessions. Attention will be paid to effective and culturally appropriate programs and strategies for traditionally marginalized and oppressed populations.

Prerequisite: SW 101. Crosslisted as: PSY 464.

SW 465 - Grief, Death, and Dying in a Politicized World (3)

This course provides an overview of death, dying, loss, grief, and bereavement from a personal and political perspective. We will explore grief as activism to advance healing and transformation on personal and societal levels. Historical and current examples of grief used in political action will be studied, drawing on social movements advancing racial justice, environmental justice, and queer LGBTQIA+ liberation

Prerequisite: SW 101 or SOC 101 or PSY 101 or permission of instructor. Crosslisted as: PSY 465.

SW 468 - Comparative Health and Social Issues in Ecuador (3)

Students will spend six weeks engaging in services in Quito, Ecuador. The focus is on issues impacting mental, physical, and spiritual well-being of individuals/communities in Ecuador and services designed to address these issues & work for social/economic justice. Comparisons are made to systems in the U.S. Approval of Studies Abroad Director required.

Prerequisite: SOC 101, SPN 301, SPN 302 or equivalent. Crosslisted as: SOC 468, SPN 468.

SW 480 - Theory and Methods of Social Work Practice I (3)

This course focuses on generalist social work practice with individuals, families, and groups using the problem-solving process. The course also focuses on social work values, ethics, and issues relevant to sensitive social work practice with populations-at-risk. Social work majors only.

Prerequisite: SW 101 and all required SW 300-level courses. Corequisite: SW 482.

SW 481 - Theory and Methods of Social Work Practice II (3)

This course provides generalist social work practice knowledge, values, and skills as applied to work with groups, organizations, communities, and societies. The course focuses on social work values, ethics, and issues relevant to sensitive social work practice with populations-at-risk. Social work majors only.

Prerequisite: SW 101 and all required SW 300-level courses. Corequisite: SW 483.

SW 482 - Social Work Practicum I (6)

Intensive supervised field experience in selected social work agencies. Students spend 16 hours per week in the field. Social work majors only.

Prerequisite: All SW courses except SW 480, SW 481, SW 483; all lower-division University and CAS requirements. Corequisite: SW 480.

SW 483 - Social Work Practicum II (6)

Intensive supervised field experience in selected social work agencies. Students spend 16 hours per week in the field. Social work majors only.

Prerequisite: All SW courses except SW 481; all lower-division University and CAS requirements. Corequisite: SW 481.

SW 490 - Directed Study (Variable)

Credit arranged.

SW 491 - Seminar (Variable)

Credit arranged.

SW 492 - Seminar (Variable)

Credit arranged.

SW 494 - Research (Variable)

Participate directly in the research process with a faculty member. Before enrolling a student must consult with a faculty member to define the project.

SW 497 - Internship (Variable)

Practical field experience working within a human service organization. Internships are individually arranged and may be done in a wide array of settings. Students will be required to supplement their experience with a classroom seminar. Social Work majors may take up to 6 credits in internships. Students may receive an IP (In Progress) grade until the completion of their internship.

Prerequisite: SW 101 or PSY 101 or SOC 101. Crosslisted as: PSY 497, SOC 497.

SW 499 - Senior Thesis (Variable)

Research, study, or original work under the direction of a faculty mentor, leading to a scholarly thesis document with a public presentation of results. Requires approval of thesis director, department chair, dean, and the director of the honors program, when appropriate.

Prerequisite: Senior standing; 3.0 G.P.A. in the thesis area, or good standing in the honors program.

SOC - Sociology

SOC 101 - Introduction to Sociology (3)

An introduction to the theories, scientific methods, and findings of sociology concerning group behavior, society, culture, social institutions, and social change. Students learn how social patterns and structures shape individuals' experiences of the world and how our lives in turn shape society. Special attention is paid to social and cultural diversity in the U.S., including class, race, ethnicity, and gender.

SOC 214 - Research Methods: Design (3)

Principles and methods of research on human behavior. Scientific method as an approach to problem identification, analysis, and solution. How to evaluate methods and findings. How to design studies relevant to a given problem.

Prerequisite: SOC 101 and MTH 161 or permission of instructor. Crosslisted as: PSY 214, SW 214.

SOC 215 - Research Methods: Analysis (3)

Introduction to psychological and sociological research with emphasis on quantitative methods. Topics include sampling, hypothesis testing, statistical analysis, and computer usage.

Prerequisite: SOC 101, MTH 161 and SOC/PSY/SW 214 or permission of instructor. Crosslisted as: PSY 215.

SOC 305 - Sociology of Crime and Justice (3)

A systematic and in-depth review of criminal justice in America from a sociological perspective. Course evaluates the historical development of policing, the judiciary, and corrections, and examines the culture and organizations of criminal justice institutions. Significant attention is paid to examining public policy issues in criminal justice.

Prerequisite: SOC 101 or PSY 101.

SOC 325 - Cultural Diversity and Cultural Competence (3)

This course considers issues of human diversity focusing on cultural pluralism and race and ethnic relations. Students will explore concepts of privilege, oppression, prejudice, and discrimination in the context of U.S. communities and human service professions and learn strategies for dismantling oppression and promoting socially just practices. Other dimensions of diversity (e.g., gender identity, sexual orientation, religion, ability) are explored.

Prerequisite: SW 205 or SOC 101 or permission of instructor. Crosslisted as: SW 325.

SOC 333 - Social Class and Inequality (3)

Examination of inequality in the distribution of wealth, power, and prestige. Focus will be on stratification within societies and on the nature, extent, and significance of inequality of wealth and power between societies.

Prerequisite: SOC 101.

SOC 336 - Race and Racism in the United States (3)

This course introduces concepts and theories in the sociology of race and racism to develop racial literacy. The course examines how race and racism structure everyday life and shape the life chances of individuals and groups. The course emphasizes historical and contemporary race relations in the US, but comparative analyses of race and racism are also explored.

Prerequisite: SOC 101.

SOC 339 - Sociology of the Family (3)

This course examines the family through a sociological lens. We consider how the form and function of family has changed over time, including how race, class, gender, and sexuality structure legal definitions and practices within the family. Readings explore diversity in family formation and inequalities in family life.

Prerequisite: SOC 101.

SOC 344 - Sociology of Deviant Behavior (3)

Study of behavior which differs from cultural expectations. This course is concerned with social deviance and will consider the history of the concept of deviance, the legal aspects, social aspects, deviant subcultures, self images, social organization, causes of deviance, and strategies for response.

Prerequisite: SOC 101.

SOC 346 - Sociology of Policing (3)

Course examines current issues related to the accountability of the police to the community and the political process.

Prerequisite: SOC 101 or PSY 101.

SOC 347 - Crime and Justice in Film (3)

Survey of how the American criminal justice system has been portrayed in cinema during the latter half of the 20th century. The course uses select films to underscore significant theoretical debates and policy developments in criminal justice.

SOC 357 - Perspectives on Gender and the Body (3)

This course will help students critically analyze biopsychosocial and cultural meanings of gender and body image, change (i.e., disability, illness, aging), and variations through interdisciplinary lenses. Students will explore the social construction of gender and the body as well as the consequences that differing meanings of “gender” and “body” can have on individuals in our society.

Prerequisite: SOC 101 or permission of instructor. Crosslisted as: SW 357.

SOC 360 - Criminology (3)

Criminology is the body of knowledge regarding delinquency and crime as social phenomena. Includes the development of a body of general and verified principles and of other types of knowledge regarding process of law, crime, and reaction to crime. Focus is on the adult offender.

Prerequisite: SOC 101 and PSY/SOC/SW 214, or permission of instructor.

SOC 371 - Social Psychology (3)

Psychological behavior of an individual as a member of a group; the influence of culture and society on attitudes, personality, and behavior; the dynamics of group interaction.

Prerequisite: SOC 101. Crosslisted as: PSY 371.

SOC 380 - Sociological Theory (3)

Comprehensive study of sociological theories from the late nineteenth century to the present; the relationship between theory and research. Required of majors in sociology.

Prerequisite: SOC 101; SOC 214 or SOC 215.

SOC 391 - Seminar (Variable)

Credit arranged.

SOC 392 - Seminar (Variable)

Credit arranged.

SOC 431 - Mapping Social Problems (3)

This course emphasizes a spatial approach to the study of social problems. Using Geographic Information Systems (GIS) software, students will gain experience in making maps, obtaining data, and uncovering spatial patterns (e.g., "hot spots" of criminal activity or residential segregation) to inform public policy.

Prerequisite: SOC 214, PSY 214, or SW 214, SOC 215 or PSY 215 or permission of instructor.

SOC 432 - Gender and Violence (3)

The course explores the way gender is associated with violence as well as the roots and manifestations of gender-based violence. Particular attention will be paid to sexual assault, prostitution and domestic violence. Students will be able to explain and apply theories of violence and will have a choice of actively working to reduce violence or conducting a research project to better understand violence.

Prerequisite: SOC 214, PSY 214 or SW 214 or permission of instructor.

SOC 434 - Urban Society (3)

Topics include the origin and development of cities; the social-psychological consequences of living in the urban environment; the social problems associated with urbanization in both industrial and third world cities; and the future of cities.

Prerequisite: SOC 101; SOC 214 or PSY 214.

SOC 436 - Women and Work (3)

This course examines "work" as a site of uneven power for women, and interrogates the contexts of paid and unpaid labor across different social contexts. Additionally, the course explores how race, class, gender, citizenship status, and geography intersect to produce constrained agency for women laboring under global capitalism. This advanced course in sociology provides enhanced training in qualitative research methods.

Prerequisite: SOC 101; SOC/PSY/SW 214; SOC/PSY 215.

SOC 438 - Juvenile Delinquency (3)

Analysis of theories and research concerning the nature, extent, course, and control of juvenile criminal and antisocial conduct.

Prerequisite: SOC 101 or PSY 101; SOC 214, PSY 214 or SW 214; SOC 215 or PSY 215.

SOC 453 - Psychosocial Aspects of Sport Activity (3)

This course will engage psychological and sociological perspectives toward understanding sports and physical activity as both personal engagements and social phenomena. Topics will include sport-based youth development, mental health and physical activity, performance enhancement, and sport and social issues. The course will emphasize reflective, analytic, critical, and interdisciplinary perspectives based on engaging with scholarly readings and material.

Prerequisite: SOC 101 or PSY 101. Crosslisted as: PSY 453.

SOC 461 - Introduction to Gerontology (3)

This course introduces students to the field of gerontology. The course examines the aging process and its impact upon the individual, the family, and society. The course also covers various social, cultural, political, and economic issues for older adults in our society.

Prerequisite: PSY 101 or SOC 101 or SW 205 or permission of instructor. Crosslisted as: PSY 461, SW 461.

SOC 463 - Children, Youth and Society (3)

This course is about child and youth development as embedded in social and cultural contexts. The particular emphasis will be on early childhood through the transition into adulthood, and on thinking about childhood and youth as social phenomena. The course is reading/discussion intensive and involves a community-based learning project.

Prerequisite: SOC 101. Crosslisted as: PSY 463.

SOC 468 - Comparative Health and Social Issues in Ecuador (3)

Students will spend six weeks engaging in services in Quito, Ecuador. The focus is on issues impacting mental, physical, and spiritual well-being of individuals/communities in Ecuador and services designed to address these issues & work for social/economic justice. Comparisons are made to systems in the U.S. Approval of Studies Abroad Director required.

Prerequisite: SOC 101, SPN 301, SPN 302 or equivalent. Crosslisted as: SW 468, SPN 468.

SOC 490 - Directed Study (Variable)

Guided inquiry for superior students by special arrangement with the sociology faculty.

SOC 491 - Sociology Seminar (Variable)

Credit arranged.

Prerequisite: SOC 214, PSY 214, or SW 214 or permission of instructor.

SOC 492 - Sociology Seminar (Variable)

Credit arranged.

Prerequisite: SOC 214, PSY 214, or SW 214 or permission of instructor.

SOC 493 - Research (Variable)

Participate directly in the research process with a faculty member. Before enrolling, a student must consult with a faculty member to define the project.

SOC 494 - Research (Variable)

Participate directly in the research process with a faculty member. Before enrolling, a student must consult with a faculty member to define the project.

SOC 497 - Internship (Variable)

Practical field experience working within a human service organization. Internships are individually arranged and may be done in a wide array of settings. Students will be required to supplement their experience with a classroom seminar. Sociology majors may take up to 6 credits in internships. Students may receive an IP (In Progress) grade until the completion of their internship.

Prerequisite: SW 205 or PSY 101 or SOC 101. Crosslisted as: PSY 497, SW 497.

SOC 497C - Criminology Internship (3)

Supervised in-service experience in some aspect of the criminal justice system. This might include work in corrections, police activities, court room procedures, or legislative internship. Criminology track students only.

Prerequisite: SOC 101.

SOC 498 - Senior Project (3)

Advanced analysis, integration, application, and criticism of the field of sociology. Students will complete a senior project. Sociology majors only.

Prerequisite: SOC 214 and SOC 380, or permission of instructor.

SOC 499 - Senior Thesis (1)

Research, study, or original work under the direction of a faculty mentor, leading to a scholarly thesis document with a public presentation of results. Requires approval of thesis director, and department chair.

Prerequisite: SOC 214 and SOC 380. Senior standing; 3.0 G.P.A. in the thesis area, or good standing in the honors program.

SPN - Spanish

SPN 101 - Elementary Spanish (3)

SPN 101 is an introductory course in which students acquire foundational Spanish grammar and vocabulary in meaningful social contexts. Through multimedia, students are introduced to the geography and cultures of the Spanish-speaking world.

Listening comprehension, reading, writing, and speaking skills are developed through communicative activities and assignments. SPN 101/102 are taken as a comprehensive, consecutive sequence.

SPN 102 - Elementary Spanish (3)

SPN 102 is an introductory course in which students acquire foundational Spanish grammar and vocabulary in meaningful social contexts. Through multimedia, students are introduced to the geography and cultures of the Spanish-speaking world. Listening comprehension, reading, writing, and speaking skills are developed through communicative activities and assignments. SPN 101-102 are taken as a comprehensive, consecutive sequence.

Prerequisite: SPN 101 or equivalent.

SPN 105 - Accelerated Beginning Spanish (6)

This class provides students with the opportunity to learn a full year of Spanish in six weeks with the advantage of intensive study, which promotes greater retention. Students will practice verb conjugations and usage, gain proficiency skills, and learn key grammatical concepts.

SPN 201 - Intermediate Spanish (3)

In SPN 201 students increase listening, reading, writing, and speaking skills at the intermediate level while advancing knowledge of the vocabulary, geography, and cultures of the Spanish-speaking world. Foundational grammar concepts are solidified and built upon by introducing advanced grammatical structures through multimedia content and communicative activities and assignments. SPN 201-202 are taken as a comprehensive, consecutive sequence.

SPN 202 - Intermediate Spanish Language and Culture (3)

In SPN 202 students increase listening, reading, writing, and speaking skills while advancing knowledge of the vocabulary, geography, and cultures of the Spanish-speaking world. Grammar concepts are solidified and built upon through multimedia and communicative activities. Students will be able to recognize other cultural perspectives and use them in interactions in target language. SPN 201-202 are a comprehensive, consecutive sequence.

Prerequisite: SPN 201.

SPN 205 - Accelerated Intermediate Spanish Language and Culture (6)

Course will offer students an opportunity to immerse themselves in the Spanish language and strengthen their linguistic and relevant cultural skills. Follows SPN 102 and will build on the concepts covered at the introductory level. This intensive class substitutes for SPN 201-202, thus making it possible to complete the language requirement in the CAS B.A. core curriculum.

SPN 290 - Directed Study (Variable)

Credit arranged.

SPN 301 - Advanced Spanish Composition, Conversation, and Culture I (3)

Spanish 301 and 302 are bridges to all upper-division Spanish courses and develop advanced writing and conversation skills. Grammar review, reading, vocabulary building, and class discussion lead to essays and presentations on relevant cultural topics. Students will be able to recognize other cultural perspectives and use them in interactions in target language. These courses may be taken in any order.

Prerequisite: SPN 202 or 302 or a score of 71% and above on Spanish placement test.

SPN 302 - Advanced Spanish Composition, Conversation, and Culture II (3)

Spanish 301 and 302 are bridges to all upper-division Spanish courses and develop advanced writing and conversation skills. Grammar review, reading, vocabulary building, and class discussion lead to essays and presentations on relevant cultural topics. Students will be able to recognize other cultural perspectives and use them in interactions in target language. These courses may be taken in any order.

Prerequisite: SPN 202 or 301 or a score of 71% and above on Spanish placement test.

SPN 306 - Advanced Spanish Grammar (3)

Intense review of Spanish grammar which will benefit those who have a high proficiency in the language and need a thorough review of concepts in order to enhance writing, reading, oral, and speaking skills. Of special benefit to education majors who seek a Spanish endorsement and will be teaching the language at the elementary or secondary level.

SPN 308 - Advanced Spanish for Heritage Speakers (3)

SPN 308 is a bridge to upper-division Spanish courses that advances heritage speakers' writing, reading, and presentational skills. For bilingual and bicultural students, the course emphasizes Hispanic cultures in the U.S. Students will be able to recognize other cultural perspectives and use them in interactions in target language. Students self-select for this course and take it instead of SPN 301-302.

Prerequisite: Completion of 200 level Spanish (201-202/205) on campus or 71% or better on placement test and instructor's approval.

SPN 330 - The Three Cultures of Medieval Spain (3)

This course examines the variable relationships between Christians, Jews, and Muslims in medieval Spain, when the proximity of these distinct cultures enriched each one in ways rarely seen since then. Analysis of primary and secondary literary and historical texts will address the coexistence and even flourishing of these three cultures, as well as tensions that eventually undermined their centuries-long collaboration.

Prerequisite: SPN 301 & SPN 302 or SPN 306 or SPN 308.

SPN 331 - Golden Age Spanish Literature and Culture (3)

This course studies cultural production during the Spanish Golden Age of the 1500s and 1600s. Readings and discussions will examine issues including love and its attendant emotions, religious identity, societal honor, attitudes towards death, and the perspectives of female authors and characters. Students will relate their understanding of Renaissance and Baroque literature to the 21st century and their own experiences.

Prerequisite: SPN 301 & SPN 302 or SPN 306 or SPN 308.

SPN 340 - Nation and Identity in Spanish Theater: 1788-1931 (3)

Canonical dramas, tragedies, and comedies illuminate stasis, change, and conflict in Spanish society across three centuries. Discussion of the plays focuses on the individual's struggle for rights against the reassertion of traditional social mores with a focus on gender identity. Embedded grammar instruction includes close reading of text, frequent writing, and live theater performance by students for oral practice.

Prerequisite: SPN 301 & SPN 302 or SPN 306 or SPN 308.

SPN 341 - Twenty-First Century Spanish Literature (3)

Short stories, essays, novel excerpts, poems (including readings from mass culture), and films present Spain's most recent artistic production to explore diverse aspects of Spanish society such as urban life, gender identity formation, and consumerism. This course offers introductory skills to literary and cultural analysis as well as continued advanced grammar review.

Prerequisite: SPN 301 & SPN 302 or SPN 306 or SPN 308.

SPN 350 - Latin American Women's Voices (3)

This course aims to deepen students' understanding of the historical and cultural transformations in Latin America through the experiences, artistic productions, and testimonies of women whose actions were crucial to social changes. It has a multidisciplinary approach that includes traditional literary texts and visual and performative forms of expression. Course embeds grammar to build advanced reading and writing skills.

Prerequisite: SPN 301 & SPN 302 or SPN 306 or SPN 308.

SPN 351 - Latin American Cinema (3)

This course introduces students to major directors of Latin America and examines the various cultural and national issues that these artists explore in their films. The course includes a basic introduction to the technical aspects of filmmaking and terminology used to analyze films. It also aims to improve students' writing and reading skills.

Prerequisite: SPN 301 & SPN 302 or SPN 306 or SPN 308.

SPN 360 - Literature and Culture of Contemporary Mexico (3)

Through the study of different cultural manifestations such as literature, film, music, comics, painting, cuisine, and folklore this course introduces students to significant aspects of Mexican history, sociocultural traits, and current affairs that have shaped the country and its people. This class also focuses on literary analysis, interpretation, and refining advanced writing skills.

Prerequisite: SPN 301 & SPN 302 or SPN 306 or SPN 308.

SPN 361 - Latin American Short Story (3)

Close reading of short stories by prominent contemporary Latin American writers with the goal of enhancing reading comprehension and improving grammatical accuracy in writing, while enhancing understanding of the cultures and history of the region. The course focuses on vocabulary building, linguistic analysis, and literary interpretation, in order to acquire a deeper understanding of how the Spanish language carries meaning.

Prerequisite: SPN 301 & SPN 302 or SPN 306 or SPN 308.

SPN 367 - Culture of Ecuador (3)

This course introduces students to Ecuador's present-day culture and society. To achieve this goal, the course covers significant aspects of Ecuadorian history, sociocultural traits, and current affairs that provide students with some of the fundamental facts and information that have shaped the country and its people. This course is offered in the Quito, Ecuador, Summer Program.

Prerequisite: SPN 202.

SPN 380 - Latino Social and Health Issues (3)

Course is designed for students in professional programs who need a thorough review of oral and written Spanish language skills in addition to specific terminology related to health and social issues: immigration, education, employment, workers' compensation, and domestic violence, and their influence in Latino health and medical services.

Prerequisite: SPN 301 & SPN 302 or SPN 306 or SPN 308.

SPN 430 - Cervantes: Don Quixote and Beyond (3)

This course studies the literary production of Miguel de Cervantes, one of the most iconic writers of the Spanish Golden Age. Students will read selections of his great masterpiece, *Don Quixote de la Mancha*, as well as examples of his lesser-known but equally important work in other genres, including plays, shorter fiction, dramatic interludes, and the pastoral novel.

Prerequisite: SPN 301 & SPN 302 or SPN 306 or SPN 308.

SPN 440 - Spain's Civil War in Fiction and Film (3)

This course focuses on the representation of the Spanish Civil War's aftermath in fiction and film from 1939 to today in order to identify the strategies writers and filmmakers used to avoid censorship under the dictatorship, to recount the past during the pact of silence, and to break the silence after the Law of Historical Memory was passed in 2007.

Prerequisite: SPN 301 & SPN 302 or SPN 306 or SPN 308.

SPN 441 - Spain Today (3)

After an introduction to Spain's geography, peoples, and system of government, the course examines the broad social, political, and cultural trends which define Spain today through historical, literary, and journalistic readings. Readings and films embed special topics such as family, marriage, immigration, youth cultures, and the coastal environment to build vocabulary and support research projects for course.

Prerequisite: SPN 301 & SPN 302 or SPN 306 or SPN 308.

SPN 450 - Advanced Latin American Culture and Civilization (3)

Through the study of different representations such as literature, painting, popular art, film, and music, the course addresses questions of cultural unity and national identity; ethnic and racial heritage and diversity; social and cultural institutions; struggle for social change; and the controversial role of the United States in the politics of Latin America.

Prerequisite: SPN 301 & SPN 302 or SPN 306 or SPN 308.

SPN 451 - Survey of Latin American Literature and Civilization (3)

An introduction to the literatures and cultures of Latin America from pre-Columbian times to the present. Students will read a variety of works from different periods, regions, and genres, and discuss them in class in the context of the historical moment in which they were produced.

Prerequisite: SPN 301 & SPN 302 or SPN 306 or SPN 308.

SPN 468 - Comparative Health and Social Issues in Ecuador (3)

Students will spend six weeks engaging in services in Quito, Ecuador. The focus is on issues impacting mental, physical, and spiritual well-being of individuals/communities in Ecuador and services designed to address these issues and work for social/economic justice. Comparisons are made to systems in the U.S. Approval of Studies Abroad Director required.

Prerequisite: SOC 101, SPN 301, SPN 302 or equivalent. Crosslisted as: SOC 468, SW 468.

SPN 469 - Latin American Jewish Literature and Culture (3)

This course studies the Jewish experience in Latin America from the colonial era to the present, a time and place where Jews have historically been marginalized or invisible. Readings, discussions, and student production will address the fluidity of Jewish identity, the importance of memory creating this identity, and the oft-antithetical relationship between Jews and non-Jews in Latin America.

Prerequisite: SPN 301 & SPN 302 or SPN 306 or SPN 308.

SPN 480 - Medical Translation and Interpretation (3)

This course offers training in oral interpretation between health care providers and patients, as well as sight translation of healthcare documents. In addition, students will be exposed to the linguistic and cultural background of Spanish-speaking communities in the USA in order to better understand their health issues and medical conditions.

Prerequisite: SPN 301 & SPN 302 or SPN 306 or SPN 308.

SPN 490 - Directed Study (Variable)

Credit Arranged.

SPN 491 - Seminar (Variable)

Credit Arranged.

SPN 492 - Seminar (Variable)

Credit arranged.

SPN 493 - Spanish Research (Variable)

Credit arranged.

SPN 499 - Senior Thesis (Variable)

Research, study, and original work under the direction of a faculty mentor, leading to a scholarly thesis document with a public presentation of results. Requires approval of thesis director, department chair, dean, and the director of the honors program, when appropriate.

Prerequisite: Senior standing; 3.0 G.P.A. in the thesis area, or good standing in the honors program.

THTR - Theater**THTR 171 - Theater Experience I**

This course is designed to integrate first year students into the production components of the discipline and the theater program. Students will meet during the class time block with various faculty, staff and professionals over the term and be assigned one backstage production assignment. Course is graded P/NP.

THTR 172 - Theater Experience II

This course will continue training students in both our production shops. Students will commit to 30 hours divided between the costume, and scenic production areas (must do at least 8 hours in each). They can also include hours in lighting, sound and properties work. Students will generate a work schedule with shop supervisors. Students will be expected to go through safety training on all shop equipment. Course is graded P/NP.

THTR 207 - Introduction to the Art of Theater (3)

Introduction to theatre design concepts and principles, art techniques and design tools used in creating theatre. Exploration of art media, drawing, painting, drafting, and presentation as it relates to theatrical design through script analysis, conceptualization, design techniques and communication of ideas.

THTR 272 - Production Work and Review I (1)

Supervised participation in one production assignment in either scenery, costumes, lighting, sound, stage management or properties on Theater program productions. Required of all Sophomore Theater Majors and includes a written self evaluation and oral review with faculty. Course is graded P/NP. Grade of IP is allowed.

Prerequisite: THTR 171.

THTR 307 - Survey of Theatre History (3)

A chronological study of theater's major artistic, literary and social developments from ancient origins to present day. Emphasis will be on readings from landmark works of dramatic literature, as well as the individuals and movements that have shaped theater's evolution.

THTR 321 - Acting Workshop I (3)

This course explores the fundamentals of acting for both majors or those anticipating theater-related degrees. Includes the study of relaxation, concentration, imagination, and physical and psychological awareness. Focuses on the basic tenets of Stanislavski's acting system. (For majors and minors only.)

THTR 322 - Acting Workshop II (3)

Continuation of THTR 321. Focuses to a greater extent on Stanislavski method of acting. Continues to assist the actor with a process for character development while stressing actor interaction through basic scene work taken from realistic plays.

Prerequisite: THTR 321 or THTR 325.

THTR 325 - Acting for Non-Majors (3)

This course explores the fundamentals of the acting process to the beginning student. The student will practice a variety of acting methods, and learn the necessity of script work and analysis. The student will work on discovering the physical, vocal, and psychological aspects of the character and apply them to specific dramatic texts using scene study and performance.

THTR 333 - Directing I (3)

A practical introduction to the work of a theater director. Students in the course will work with text analysis and the visual elements of composition, picturization, and movement in staging. The course will also explore the communicative skills needed to be successful as a director in this collaborative art form.

Prerequisite: THTR 207.

THTR 335 - Voice for Stage (3)

Course is designed to help students incorporate the significant elements of vocal production into their acting. The process then proceeds one step further by applying these skills to dialect work. Class will focus on correct pronunciation using the International Phonetic Alphabet (IPA).

Prerequisite: THTR 321 or THTR 325.

THTR 337 - Stage Movement (3)

Course is designed to introduce the student to different movement techniques and incorporates movement to enhance character work.

Prerequisite: THTR 322.

THTR 350 - Theatre Crafts (3)

Introductory course for Theater majors that gives the student a foundation in the basic techniques, tools, and materials of construction for both scenery and costumes for the stage. (Non-majors by permission of instructor.) Fee: \$40.

THTR 351 - Beginning Stage Lighting and Sound (3)

An introductory study of the principles of stage lighting and sound design for theatrical productions. Emphasis will be on both the design and technology necessary to create designs use stage lighting and sound equipment. Students will use a variety of tools to create both practical and theoretical projects. Previous theatre experience is not required.

THTR 353 - Beginning Scenic Design (3)

An Introductory study in the theories and skills of scenic design for the theatre. Skill training includes beginning drawing, drafting, CADD, perspective, model building and watercolor painting. Class will also focus on visual research skills and script analysis as it pertains to the creation of a scenic environment. No previous design skills necessary.

THTR 355 - Lyric Theatre Workshop (3)

Study of theatrical singing and acting techniques as applicable to all varieties of theatrical music, including cabaret, music-theater, and opera. Students are expected to participate in various performances prepared by the class. Open to all students with instructor's permission. Email for an audition.

Crosslisted as: MUS 455, THTR 555.

THTR 363 - Beginning Costume Design (3)

Exploration and practice of drawing, rendering, and design techniques in costume design. Students will be expected to apply the historical and technical elements to costume renderings of specific theatrical. No drawing or painting experience necessary.

THTR 365 - Stage Make Up (3)

Introductory course in the basic principles of the art and techniques of theatrical makeup. Emphasis will be on both creative design and execution using a range of methods, mediums and styles. Fee: \$65.

THTR 370 - Performance Practicum (1)

Working on Theater program productions in all artistic areas is an integral part of student learning. All performance emphasis students must complete this course at least twice for the major. (It can be taken multiple times and for Theater majors can have 1 requirement substituted with THTR 371) Required for all students cast in theater program shows. Course is graded P/NP.

THTR 371 - Design/ Integrated Theater Practicum (1)

Working on Theater program productions in all artistic areas is an integral part of student learning. All design/ integrated theater emphasis students must complete this course at least twice for the major. (It can be taken multiple times and can have 1 requirement substituted for the Theater major with THTR 370) Required for students assigned an artistic position on theater program shows. Course is graded P/NP.

THTR 372 - Production Work and Review II (1)

Supervised participation in two different production assignments in either scenery, costumes, lighting, sound, stage management, properties on Theater productions. Required of all junior Theater majors and minors. Includes written self evaluation and oral review with faculty. Course is graded P/NP.

Prerequisite: THTR 272.

THTR 400 - Dramaturgy (3)

Students will investigate the deep structures of dramatic texts through the lens of their chosen emphases/majors in order to realize these texts' full potential for performance. For purposes of this class, participants will become dramaturgs, the most recent creative addition to the American theater.

THTR 405 - Drama Studies: Shakespeare in Ashland (3)

The course involves an in depth study and analysis of specific works of William Shakespeare (and perhaps other playwrights), and attending productions of those plays at the Oregon Shakespeare Festival. Taught during a summer session. Fee: \$350

Crosslisted as: PHL 339.

THTR 409 - Studies in Drama: Renaissance Theatre (3)

An in-depth examination of theatre's artistic, literary and technological advances during the Renaissance period of Western Europe, with an emphasis on the works of Elizabethan and Jacobean playwrights.

Prerequisite: THTR 307 or permission of instructor.

THTR 410 - Studies in Drama: Classical Theatre (3)

An in-depth study of western civilization's early masterpieces, which have influenced over two millennia of theater ever since. Special emphasis will be given to contemporary adaptations of Greek and Roman plays.

Prerequisite: THTR 307 or permission of instructor.

THTR 411 - Studies in Drama: American Theater (3)

An in-depth study of American dramatic literature from its foundations in colonial America up to the innovations of our own time. Participants will explore iconic works by O'Neill, Glaspell, Miller, Shepard, Wilson and Vogel, and consider the trends and movements that have advanced American theater.

Prerequisite: THTR 307 or permission of instructor.

THTR 422 - Advanced Acting (3)

An advanced course designed to help the student integrate skills learned in previous acting classes, including vocal and physical work, and to develop new skills. The course uses material from Shakespeare as the acting texts for the course and addresses work on classical texts, acting style, and period context for his plays.

Prerequisite: THTR 322. Crosslisted as: THTR 522.

THTR 424 - Graduate Preparation Workshop (1)

This course prepares the student for the rigors of graduate school auditions. The course focuses on building the audition portfolio from selection of contrasting pieces to obtaining professional head shots and developing an effective resume. It will also prepare students for the entire audition process.

Prerequisite: Permission of instructor.

THTR 427 - Playwriting Workshop (3)

Study of the aesthetics and techniques involved in the written dramatic form for stage. Emphasis upon writing, workshop critiques and discussion of student's plays.

THTR 433 - Advanced Directing for the Stage (3)

This class will allow directing focused students in the Integrated Theater Emphasis to get an advanced level course which will prepare them for a Directing Capstone by giving them some advance directing training and a public performance component. Students will continue working on Script Analysis, Stage Pictures and Blocking, and developing a conceptual approach to a theatrical production.

Prerequisite: THTR 333.

THTR 437 - Audition Techniques (3)

This course is designed to prepare the student for the entire professional auditioning process. It focuses on selection and performance of monologues, prepared auditions, cold readings, commercial and film auditions. It also covers creating appropriate resumes, getting the best head shots, and the details of getting a theatrical agent and working in union and non-union situations.

Prerequisite: THTR 322.

THTR 445 - History of Fashion (3)

Surveys the history of fashionable western dress from Ancient Egypt through the 20th century. This class will explore the meaning of fashion in the broadest social context as it relates to the arts, theatre design and its function in society, and will also use an interdisciplinary approach examining fashion through a gender and women's studies lens.

THTR 450 - Production Stage Management (3)

This course focuses on the theories and practice of stage, production, and artistic management. Topics include rehearsal management, budgeting, schedule work, costing, unions and season selection as they apply to both the educational, community and professional theatre.

THTR 451 - Advanced Stage Lighting and Sound (3)

Advanced course in study in lighting design that includes designing for thrust, arena, musicals, and dance. Work with projections, automated equipment and CADD. Sound work includes computer editing and cueing for theatrical production.

Prerequisite: THTR 351.

THTR 453 - Advanced Scenic Design (3)

A course in stage design where students will be introduced to the more advanced practices of stage design, model building, and drafting. Students will apply learned theories and skills to several projects and written presentations.

Prerequisite: THTR 353 or permission of instructor.

THTR 456 - Scenic Painting and Decorative Arts (3)

This course gives students a foundation in the decorative arts of painting and properties design for the stage as it applies to 5 different historical periods. Each period will have assigned projects where students will explore 3D painting, trompe l'oeil painting, stencils, murals, fabric crafts and lettering skills.

THTR 463 - Advanced Costume Design (3)

Students will participate in advanced discussions and projects in textiles, color palettes, silhouettes, and costume fashion research. These concepts will be implemented in formal costume design projects utilizing a variety of dramatic styles.

Prerequisite: THTR 363 or equivalent.

THTR 467 - Costume Craft and Technology (3)

This course is designed to encourage students to master construction techniques through building their own designs with a variety of techniques. Puppetry, millinery and fabric manipulation will be emphasized. Students will be expected to provide fabrics and notions for most projects. (Sewing skills required.)

THTR 471 - Theater Management (3)

Course introduces students to the diverse issues involved in managing a theatre company. It begins with a history of the issues leading up to the regional theatre movement and includes an examination of the manager's role, budgeting, marketing, fundraising, the role of a board of directors, as well as an understanding of the modern context/trends/needs of artists which management supports.

THTR 490 - Directed Study (Variable)

Individualized programs which focus on a specialized area in theatre. These are available only when developed through a contractual agreement between the student and a supervising faculty member.

THTR 491 - Seminar (Variable)

Credit arranged.

THTR 492 - Seminar (Variable)

Credit arranged.

THTR 493 - Research (Variable)

Credit arranged.

THTR 497M - Integrated Theater Internship (3)

This course is to give a professional work experience to students in the Integrated Theater Emphasis in the BA Theater program. Students enrolled will secure an internship at a professional theater company in one area of focus; management, directing or dramaturgy. This course requires a minimum 90 hours of work and is supervised by a theater faculty and the College of Arts and Sciences internship coordinator.

THTR 498 - Theater Capstone (3)

Capstone course is required of all Theater majors. Each student, in consultation with a faculty mentor, designates a specific project to act as the culmination of their degree program. Projects are in areas of Performance, Design, Directing, Stage Management, and Dramaturgy. Documentation of project includes a written process and self-evaluation paper and a public presentation to students and Theater faculty.

THTR 499 - Senior Thesis (3)

Research, study, or original work under the direction of a faculty mentor, leading to a scholarly thesis document with a public presentation of results. Requires approval of thesis director, department chair, dean, and the director of the honors program, when appropriate.

Prerequisite: Senior standing; 3.0 G.P.A. in the thesis area, or good standing in the honors program.

Graduate Courses

THTR 507 - Survey of Theatre History (3)

A graduate-level study of the historical development of theater from its ancient antecedents through the postmodern era. Emphasis will be on teaching strategies for conveying the sociopolitical momentum of western civilization as reflected in (and sometimes caused by) theater production and literature.

THTR 510 - Theories of Dramatic Criticism (3)

Exploration of selected writing on theater ranging from Plato and Aristotle to the present day. Participants will undertake writing of their own using various styles and formats.

THTR 515 - Advanced Studies in Theatre History (3)

This course is designed to provide MFA directing students with methodologies for exploring dramatic literature's masterpieces, with a focus on creative solutions to the directing challenges posed by working on a variety of historical time periods.

Prerequisite: THTR 507 or permission of instructor.

THTR 521 - Acting Pedagogy (3)

This course is designed to help prepare the student to undertake the teaching of acting at the college level. The student will observe and participate actively in the teaching of a University of Portland acting course, as well as, having regular mentoring sessions with the course's instructor.

THTR 522 - Advanced Acting (3)

An advanced course in acting designed to challenge the student as an actor and director. The course uses material from Shakespeare as the acting texts for the course and addresses work on classical texts, acting style, and period context for his plays. The course includes both vocal and physical work. It also explores the directing of Shakespeare.

Crosslisted as: THTR 422.

THTR 531 - Advanced Production Seminar (3)

This course is designed to help graduate directors develop a personal creative process to conceptualization and collaboration. Besides focusing on written documentation and research for the development of a conceptual approach to a text, which culminates in a formal concept paper, students will devise performance pieces that are based on ideas of ritual, absurdism, performance art and post modern production.

THTR 533 - Advanced Play Direction (3)

This course introduces students to the MFA in Directing program, and focuses on directing technique. It addresses analysis and conceptualization of a play for production; stage composition, picturization, and movement; collaboration; and production planning.

THTR 537 - Advanced Directing Seminar (3)

This seminar course will examine current issues and professional practices in the field of directing. The student will be directly exposed to the ideas, practices, and experiences of currently working professional directors from a variety of backgrounds.

THTR 539 - Production Process Qualifier (3)

This course is designed to supervise students through the major steps in the production process. This course allows student directors to acquire production laboratory experience prior to the thesis production project.

THTR 541 - Script Analysis Seminar (3)

This MFA course is designed to give directors a variety of analysis strategies for use in preparing a production. Participants explore the value of chronological, character, and audience-based analysis structures and apply them to dramatic literature. In particular, action-based analysis will be used for interpretation of individual scenes within selected dramas.

THTR 555 - Lyric Theatre Workshop (3)

Study of theatrical singing and acting techniques as applicable to all varieties of theatrical music, including cabaret, music-theater, and opera. Students are expected to participate in various performances prepared by the class. Open to all students with instructor's permission. Email for an audition.

Prerequisite: Instructor audition required. Crosslisted as: MUS 455, THTR 355.

THTR 571 - Graduate Practicum (3)

This course is meant to provide the graduate director with an opportunity to direct a one-act play in a studio setting with undergraduate actors.

THTR 572 - Graduate Director's Workshop I (3)

This workshop/seminar course for graduate directors will focus on professional topics and directing craft. THTR 572 and THTR 573 are not sequenced and may be taken in either order.

THTR 573 - Graduate Director's Workshop II (3)

This workshop/seminar course for graduate directors will focus on professional topics and directing craft. THTR 572 and THTR 573 are not sequenced and may be taken in either order.

THTR 575 - College Course Design

This course is designed to prepare the student to undertake the design and preparation of college-level theatre courses without the benefit of pre-existing syllabi or resources. The student will be lead through the course design and syllabus writing process, starting from a brief course description to a complete syllabus and course assessment form.

THTR 579 - Production Internship (3)

This course provides a professional development opportunity through an internship with an organization outside of the University. The student seeks out and obtains an internship with the guidance and advice of the Graduate Program Director. (IP grade allowed.)

THTR 590 - Directed Study (1-3)

Individualized programs which focus on a specialized area in theatre. These are available only when developed through a contractual agreement between the student and a supervising faculty member.

THTR 593 - Seminar (Variable)

Credit arranged.

THTR 598 - Thesis Production (3)

This course is the capstone production for the graduate directing student application of the full directing process from conceptualization to finished produced production.

THTR 599 - Thesis (3)

Graduate directing students will work under an advisor in the creation of a thesis that documents the research and directing process for their produced Thesis Production. Students will defend the conclusions arrived at in the thesis in front of the entire theater faculty. (IP grade allowed.)

Prerequisite: THTR 598.

THTR 599X - Thesis in Progress (0)

Registration for any graduate student who has received the grade of IP in Thesis 599 is required while the thesis is in progress. Fee: \$50.

THE - Theology

THE 101 - An Introduction to Religion and Theology (3)

Study of the basic characteristics of religion and theology as exemplified in major religions of the world. The intent is not to compare religions but to understand and appreciate religion in the experience of many cultures and civilizations. For transfer students only.

THE 105 - Engaging Ultimate Questions: Religion, Faith, and Ethics (3)

This course examines faith, religion, and ethics and considers their roles in the human search for meaning. It engages students in critical and creative studies of diverse global theologies, including the Roman Catholic tradition.

THE 205 - The Bible, Past and Present (3)

This course introduces students to the historical, cultural, and thematic aspects of the Bible while providing them with the basic skills for biblical literacy and methods of interpretation. Through this learning process, students will focus on the study and uses of the Bible as a privileged source for Christian theology.

Prerequisite: THE 101 or THE 105 and PHL 150 or ENG 112.

THE 300 - God Our Mother (3)

This course aims to broaden the theological imagination of the students as they reflect on the wonderful reality some call God. Together with the Catechism of the Catholic Church, this course will affirm that “God transcends the human distinction between the sexes” and explore various ways of envisioning God that go beyond the image of a male God.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 400.

THE 302 - Poets, Prophets, Divas, and Diviners (3)

This course explores the prophetic tradition in biblical and contemporary times. Selected texts are read in context of cultural and global realities to discover how culture shapes these texts and how these texts continue to shape cultures and world views. Topics include God, gender, power, justice, empire, ecology, hope, prophetic vision, and what it means to be prophetic today.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 402.

THE 304 - Sages and Singers, Songwriters and Storytellers (3)

This course explores and critiques the wisdom writings of the Bible and other texts, and the cultures that shaped these texts. Focus is on the wisdom needed for wise decision-making practices for the work of justice and transformation of life in a globalized world. Attention is also given to two main wisdom themes: creation and the presence of the Divine in the midst of all life.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 404.

THE 305 - Comparing Religions of the World (3)

This course focuses on the comparative study of religions. It will investigate the definition of “religion” and then analyze several traditions in the context of this definition. Finally, it will compare these traditions to one another with regard to certain topics, such as worship, the soul, and the place of women.

Prerequisite: THE 105 and THE 205. Crosslisted as: THE 405.

THE 306 - The Bible in a Global Village (3)

This course includes reading and discussion of selections from both the Old and New Testaments. We will discuss elements of race and class, as well as gender and sexuality, as we take historical, cultural, and political contexts into consideration with the goal of applying the realities of biblical cannon and applying them to our societies and cultures today.

Prerequisite: THE 105 and THE 205. Crosslisted as: THE 406.

THE 307 - Theology and Controversy in the Letters of Paul (3)

As a first century missionary, theologian and letter writer, Paul of Tarsus (St. Paul) articulated many of Christianity's basic beliefs and presided over some of Christianity's earliest controversies. This course examines his letters as a way of gaining access to the concerns, the theology, and the growing pains of some of the very first Christians on record.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 407.

THE 312 - Jesus' Ministry in the Gospels (3)

Our most important information on Jesus comes from the Gospels. This course examines the theology and history contained in the gospels in order to gain an understanding of who Jesus was and how his message was received and developed by the early church. In alternating semesters, the course will focus on John, or on Matthew, Mark and Luke.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 412.

THE 317 - Trickery, Gender, Power, and Politics in the Bible (3)

This course explores the theme of gender in the Bible, the cultures that shaped the texts, and how the biblical culture and stories continue to have an impact on life today as we struggle for gender justice in a globalized world. The course explores such topics as power, politics, kyriarchy, the intersectionality of gender discrimination with other forms of discrimination. Emphasis is on liberation, transformation, and ethical praxis.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 417.

THE 319 - Biblical Spirituality: Saints and Sinners on a Journey with God (3)

What does it mean to be holy? Who are the saints and sinners in the Bible? How does God relate to them? What is meant by the sacredness of all creation? This course explores such themes as the spirit, the heart, prayer, sacred space, etc. in the context of a biblical-based contemplative and mystical understanding of life.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 419.

THE 320 - Christian Personal Values (3)

The ethical question, "who is the good person?", is founded on the premise that being a Christian makes one a certain type of person with certain values. This course offers a historical study of various philosophical and theological descriptions of the nature of the good person.

Prerequisite: THE 101 or THE 105, and THE 205. Crosslisted as: THE 420.

THE 322 - Modern Catholic Ethics (3)

Analysis of several contemporary Catholic ethicists, including Curran, O'Connell, Regan, and McCormick, who have influenced the development of Catholic ethics. A critical examination of natural law, human freedom, conscience, authority, and the moral and rational capacity.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 422.

THE 323 - Christian Social Ethics (3)

Contemporary American Christian thought on the nature of morality and society. An attempt to reveal the dynamics of faith that calls us to do justice. Special consideration given to the development of pacifism in American churches.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 423.

THE 324 - The Character Project (3)

This course is an introduction to the theological ethics of character as encountered in the Christian tradition. We will systematically consider the topic through a series of guided discussions about values, decisions, conscience, habits, virtues, and vices, the role of Christian narrative, and finally, an integrated theory and theology of Christian personal character. Readings will include selections from writings by Richard Gula, Paul J. Waddell, The Catechism of the Catholic Church, James Keenan, Stanley Hauerwas, James Gustafson, and the Gospel of Luke.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 424.

THE 325 - Catholic Social Teaching: A Living Tradition of Thought and Action (3)

The issues of justice from a Catholic perspective as they affect society locally, nationally, and internationally.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 425.

THE 326 - Christian Marriage: Tradition and the Modern Context (3)

Inquiry into the theological, philosophical, psychological, and social aspects of Christian marriage with specific emphasis on commitment and the bond of love. The moral problems of abortion, divorce, and homosexuality in the modern context will be discussed.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 426.

THE 329 - Theological Bioethics (3)

Drawing from Christian/Catholic tradition and from other ethical perspectives, the course addresses the moral dilemmas of abortion, artificial reproductive technologies, genetic technology, organ transplant, physician assisted suicide, and other issues of death and dying with the end goal of forming students as intelligent and critical interlocutors of bio-ethical issues.

Prerequisite: THE 101 or THE 105, 205. Crosslisted as: THE 429.

THE 331 - Sexual Ethics (3)

Sexual Ethics begins with a study of the historic evolution of sexual teachings to provide a context to current ethical debates on sexual issues. The course presents diverse perspectives on these issues for critical study, discourse, and discernment.

Prerequisite: THE 101 or 105, THE 205. Crosslisted as: THE 431.

THE 332 - Intercultural Feminist Theology (3)

This course takes as a starting point gender violence as a phenomenon across cultures around the globe. With this main premise that gender violence is linked with gender inequity, it studies how this inequity has its roots in patriarchal traditions, cultural practices, and religious beliefs. It ends with the study of gender resistance, through feminist theo-religious reconstruction and liberative activism.

Prerequisite: THE 101 or 105 and THE 205. Crosslisted as: THE 432.

THE 333 - Theological Implications of the Holocaust (3)

Explores contemporary Christian and Jewish theological reflections on the Nazi genocide campaign to eliminate the Jews of Europe. Special emphasis on the documents of the churches until now, on the Austrian and German efforts to cope with this part of recent history, and on the relation of early anti-Judaism in Christian cultures to racism and anti-Semitism.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 433.

THE 334 - Sacramental Imagination (3)

This course will explore the ways material reality affects how human beings relate to divinity. Students will learn about the ways place, time, sound, smell, gesture, food, art, and narrative affect spirituality. Special attention will be given to rituals of worship.

Prerequisite: THE 101 or 105 and THE 205. Crosslisted as: THE 434.

THE 335 - Theology of Christian Worship (3)

Exploration of liturgy as Christian worship, considering ritual symbolism as "the language" (word and action) of worship, and worship as Christian faith in dialogue with God. A critical evaluation of contemporary liturgical reforms in ecumenical perspective.

Prerequisite: THE 101 or THE 105, and THE 205. Crosslisted as: THE 435.

THE 336 - Liturgy and Ethics (3)

This course will explore the connection between rituals of worship and the ethical behavior of the people who practice those rituals. As a form of language, rituals exert influence on how people understand themselves and how they behave toward others. This course will address topics such as: ecology, gender, economics, race, culture, and technology.

Prerequisite: THE 105 and THE 205. Crosslisted as: 436.

THE 341 - Responding to God: An Introduction to Spiritual Practice (3)

This Course offers an opportunity to deepen awareness of sacred presence through theological and historical exploration of spiritual practices such as *lectio divina*, meditation, and contemplation. Students will examine key concepts that inform these practices, such as discernment and gratitude, through active and self-reflective participation in spiritual practices.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 441.

THE 342 - Introduction to Christian Spirituality (3)

An exploration of Christian spirituality in terms of images of God, Christian anthropology, prayer, and social and ecological concerns. A critical and dialogical engagement with selected classical texts from the Christian tradition that suggest ways of being in right relationships with God, self, others, and the natural world within the context of the 21st century.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 442.

THE 343 - Ecological Spirituality (3)

This course is an exploration of the wisdom offered by various religious traditions for responding to a time of ecological crisis. In this course, students will examine the role of religious experience in making ethical decisions about creation-care, reflect upon their own response to ecological crisis, and design spiritual practices expressive of that response.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 443.

THE 347 - Theological Reflection Seminar (1)

This 1 credit course is a requirement each semester for Faith and Formation Ambassadors. Students integrate the different components of the program: work in the residence halls, L'Arche@UP, and personal spiritual formation, through theological reflection as well as engagement in diverse University activities. Course is graded P/NP.

THE 348 - Theological Dimensions of Suffering and Death (3)

Theology 348 examines what it means to experience and/or accompany others in times of suffering and death. The course surveys issues of loss from interdisciplinary and interreligious perspectives while also incorporating ethical and cultural insights. It invites students to explore and reflect on two fundamental aspects of existence--suffering and death—that are an enduring part of our holistic human experience. (Nursing students only.)

Prerequisite: THE 101 or THE 105, THE 205.

THE 350 - Grace, Sin, and the Human Condition (3)

What does it mean to be human in light of the mystery of Christ? As they examine the nature of human freedom through the traditional categories of creation, sin, grace and eschatology, students will be challenged to employ the riches of the Roman Catholic tradition in articulating the meaning and destiny of their own humanity.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 450.

THE 351 - Religions of Africa (3)

This course takes a comparative approach to the theological inquiry probing fundamental religious questions in relation to African indigenous Religions and Christianity. We will look at the major beliefs and practices of African indigenous Religions and Christianity and their historical development using primary sources and focusing on how diverse religious approaches might be mutually illuminative.

Prerequisite: THE 105 and THE 205. Crosslisted as: THE 451.

THE 352 - God and the Human Person (3)

This course will introduce students to the contemporary trends in theological anthropology. Notions of identity and relationality will be explored theologically, culturally, and philosophically. These will be linked to other social issues like ecology, poverty, racial and economic justice, feminism, grace, and suffering.

Prerequisite: THE 105 and THE 205. Crosslisted as: THE 452.

THE 353 - Religion and Science (3)

Historical development of conflicts, especially over the theory of evolution, and the variety of positions presented today by theologians, scientists, and philosophers.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 453.

THE 355 - Christology (3)

Systematic reflection upon the doctrine of Christ in its biblical, classical, and contemporary historical perspectives. Students will gain insight into the Church's proclamation of Jesus as the Christ by examining the faith experiences of communities past and present in relation to their own experience of faith.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 455.

THE 356 - Literary Catholicism (3)

This course will explore the Catholic theological tradition, primarily as it finds expression in five novelists whose writings are influenced by that tradition.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 456.

THE 357 - Foundations of Catholic Theology (3)

An examination of elements of theological reflection in the Roman Catholic tradition, with emphasis on theological method and the development of doctrine. From the starting point of an experience of faith that is personal and communal, historical and eschatological, students will explore the interrelationships among such theological categories as Revelation, Scripture and Tradition, Grace, Christology, and Ecclesiology.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 457.

THE 359 - Theological Themes in Catholic Literature (3)

This course will explore the Catholic theological tradition primarily as it finds expression in recent Catholic writing. Some examples of subjects to be discussed include Jesus Christ, Revelation, the Fall of humanity, the problem of evil, the nature of sacraments, and the implications of faith for personal relationships.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 459.

THE 360 - Christianity's First Thousand Years: Emergence and Growth, 100-1200 (3)

The course traces Christianity's meteoric development in the first millennium. It examines the break from Judaism, the formation of the Christian Bible, the age of martyrs, the theological golden period of the late Roman Empire, and the rise of the papacy and monasticism. Its tools are chronological tracking, historical vignettes, analysis of selected texts, and profiles of important figures.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 460.

THE 361 - Christianity's Second Thousand Years: Challenge and Renewal, 1200-2000 (3)

The course traces Christianity's vigorous but fragmented growth in the second millennium. It studies the grandeur of the medieval cathedrals, the ideas of scholasticism and mysticism, the challenges of the Reformation, the rise of modernity, and the course of Christianity in America. Its tools are chronological tracking, historical vignettes, analysis of selected texts and profiles of important figures.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 461.

THE 363 - Saint Augustine, Teacher of Christianity (3)

Augustine of Hippo (d. 430) grounds the history of western theology, and still informs modern fields like psychology and linguistics. While situating him in Roman antiquity, the course studies his thought as an account of Christian faith seeking understanding. We will read in depth his classic, theologically profound conversion story, the Confessions, and study his thought on God, Scripture, and the grace of Christ.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 463.

THE 365 - A Concise History of Christianity Through Twenty Centuries (3)

The course traces Christianity's development, from its origins as an obscure Jewish sect, through acceptance and growth in the late Roman Empire and mature self-definition in the Middle Ages, to the challenges of fragmentation and renewal in the Reformation and the modern world. Its tools are chronological tracking, historical vignettes, analysis of selected texts, and profiles of important figures.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 465.

THE 371 - Heaven, Hell and Hope (3)

This course explores the central theme of Christian hope and its role in shaping the political, cultural, economic, historical, ecological and relational experiences of humans in society.

Prerequisite: THE 105 and THE 205. Crosslisted as: THE 471.

THE 372 - Theologies of Encounter (3)

This course will introduce students to both the historical and theological development of interreligious dialogue in the Roman Catholic Church's tradition. Particular attention will be given to the meaning and purpose of interfaith encounters, identity, culture, memory, history, and politics. We will appropriate insights from theological, cultural, philosophical, and political voices from the global north and south.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 472.

THE 373 - Theological Thought in Modern Europe (3)

Christian tradition in the 21st century and post Vatican II; the modern Church in the liturgy, the ecumenical movement toward Christian unity, the social justice and evangelical mission of the Church in the secular and pluralistic world. (Salzburg only.)

Prerequisite: Salzburg only. Director of Studies Abroad approval required.

Biblical Studies

Restricted to Theology majors and minors.

THE 400 - God Our Mother (3)

This course aims to broaden the theological imagination of the students as they reflect on the wonderful reality some call God. Together with the Catechism of the Catholic Church this course will affirm that “God transcends the human distinction between the sexes” and explore various ways of envisioning God that go beyond the image of a male God.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 300.

THE 402 - Poets, Prophets, Divas, and Diviners (3)

This course explores the prophetic tradition in biblical and contemporary times. Selected texts are read in context of cultural and present day global realities to discover how culture shapes these texts and how these texts continue to shape cultures and world views. Topics include God, gender, power, justice, empire, ecology, hope, what it means to be prophetic vision, and what it means to be prophetic today.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 302.

THE 404 - Sages and Singers, Songwriters and Storytellers (3)

This course explores and critiques the wisdom writings of the Bible and other texts, and the cultures that shaped these texts. Focus is on the wisdom needed for wise decision-making practices for the work of justice and transformation of life in a globalized world. Attention is also given to two main wisdom themes: creation and the presence of the Divine in the midst of all life.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 304.

THE 405 - Comparing Religions of the World (3)

This course focuses on the comparative study of religions. It will investigate the definition of “religion” and then analyze several traditions in the context of this definition. Finally, it will compare these traditions to one another with regard to certain topics, such as worship, the soul, and the place of women.

Prerequisite: THE 105 and THE 205. Crosslisted as: THE 305.

THE 406 - The Bible in a Global Village (3)

This course includes reading and discussion of selections from both the Old and New Testaments. We will discuss elements of race and class, as well as gender and sexuality, as we take historical, cultural, and political contexts into consideration with the goal of applying the realities of biblical cannon and applying them to our societies and cultures today.

Prerequisite: THE 105 and THE 205. Crosslisted as: THE 306.

THE 407 - Theology and Controversy in the Letters of Paul (3)

As a first century missionary, theologian and letter writer, Paul of Tarsus (St. Paul) articulated many of Christianity's basic beliefs and presided over some of Christianity's earliest controversies. This course examines his letters as a way of gaining access to the concerns, the theology, and the growing pains of some of the very first Christians on record.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 307.

THE 412 - Jesus' Ministry in the Gospels (3)

Our most important information on Jesus comes from the Gospels. This course examines the theology and history contained in the gospels in order to gain an understanding of who Jesus was and how his message was received and developed by the early church. In alternating semesters, the course will focus on John, or on Matthew, Mark and Luke.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 312.

THE 417 - Trickery, Gender, Power, and Politics in the Bible (3)

This course explores the theme of gender in the Bible, the cultures that shaped the texts, and how the biblical culture and stories continue to have an impact on life today as we struggle for gender justice in a globalized world. The course explores such topics as power, politics, kyriarchy, the intersectionality of gender discrimination with other forms of discrimination. Emphasis is on liberation, transformation, and ethical praxis.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 317.

THE 419 - Biblical Spirituality: Saints and Sinners on a Journey with God (3)

What does it mean to be holy? Who are the saints and sinners in the Bible? How does God relate to them? What is meant by the sacredness of all creation? This course explores such themes as the spirit, the heart, prayer, sacred space, etc. in the context of a biblical-based contemplative and mystical understanding of life.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 319.

Theological Ethics

Restricted to Theology majors and minors.

THE 420 - Christian Personal Values (3)

The ethical question, "who is the good person?", is founded on the premise that being a Christian makes one a certain type of person with certain values. This course offers a historical study of various philosophical and theological descriptions of the nature of the good person.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 320.

THE 422 - Modern Catholic Ethics (3)

Analysis of several contemporary Catholic ethicists, including Curran, O'Connell, Regan, and McCormick, who have influenced the development of Catholic ethics. A critical examination of natural law, human freedom, conscience, authority, and the moral and rational capacity.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 322.

THE 423 - Christian Social Ethics (3)

Contemporary American Christian thought on the nature of morality and society. An attempt to reveal the dynamics of faith that calls us to do justice. Special consideration given to the development of pacifism in American churches.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 323.

THE 424 - The Character Project (3)

This course is an introduction to the theological ethics of character as encountered in the Christian tradition. We will systematically consider the topic through a series of guided discussions about values, decisions, conscience, habits, virtues, and vices, the role of Christian narrative, and finally, an integrated theory and theology of Christian personal character. Readings will include selections from writings by Richard Gula, Paul J. Waddell, The Catechism of the Catholic Church, James Keenan, Stanley Hauerwas, James Gustafson, and the Gospel of Luke.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 324.

THE 425 - Catholic Social Teaching: A Living Tradition of Thought and Action (3)

The issues of justice from a Catholic perspective as they affect society locally, nationally, and internationally.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 325.

THE 426 - Christian Marriage: Tradition and the Modern Context (3)

Inquiry into the theological, philosophical, psychological, and social aspects of Christian marriage with specific emphasis on commitment and the bond of love. The moral problems of abortion, divorce, and homosexuality, special to the modern context, will be discussed.

Prerequisite: THE 101 or THE 105, THE 205. By instructor permission only. Crosslisted as: THE 326.

THE 429 - Theological Bioethics (3)

Drawing from the Christian/Catholic tradition and from other ethical perspectives, the course addresses the moral dilemmas of abortion, artificial reproductive technologies, genetic technology, organ transplant, physician assisted suicide, and other issues of death and dying, with the end goal of forming students as intelligent and critical interlocutors of bio-ethical issues.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 329.

THE 431 - Sexual Ethics (3)

Sexual Ethics begins with a study of the historic evolution of sexual teachings to provide a context to current ethical debates on sexual issues. The course presents diverse perspectives on these issues for critical study, discourse, and discernment.

Prerequisite: THE 101 or 105, THE 205. Crosslisted as: THE 331 Sexual Ethics.

THE 432 - Intercultural Feminist Theology (3)

This course takes as a starting point gender violence as a phenomenon across cultures around the globe. With the main premise that gender violence is linked with gender inequity it studies how this inequity, has its roots in patriarchal traditions, cultural practices, and religious beliefs. It ends with the study of gender resistance through feminist theo-religious reconstruction and liberative activism.

Prerequisite: THE 101 or 105 and THE 205. Crosslisted as: THE 332.

THE 433 - Theological Implications of the Holocaust (3)

Explores contemporary Christian and Jewish theological reflections on the Nazi genocide campaign to eliminate the Jews of Europe. Special emphasis on the documents of the churches until now, on the Austrian and German efforts to cope with this part of recent history, and on the relation of early anti-Judaism in Christian cultures to racism and anti-Semitism.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 333.

Sacramental and Liturgical Theology

Restricted to Theology majors and minors.

THE 434 - Sacramental Imagination (3)

This course will explore the ways material reality affects how human beings relate to divinity. Students will learn about the ways place, time, sound, smell, gesture, food, art, and narrative affect spirituality. Special attention will be given to rituals of worship.

Prerequisite: THE 101 or THE 105 and THE 205. Crosslisted as: THE 434.

THE 435 - Theology of Christian Worship (3)

Exploration of liturgy as Christian worship, considering ritual symbolism as "the language" (word and action) of worship, and worship as Christian faith in dialogue with God. A critical evaluation of contemporary liturgical reforms in ecumenical perspective.

Prerequisite: THE 101 or THE 105, and THE 205. Crosslisted as: THE 335.

THE 436 - Liturgy and Ethics (3)

This course will explore the connection between rituals of worship and the ethical behavior of the people who practice those rituals. As a form of language, rituals exert influence on how people understand themselves and how they behave toward others. This course will address topics such as: ecology, gender, economics, race, culture, and technology.

Prerequisite: THE 105 and THE 205. Crosslisted as: THE 336.

Spirituality

Restricted to Theology majors and minors.

THE 441 - Responding to God: An Introduction to Spiritual Practice (3)

Enrich an awareness of God's presence in the world through a theological and historical exploration of Christian spiritual practices such as lectio divina, meditation, and contemplation. Students will examine key concepts that inform these practices, such as discernment and gratitude, through active and self-reflective participation in spiritual practices.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 341.

THE 442 - Introduction to Christian Spirituality (3)

An exploration of Christian spirituality in terms of images of God, Christian anthropology, prayer, and social and ecological concerns. A critical and dialogical engagement with selected classical texts from the Christian tradition that suggest ways of being in right relationships with God, self, others and the natural world within the context of the 21st century.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 342.

THE 443 - Ecological Spirituality (3)

This course is an exploration of the wisdom offered by various religious traditions for responding to a time of ecological crisis. In this course, students will examine the role of religious experience in making ethical decisions about creation-care, reflect upon their own response to ecological crisis, and design spiritual practices expressive of that response.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 343.

Systematic Theology

Restricted to Theology majors and minors.

THE 450 - Grace, Sin, and the Human Condition (3)

What does it mean to be human in light of the mystery of Christ? As they examine the nature of human freedom through the traditional categories of creation, sin, grace, and eschatology, students will be challenged to employ the riches of the Roman Catholic tradition in articulating the meaning and destiny of their own humanity.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 350.

THE 451 - Religions of Africa (3)

This course takes a comparative approach to the theological inquiry probing fundamental religious questions in relation to African indigenous Religions and Christianity. We will look at the major beliefs and practices of African indigenous Religions and Christianity and their historical development, using primary sources and focusing on how diverse religious approaches might be mutually illuminative.

Prerequisite: THE 105 and THE 205. Crosslisted as: THE 351.

THE 452 - God and the Human Person (3)

This course will introduce students to the contemporary trends in theological anthropology. Notions of identity and relationality will be explored theologically, culturally, and philosophically. These will be linked to other social issues like ecology, poverty, racial and economic justice, feminism, grace, and suffering.

Prerequisite: THE 105 and THE 205. Crosslisted as: THE 352.

THE 453 - Religion and Science (3)

Historical development of conflicts, especially over the theory of evolution, and the variety of positions presented today by theologians, scientists, and philosophers.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 353.

THE 455 - Christology (3)

Systematic reflection upon the doctrine of Christ in its biblical, classical, and contemporary historical perspectives. Students will gain insight into the Church's proclamation of Jesus as the Christ by examining the faith experiences of communities past and present in relation to their own experience of faith.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 355.

THE 456 - Literary Catholicism (3)

This course will explore the Catholic theological tradition, primarily as it finds expression in five novelists whose writing is influenced by that tradition.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 356.

THE 457 - Foundations of Catholic Theology (3)

An examination of elements of theological reflection in the Roman Catholic tradition, with emphasis on theological method and the development of doctrine. From the starting point of an experience of faith that is personal and communal, historical and eschatological, students will explore the interrelationships among such theological categories as Revelation, Scripture and Tradition, Grace, Christology, and Ecclesiology.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 357.

THE 459 - Theological Themes in Catholic Literature (3)

This course will explore the Catholic theological tradition primarily as it finds expression in recent Catholic writing. Some examples of subjects to be discussed include Jesus Christ, Revelation, the Fall of humanity, the problem of evil, the nature of sacraments, and the implications of faith for personal relationships.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 359.

THE 471 - Heaven, Hell and Hope (3)

This course explores the central theme of Christian hope and its role in shaping the political, cultural, economic, historical, ecological, and relational experiences of humans in society.

Prerequisite: THE 105 and THE 205. Crosslisted as: THE 371.

THE 472 - Theologies of Encounter (3)

This course will introduce students to both the historical and theological development of interreligious dialogue in the Roman Catholic Church's tradition. Particular attention will be given to the meaning and purpose of interfaith encounters, identity, culture, memory, history, and politics. We will appropriate insights from theological, cultural, philosophical, and political voices from the global north and south.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 372.

Historical Theology

Restricted to Theology majors and minors.

THE 460 - Christianity's First Thousand Years: Emergence and Growth, 100-1200 (3)

The course traces Christianity's meteoric development in the first millennium. It examines the break from Judaism, the formation of the Christian Bible, the age of martyrs, the theological golden period of the late Roman Empire, and the rise of the papacy and monasticism. Its tools are chronological tracking, historical vignettes, analysis of selected texts, and profiles of important figures.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 360.

THE 461 - Christianity's Second Thousand Years: Challenge and Renewal, 1200-2000 (3)

The course traces Christianity's vigorous but fragmented growth in the second millennium. It studies the grandeur of the medieval cathedrals, the ideas of scholasticism and mysticism, the challenges of the Reformation, the rise of modernity, and the course of Christianity in America. Its tools are chronological tracking, historical vignettes, analysis of selected texts and profiles of important figures.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 361.

THE 463 - Saint Augustine, Teacher of Christianity (3)

Augustine of Hippo (d. 430) grounds the history of western theology, and still informs modern fields like psychology and linguistics. While situating him in Roman antiquity, the course studies his thought as an account of Christian faith seeking understanding. We will read in depth his classic, theologically profound conversion story, the Confessions, and study his thought on God, Scripture, and the grace of Christ.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 363.

THE 465 - A Concise History of Christianity Through Twenty Centuries (3)

The course traces Christianity's development, from its origins as an obscure Jewish sect, through acceptance and growth in the late Roman Empire and mature self-definition in the Middle Ages, to the challenges of fragmentation and renewal in the

Reformation and the modern world. Its tools are chronological tracking, historical vignettes, analysis of selected texts, and profiles of important figures.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: THE 365.

Theological Perspectives

They may be used to fulfill:

- a.) an upper-division theology requirement for the theology major or minor, or
- b.) the University core requirement for upper-division theology and/or the integrated core discipline (if applicable), or
- c.) a CAS upper-division elective, if and only if a student has previously completed all 9 hours of the University core theology requirement. See University core requirements.
- d.) an upper-division requirement in a major other than theology, if allowed by that major. (Students should consult their major advisors.)

THEP 348 - Theological Dimensions of Suffering and Death (3)

This course surveys issues of suffering and death from biblical, systematic, and ethical perspectives of Theology, as well as psycho-social, legal, and ethical perspectives of the health care profession, especially nursing. Focus is on exploring the human experience of loss and the many dimensions of grief employed in dealing with loss.

Prerequisite: THE 101 or THE 105, THE 205.

THEP 383 - Heat, Hunger, and Hurricanes (3)

This course examines biblical, theological and philosophical perspectives on the challenges posed by climate change. Global topics may include sacramentality; common good; world hunger; loss of biodiversity and habitat; intrinsic value vs instrumental value; fairness, justice, and obligation with respect to climate change mitigation and adaptation; climate related natural disasters; climate migration and refugees.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: PHL 391.

THEP 482 - Theology in Ecological Perspective (3)

This course investigates the relationship between theology and science, the science of ecology and the related field of environmental science, the major aspects of our current environmental crisis, the underlying historical and social reasons for this crisis, and current attempts to reformulate Christian theology from the perspective of ecology. This course also explores possible solutions for a sustainable future.

Prerequisite: THE 101 or THE 105, THE 205. Crosslisted as: ENV 482.

THEP 491 - Special Offerings (Variable)

Special Offerings.

400 Other

THE 490 - Directed Study (Variable)

Guided inquiry for superior juniors and seniors who wish to pursue a particular subject area in Theology more intensely than course offerings permit. By special arrangement with members of the Theology faculty.

THE 491 - Special Offerings (Variable)

Special Offerings.

THE 492 - Theology Major's Seminar (3)

A required course for theology majors that explores advanced aspects of the discipline and practice of Theology. Students will examine key topics and theological methods of analysis. The course will focus on writing in the discipline, critical reading of primary and secondary sources, and peer discussion. Theology majors only.

Prerequisite: THE 105, THE 205.

THE 495 - Workshop (Variable)

Credit arranged.

THE 496 - Workshop (Variable)

Credit arranged.

THE 498 - Capstone Thesis (3)

Research, study, or original work under the direction of a faculty mentor leading to a scholarly capstone document. Requires approval of capstone director, department chair, and the director of the honors program, when appropriate. Grade will be IP until all requirements are fulfilled.

Prerequisite: Senior Standing.

THE 499 - Senior Presentation (1)

Preparation for the presentation of a student's previous written work for a general audience. For Theology majors in track one, this will be a student's capstone thesis; for those in track two, this will be a paper chosen in consultation with a faculty mentor. Requires approval of the department chair.

Prerequisite: Senior standing.

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Provost and (effective July 1, 2021) Acting President

B.Sc., University of California at Los Angeles, 1985; M.S., University of California at Berkeley, 1987; Ph.D., *ibid*, 1992.

Eric C. Barger, C.P.A., M.B.A.

Vice President for Financial Affairs

B.S., University of Portland, 1990; B.B.A., *ibid*, 1990; M.B.A., *ibid*, 1994.

Andrea M. Barton, J.D.

Vice President & General Counsel

B.A., University of Notre Dame, 2005; J.D., Notre Dame Law School, 2009.

Rev. John J. Donato, C.S.C., Ed.D.

Vice President for Student Affairs

B.A., University of Notre Dame, 1986; M.Div., *ibid*, 1990; M.Sc.A, *ibid* 1997; Ph.D., Seattle University, 2005.

Michael E. Lewellen, B.S.

Vice President for Marketing and Communications

B.S., Arkansas State University, 1983.

Scott R. Leykam, B.A.

Vice President for Athletics

B.A., Saint Mary's College, 1995.

James B. Ravelli, E.M.P.A.

Vice President for University Operations

B.S., Arizona State University, 1982; E.M.P.A., University of Washington, 2014.

J. Bryce Strang, B.A.

Vice President for University Relations

B.A., University of Oregon, 1974.

Office of the President

Herbert A. Medina, Ph.D.

Acting President (effective July 1, 2021) and Provost

B.Sc., University of California at Los Angeles, 1985; M.S., University of California at Berkeley, 1987; Ph.D., *ibid*, 1992.

Evan Leadem, J.D.

Chief of Staff & Board Secretariat

B.A., Wake Forest University, 2011; J.D., Wake Forest University School of Law, 2015.

President's Leadership Cabinet

The University of Portland President's Leadership Cabinet is comprised of select senior administrators and others. Collectively, the President's Leadership Cabinet represents all aspects of the University community. The Cabinet meets regularly to advise and counsel the President on strategic and operational matters and to collaborate on key projects and initiatives. Membership on the Cabinet is at the President's discretion.

Andrea M. Barton, J.D.

Vice President & General Counsel

B.A., University of Notre Dame, 2005; J.D., Notre Dame Law School, 2009.

Eduardo R. Contreras

Associate Provost for International Education, Diversity, and Inclusion

B.A., University of Texas at Austin, 1998; M.A., *ibid*, 2001; Ed.M., Harvard Graduate School of Education, 2009; Ed.D., *ibid*, 2015.

Rev. John J. Donato, C.S.C., Ed.D.

Vice President for Student Affairs

B.A., University of Notre Dame, 1986; M.Div., *ibid*, 1990; M.Sc.A, *ibid* 1997; Ed.D., Seattle University, 2005.

Evan T. Leadem, J.D.

Chief of Staff and Board Secretariat

B.A., Wake Forest University, 2011; J.D., Wake Forest University School of Law, 2015.

Michael E. Lewellen, B.S.

Vice President for Marketing and Communications

B.S., Arkansas State University, 1983.

Scott R. Leykam, B.A.

Vice President for Athletics

B.A., Saint Mary's College, 1995.

Herbert A. Medina, Ph.D.

Provost and (effective July 1, 2021) Acting President

B.Sc., University of California at Los Angeles, 1985; M.S., University of California at Berkeley, 1987; Ph.D., *ibid*, 1992.

Elise M. Moentmann, Ph.D.

Associate Provost for Academic Affairs

B.A., Louisiana Tech University, 1985; M.A., *ibid*, 1988; Ph.D., University of Illinois, 1998.

James B. Ravelli, E.M.P.A.

Vice President for University Operations

B.S., Arizona State University, 1982; E.M.P.A., University of Washington, 2014.

J. Bryce Strang, B.A.

Vice President for University Relations

B.A., University of Oregon, 1974.

Office of the Provost

Herbert A. Medina, Ph.D.

Provost and (effective July 1, 2021) Acting President

B.Sc., University of California at Los Angeles, 1985; M.S., University of California at Berkeley, 1987; Ph.D., *ibid*, 1992.

Gerardo Cifuentes, M.S.

Associate Provost of Admissions

B.S., Christian Oklahoma University, 2008; M.S., Warner Pacific University, 2011.

Eduardo Contreras, Jr., Ed.D.

Associate Provost for International Education, Diversity, and Inclusion

B.A., University of Texas at Austin, 1998; M.A., *ibid*, 2001; Ed.M., Harvard Graduate School of Education, 2009; Ed.D., *ibid*, 2015.

Elise Moentmann, Ph.D.

Associate Provost for Academic Affairs

B.A., Louisiana Tech University, 1985; M.A., *ibid*, 1988; Ph.D., University of Illinois, 1998.

John C. Orr, Ph.D.

Assistant Provost for Scholarly Engagement and Career Readiness

B.A., Hardin-Simmons University, 1980; M.A., University of Oklahoma, 1983; Ph.D., Duke University, 1992.

Glenna M. Andrews, B.A.

Assistant Athletic Director for Academic and Student-Athlete Development

B.A., Lewis & Clark College, 2015.

Amy E. Cavanaugh, M.S.

Director, Career Center

B.A., St. Mary's College, Indiana, 1996; M.S., University Portland, 2006.

Karen E. Eifler, Ph.D.

Executive Co-Director, Garaventa Center

B.A., University of California at Los Angeles, 1982; Ph.D., University of Nebraska at Lincoln, 1997.

Rev. Charles B. Gordon, C.S.C., Ph.D.

Executive Co-Director, Garaventa Center

B.A., University of Notre Dame, 1977; M.Div., *ibid*, 1986; Ph.D., University of Cambridge, 1999.

Col. R. Scott Grainger, M.M.A.S.

Commander of Air Force ROTC, and Professor, Aerospace Studies

B.S., University of Portland, 1994; M.S., University of Missouri, 1998; M.M.A.S., Air University, 2007.

Brenda Greiner, M.A.

Director, Shepard Academic Resource Center

B.S., Oregon State University, 1995; M.A., University of Portland, 2008.

Michael F. Johnson, Ph.D.

Director, Institutional Research

B.A., Lafayette College, 2006; M.A., University of Hawaii Manoa, 2009; Ph.D., *ibid*, 2014.

Roberta D. Lindahl, M.B.A.

Registrar

B.S., University of Portland, 1997; M.B.A., *ibid*, 2000.

Daniel M. McGinty, Ed.D.

Director, Dundon-Berchtold Institute for Moral Formation and Applied Ethics

B.A., University of Notre Dame, 1995; M.A., University of Portland, 1997; Ed.D., *ibid*, 2019.

Michael J. Pelley, M.S.

Director, International Student Services

B.A., University of Oregon, 2009; M.S., University of Portland, 2009.

Lt. Col. Jeremy L. Rockwell, M.B.A.

Commander of Army ROTC, and Professor, Military Science

B.S., Slippery Rock University, 2002 ; M.B.A., Pacific Lutheran University, 2013.

Deans

Xan Arch, M.L.I.S.

Dean, Clark Library

B.A. Stanford University, 1999; M.A., *ibid*, 2000; M.L.I.S., San Jose State University, 2007.

Michael L. DeVaughn, Ph.D.

Dean, Dr. Robert B. Pamplin, Jr., School of Business Administration

A.B., Brown University, 1986; M.B.A., Indiana University, 1990; Ph.D., University of Wisconsin-Madison, 2003.

Brian Fabien, Ph.D.

Dean, Shiley School of Engineering

B.E., The City College, CUNY, 1981; M.S., Columbia University, 1983; M.Phil., Columbia University, 1990; Ph.D., *ibid*, 1990.

Norah Martin, Ph.D.

Interim Dean, College of Arts and Sciences

B.A., Connecticut College, 1984; M.Litt., University of Edinburgh, 1989; Ph.D., State University of New York at Stony Brook, 1994..

Casey R. Shillam, Ph.D.

Dean, School of Nursing

B.A., Portland State University, 2000; B.S., Oregon Health & Science University, 2002; M.S., *ibid*, 2004; Ph.D., *ibid*, 2008.

John L. Watzke, Ph.D.

Dean, School of Education and Graduate School

B.A., University of Iowa, 1990; M.A., *ibid*, 1994; Ph.D., *ibid*, 2000.

Office of Athletics

Scott R. Leykam, B.A.

Vice President for Athletics

B.A., Saint Mary's College, 1995.

Karen Peters, M.S.

Senior Associate Athletic Director

B.A., New Mexico State University, 1993; M.S., University of Massachusetts, 1995.

Jason Brough, B.B.A.

Associate Athletic Director for Public Relations & Digital Media

B.B.A., University of Portland, 2003.

Jackie Greulich, M.B.A.

Associate Athletic Director for Business Operations

B.S., Lynn University, 2006; M.B.A. California State East Bay, 2015.

Karina Handeland, M.A.

Associate Athletic Director for External Relations

B.A., Washington State University, 1999; M.A., Loyola Marymount University, 2012.

Andrew Keippela, B.S.

Associate Athletic Director for Development

B.S., Western Oregon University, 2005.

Office of Financial Affairs

Eric C. Barger, C.P.A., M.B.A.

Vice President for Financial Affairs

B.S., University of Portland, 1990; B.B.A., *ibid*, 1990; M.B.A., *ibid*, 1994.

Robin G. Michell, B.B.A.

Associate Vice President for Budgeting

B.B.A., California State University, Sacramento, 1984.

Euriziel Gordon

Director, Student Accounts

Janet K. Turner, B.A.

Director, Financial Aid

B.A., Washington State University.

Lori Watson, M.B.A.

Associate Vice President for Finance and Controller

B.B.A., University of Portland, 1995; M.B.A., *ibid*, 2008.

Melanie Kellar*

Manager, Bookstore

Kirk Mustain*

General Manager, Bon Appetit

**Auxiliary services personnel*

Office of Human Resources

TBD

Vice President for Human Resources

Laura Barnard, M.B.A.

Associate Director of Human Resources

B.B.A., Portland State University, 1997; M.B.A., University of Portland, 2020.

Office of Marketing and Communications

Michael E. Lewellen, B.S.

Vice President for Marketing and Communications

B.S., Arkansas State University, 1983.

Jessica Murphy Moo

Editor, Portland Magazine and Associate Director of Storytelling

Mary Scroggins

Director, Printing and Mailing Services

Office of Student Affairs

Rev. John J. Donato, C.S.C., Ed.D.

Vice President for Student Affairs

B.A., University of Notre Dame, 1986; M.Div., *ibid*, 1990; M.Sc.A, *ibid* 1997; Ed.D., Seattle University, 2005.

Tamara Herdener, J.D.

Associate Vice President for Student Development

B.A., Seattle University, 1994; J.D., University of Notre Dame Law School, 1997.

Carol Dell'Oliver, Ph.D.

Director, Center for Health and Counseling

B.A., University of Colorado, Boulder, 1984; Ph.D., University of Kansas, 1992.

Rev. James Gallagher, C.S.C., M.Div.

Director of Campus Ministry

B.S., University of Notre Dame, 1998; M.Div., *ibid*, 2006.

Sara Westbrook, B.A.

Director, Campus Safety

B.A., Eastern Washington University, 1998.

Jeromy Koffler, Ed.D.

Director, Student Activities

B.A., St. Martin's College, 1993; M.A., Stanford University, 1994; Ed.D., University of Portland, 2017.

Laurie Laird, M.A.

Director, Moreau Center

B.S., Santa Clara University, 1987; M.A., San Jose State University, 1994.

Andrew Weingarten, M.S.

Director, Residence Life

B.A., La Salle University, 2008; M.S., Manhattan College, 2012.

Office of University Operations

James B. Ravelli, E.M.P.A.

Vice President for University Operations

B.S., Arizona State University, 1982; E.M.P.A., University of Washington, 2014.

Jennie Cambier, M.Arch.

Associate Vice President for Land Use and Planning

B.A., Middlebury College, 2001; M.Arch, University of Oregon, 2005.

Ann Harris, B.S.

Associate Chief Information Officer

B.S., Oregon State University, 1987.

David Hobbs, M.A.

Associate Vice President for Construction and Facilities

B.A., University of Colorado, 1991; M.A., Southern Illinois University, 1993.

Lisel Stancil, B.A.

Director, Web and Enterprise Services

B.A., University of Portland, 2002.

Office of University Relations

Rev. Edwin H. Obermiller, C.S.C., M.Div.

Interim Vice President for University Relations

B.A., Pontifical College Josephinum, 1988; M.Div., Jesuit School of Theology, 1994.

Amy P. Eaton

Associate Vice President for Development

B.A., University of Montana, 1995; M.B.A., University of Portland, 2013.

Joseph D. Kaleel, B.A.

Director of University Events

B.A., Oregon State University, 1983.

Gina M. Yazzolino, B.A.

Director of Alumni & Parent Relations

B.A., University of Portland, 1996.

FACULTY

July 1, 2021

The final date in a listing indicates the year of first appointment to the University of Portland faculty. More than one date indicates a break in service.

Footnote reference:

1 Part-time

2 On leave

3 Administrative personnel primarily

4 Special faculty status

Shaghayegh Abbasi, Ph.D.

Assistant Professor, Electrical Engineering

B.Sc., Sharif University of Technology, 2005; M.Sc., University of Washington, 2007; Ph.D., *ibid*, 2011. At Portland, 2020—

Kali Abel, M.S.

Visiting Instructor, Environmental Studies

B.A., Colby College, 2007; M.S., University of Colorado, 2012. At Portland, 2021—

Brian J. Adams, Ph.D.

Professor, Business

B.A., University of Oregon, 1990; M.B.A., University of Portland, 1996; Ph.D., Arizona State University, 2003. At Portland, 2003—

Bahram Adrangi, Ph.D.

Professor, Business

B.A., University of Tehran, 1973; M.B.A., Western Illinois University, 1975; Ph.D., University of Oregon, 1982. At Portland, 1982—

Amelia J. Ahern-Rindell, Ph.D.

Associate Professor, Biology

B.S., University of Illinois, 1979; M.S., Washington State University, 1985; Ph.D., *ibid*, 1988. At Portland, 1997—

SimonMary Asese A. Ahiokhai, Ph.D.

Associate Professor, Theology

Diploma, Spiritan School of Philosophy, Isien-Nsukka, Nigeria, 1997; M.A. St. John's Seminary, 2007; Ph.D., Duquesne University, 2013; At Portland, 2016—

Lauren M. Alfrey, Ph.D.

Assistant Professor, Sociology & Social Work

B.A., University of Massachusetts, Amherst, 2004; M.A., Georgetown University, 2010; Ph.D., University of California, Santa Barbara, 2016. At Portland, 2016—

Eric J. Anctil, Ph.D.

Associate Professor, Education

B.A., University of Oregon, 1992; M.A., Portland State University, 2000; Ph.D., University of Wisconsin-Madison, 2003. At Portland, 2008—

Rev. Robert C. Antonelli, C.S.C., Ph.D.

Associate Professor, Theology³

B.A., University of Notre Dame, 1962; S.T.B., Pontificia Universitas Gregoriana, 1964; S.T.L., *ibid*, 1966; M.A., The Johns Hopkins University, 1968; Ph.D., University of Strasbourg, 1970. At Portland, 1999—

Devin Apland, M.S.N.

Instructor, Nursing

B.S.N., University of Portland, 2012; M.S.N., Western Governor's University, 2017. At Portland, 2020—

Mohammad Arbabian, Ph.D.

Assistant Professor, Business

B.S., Iran University, 2010; M.S., Khaje Nasir Toosi University, 2012; Ph.D., University of Washington, 2018. At Portland 2019—

Xan Arch, M.L.I.S.

Dean of the University Library³

B.A. Stanford University, 1999; M.A., *ibid*, 2000; M.L.I.S., San Jose State University, 2007. At Portland, 2016—

Richard R. Askay, Ph.D.

Professor, Philosophy

B.A., Portland State University, 1975; M.A., Purdue University, 1977; Ph.D., *ibid*, 1980. At Portland, 1982—

Christina A. Astorga, Ph.D.

Professor, Theology

AB-BSE, College of the Holy Spirit, 1972; M.A., Loyola School of Theology, Ateneo-de Manila University, 1979; Ph.D., *ibid*, 1992. At Portland, 2014—

Marjorie Attis-Josias, Ph.D.

Assistant Professor, Nursing

B.S.N., Rutgers University-Newark, 1996; M.S.N., University of Central Florida, 2013; Ph.D., Capella University, 2020. At Portland, 2020—

Nicole E. Auxier, Ph.D.

Associate Professor, Nursing

B.S.N., University of Portland, 2007; Ph.D., Medical University of South Carolina. At Portland, 2015—

Tanya Bachman, M.S.

Instructor, Nursing

B.S., Portland State University, 1994; M.S., University of Western States, 2015. At Portland, 2016-2020, 2021—

Erica Bailey, M.S.

Instructor, Nursing

A.S., Portland Community College, 2008; B.S.N., Linfield College, 2011; M.N., University of Portland, 2016. At Portland, 2016—

James Baillie, Ph.D.

Professor, Philosophy

M.A., University of Glasgow, 1979; Ph.D., *ibid*, 1989. At Portland, 1990—

Janet M. Banks, M.S.N.

Assistant Professor, Nursing

B.S.N., University of Portland, 1987; M.S.N., Gonzaga University, 2009. At Portland, 2009—

William F. Barnes, Ph.D.

Associate Professor, Business

B.A., University of New Hampshire, 1989; Ph.D., University of Notre Dame, 2000. At Portland, 2000—

Kaleigh Barnett, M.N.E.

Instructor, Nursing

B.S.N., University of Portland, 2013; M.N.E., Oregon Health & Science University, 2018. At Portland, 2020—

Todd Basil, M.S.

Instructor, Mathematics

B.F.A., Chapman University, 2003; M.S., California State University, Los Angeles, 2016. At Portland, 2019—

Elizabeth Baynes, M.S.N.

Instructor, Nursing

B.S.N., Oregon Health & Science University, 1972; M.S.N., University of Portland, 2002. At Portland, 2019—

Amy S. Beadles-Bohling, Ph.D.

Lecturer, Biology

B.A., Concordia College, 1994; Ph.D., Oregon Health & Science University, 2004. At Portland, 2008—

Gary M. Beckley, Ph.D.

Assistant Dean, PACE, Education

B.S., John Carroll University, 2003; M.S., Notre Dame, 2005; Ph.D., Trevecca Nazarene University, 2012. At Portland, 2019—

Lauren Berger, Ph.D.

Assistant Professor, Psychological Sciences

B.A., University of Notre Dame, 2005; M.A., University of California, Davis, 2009; Ph.D., *ibid*, 2017. At Portland, 2020—

Kathleen A. Bieryla, Ph.D.

Assistant Professor, Engineering

B.S., University of Pittsburgh, 2004; M.S., Virginia Polytechnic Institute and State University, 2006; Ph.D., *ibid*, 2009. At Portland, 2017—

Laura Blackhurst, M.S.N.

Instructor, Nursing

B.S., Portland State University, 2009; B.S.N., University of Portland, 2011; M.S.N.-C.N.L., *ibid*, 2014. At Portland, 2018—

Barbara Bloom-Groshong, J.D.

Instructor, Business

B.S., Political Science, Santa Clara University, 1989; J.D., Willamette University College of Law, 1992. At Portland, 2015—

Osiel Bonfim, Ph.D.

Professor, Physics

B.S., Federal University of Pernambuco, 1973; M.S., *ibid*, 1976; Ph.D., University of Oxford, 1981. At Portland, 2001—

Trudie M. Booth, M.A.

Lecturer, French

M.A., University of Freiburg, 1971. At Portland, 1977—

Genevieve Y. Brassard, Ph.D.

Associate Professor, English

B.A., San Francisco State University, 1995; M.A., University of Connecticut, 1997; Ph.D., University of Connecticut, 2004. At Portland, 2005—

Maureen Briare, M.A.

Instructor, Nursing

B.S.N., University of Portland, 1992; M.A., *ibid*, 2004. At Portland, 2020—

Cheri Buck-Perry, M.A.

Instructor, English

B.A., Walla Walla University, 1989; M.A., Portland State University, 1995. At Portland, 2016—

Sandra F. Calm, M.S.

Instructor, Nursing

B.S., Portland State University, 2006; M.S., University of Portland, 2010. At Portland, 2020

Glenn (Michael) M. Cameron, Ph.D.

Professor, Theology

B.A., Central Bible College, 1977; Bethany Theological Seminary, 1981; Ph.D., University of Chicago Divinity School, 1996. At Portland, 2002—

Kevin Cantrell, Ph.D.

Professor, Chemistry

B.S., Furman State University, 1992; M.S., Oregon State University, 1998; Ph.D., *ibid*, 2001. At Portland, 2001—

Heather Carpenter, Ph.D.

Lecturer, Environmental Science

B.S., Oregon State University, 2003; Ph.D., University of California, Davis, 2009. At Portland, 2016—

Andrea Castanette, M.A.F.L.

Instructor, International Languages and Cultures

B.A.F.L., Portland State University, 2014; M.A.F.L., *ibid*, 2014. At Portland, 2011—

Martin Cenek, Ph.D.

Associate Professor, Computer Science, Engineering

B.S., Portland State University, 2002; M.S., *ibid*, 2004; Ph.D., *ibid*, 2011. At Portland, 2018—

Christie Engesser Cesar, Ph.D.

Lecturer, Biology

B.S., University of Oregon, 1997; Ph.D., University of California, Irvine, 2006. At Portland, 2016—

Arjun Chatrath, D.B.A.

Professor, Business

B.A., University of Delhi, 1985; M.B.A., University of Notre Dame, 1989; D.B.A., Cleveland State University, 1994. At Portland, 1997—

Lori Chorprenning, M.S.

Instructor, Nursing

B.S.N., Metropolitan State College, 1989; M.S., University of Portland, 2003. At Portland, 2004—

Andrew Christensen, M.F.A.

Visiting Instructor, Performing and Fine Arts

B.A., Vanguard University of Southern California, 2008; M.F.A., Lir Academy of Trinity College Dublin & RADA, 2017. At Portland, 2021—

Glenna T. Clifton, Ph.D.

Assistant Professor, Biology

B.A., Barnard College, 2010; Ph.D., Harvard University, 2017. At Portland, 2020—

Nelson E. Coates, Ph.D.

Assistant Professor, Physics

B.A., Macalester College, 2004; Ph.D., University of California, Santa Barbara, 2010. At Portland, 2019—

Eduardo Contreras, Ed.D.

Adjunct Assistant Professor, Education³

B.A., University of Texas at Austin, 1998; M.A., *ibid*, 2001; Ed.M., Harvard Graduate School of Education, 2009; Ed.D., *ibid*, 2015. At Portland, 2015—

Evelyn (Claire) Costin, M.B.A.

Instructor, Business

B.M., University of Texas at Austin, Butler School of Music, 2004; M.B.A., St. Edward's University, School of Management and Business, 2009. At Portland, 2017—

Lezlie Cross, Ph.D.

Assistant Professor, Performing & Fine Arts

B.A., Whitman College, 2002; M.A., The Shakespeare Institute, 2004; Ph.D., University of Washington, Seattle, 2013. At Portland, 2019—

Renee S. Crowgey, M.A.

Visiting Instructor, Psychological Sciences

B.A., University of North Carolina Wilmington, 2007; B.A., *ibid*, 2007; M.A., Wheaton College, 2009. At Portland, 2019—

Beatriz Itzel Cruz-Megchun, Ph.D.

Assistant Professor, Business

B.Sc., Universidad Aut6noma de Mexico campus Xochimilco, 2005; M.S., University of Salford, 2007; Ph.D., Staffordshire University, 2011. At Portland, 2018—

Erin Currie, Ph.D.

Visiting Instructor, Psychological Sciences

B.S., University of Wisconsin, 2002; M.S., University of Utah, 2007; Ph.D., *ibid*, 2010. At Portland, 2019—

William M. Curtis, Ph.D.

Professor, Political Science and Global Affairs

A.B., Dartmouth College, 1992; J.D., University of California, 1995; M.A., Stanford University, 1997; Ph.D., Duke University, 2006. At Portland, 2007—

Brandy R. Daniels, Ph.D.

Assistant Professor, Theology

B.A., Azusa Pacific University, 2006; M.Div. Duke University, 2010; A.M., *ibid*, 2011; M.A., Vanderbilt University, 2015; Ph.D., *ibid*, 2017. At Portland, 2020—

Katie A. Danielson, Ph.D.

Assistant Professor, Education

B.A., University of Puget Sound, 2002; Ed.M., Harvard University, 2005; M.Ed., University of Oregon, 2006; Ph.D., University of Washington, 2016. At Portland, 2019—

Sylvia Daoud Kinzie, Ph.D.

Instructor, Chemistry

B.S., Portland State University, 1993; M.S., *ibid*, 1999; Ph.D., University of California Los Angeles, 2005. At Portland, 2010—

Alexa M. Dare, Ph.D.

Associate Professor, Communication Studies

B.A., University of Alberta, 1997; M.A., University of Alaska, 2001; Ph.D., University of Denver, 2008. At Portland, 2013—

Andra Davis, Ph.D.

Associate Professor, Nursing

A.A., Rio Hondo College, 1982; B.S.N. University of Arizona, 1986; M.N., University of Washington, 1991, Ph.D., University of Utah, 2014. At Portland, 2020—

Kelley Davis, D.N.P.

Visiting Instructor, Nursing

B.S.N., University of Portland; M.S.N., Oregon Health & Science University, 2019; D.N.P., *ibid*, 2021. At Portland, 2021—

David M. De Lyser, D.A.

Associate Professor, Music

B.A., Minnesota State University, 1990; M.A., University of Portland, 2001; D.A., University of Northern Colorado, 2005. At Portland, 2010—

Sr. Carol J. Dempsey, O.P., Ph.D.

Professor, Theology

B.A., Caldwell College, 1978; M.A., St. Louis University, 1986; Ph.D., Catholic University of America, 1994. At Portland, 1994—

Michael L. DeVaughn, Ph.D.

Professor, Business³

A.B., Brown University, 1986; M.B.A., Indiana University, 1990; Ph.D., University of Wisconsin-Madison, 2003. At Portland, 2021—

Ruth Dittrich, Ph.D.

Assistant Professor, Business

B.A. University of Erfurt, Germany, 2009; M.Sc., University of Birmingham, UK, 2010; Ph.D., Scottish Rural College & University of Edinburgh, UK, 2016; At Portland, 2016—

Laurie J. Dizney, Ph.D.

Instructor, Biology

B.S., Portland State University, 1994; M.S., *ibid*, 2001; Ph.D., *ibid*, 2008. At Portland, 2012—

Timothy A. Doughty, Ph.D.

Professor, Engineering

B.S., Washington State University, 1991; M.S., *ibid*, 1993; Ph.D., Purdue University, 2002. At Portland, 2006—

Jon T. Down, Ph.D.

Associate Professor, Business⁴

B.S., Oregon State University, 1983; M.B.A., Harvard University, 1987; Ph.D., University of Washington, 1998. At Portland, 2007—

Andrew M. Downs, Ph.D.

Professor, Psychology

B.A., University of Notre Dame, 1994; M.S., Washington State University, 1998; Ph.D., *ibid*, 2002. At Portland, 2008—

Theresa A. Duda, M.S.N

Instructor, Nursing

B.S.N., Oregon Health & Science University, 1990; M.S.N., *ibid*, 1996. At Portland, 2015—**Radana Dvorak, Ph.D.**

Instructor, Engineering

B.A., University of Michigan, 1985; M.S., University of Sussex-UK, 1990; Ph.D., University of London Queen Mary College, 1995. At Portland, 2018—2020.

C. Christopher Dunnville, M.S.

Instructor, Business

B.S., Georgetown University, 1983; M.S., New York University, 1990. At Portland, 2015—

Laura A. Dyer, Ph.D.

Assistant Professor, Biology

B.S., Rensselaer Polytechnic Institute, 2003; Ph.D., Duke University, 2009. At Portland, 2017—

Maria Elva Echenique, Ph.D.

Associate Professor, Spanish

L.L., Universidad Mayor de San Andres, 1991; M.A., University of Oregon, 1998; Pd.D., *ibid*, 2002. At Portland, 2002—**Louisa Egan-Brad, Ph.D.**

Associate Professor, Psychological Sciences

B.A. Swarthmore College, 2003; M.S. Yale, 2006; M.Phil. Yale, 2006; Ph.D., Yale, 2009. At Portland 2015—

Munonvedi Egbo, Ph.D.

Sweo Endowed Assistant Professor, Mechanical Engineering

B.Eng., University of Nigeria, 2014; MSc., University of Glasgow, 2017; Ph.D., Wichita State University, 2021. At Portland, 2021—

Karen E. Eifler, Ph.D.

Professor, Education

B.A., University of California at Los Angeles, 1982; Ph.D., University of Nebraska at Lincoln, 1997. At Portland, 1998—

Brian J. Els, Ph.D.

Associate Professor, History

B.A., Whitman College, 1990; M.A., Indiana University, 1994. Ph.D., *ibid*, 2004. At Portland, 2002—**Tae-In (Mike) Eom, Ph.D.**

Professor, Business

B.S., Iowa State University, 1991; M.A., State University of New York at Albany, 1992; M.B.A., State University of New York at Binghamton, 1999; Ph.D., *ibid*. At Portland, 2004—**Andrew Scott Eshleman, Ph.D.**

Professor, Philosophy

B.A., Messiah College, 1985; M.A., Claremont Graduate University, 1991; M.A., *ibid*, 1992; Ph.D., University of California, 1998. At Portland, 2011—**Caery Ann Evangelist, Ph.D.**

Associate Professor, Philosophy

B.A., University of Pennsylvania, 1993; M.A., *ibid*, 1994; Ph.D., Duke University, 2004. At Portland, 2005—**Brian Fabien, Ph.D.**Professor, Mechanical Engineering³B.E., The City College, CUNY, 1981; M.S., Columbia University, 1983; M.Phil., Columbia University, 1990; Ph.D., *ibid*, 1990. At Portland, 2020—**Jordan Farina, Ph.D.**

Assistant Professor, Mechanical Engineering

B.S., University of Alabama, 2006; M.S., Virginia Polytechnic and State University, 2010; Ph.D., Virginia Polytechnic and State University, 2013. At Portland, 2015—

Terence G. Favero, Ph.D.

Professor, Biology

B.S., Illinois State University, 1984; M.S., University of Oregon, 1988; Ph.D., *ibid*, 1990. At Portland, 1993—

Kyle L. Flann, Ph.D.

Lecturer, Biology

B.S., Northern Arizona University, 2000; M.S., *ibid*, 2006; Ph.D., University of Arizona, 2009. At Portland, 2009—

Courtney Vail Fletcher, Ph.D.

Professor, Communication Studies

B.A., Canisius College, 2002; M.A., West Virginia University, 2005; Ph.D., University of New Mexico, 2009. At Portland, 2010—

Joan Flora, M.A.

Director of Clinical Practice, Education

B.A., Western Oregon University, 1988; M.A., University of Oregon, 1991. At Portland, 2018—

Narcy M. Foraker, M.N.E.

Instructor, Nursing

A.D., College of the Desert, 2004; B.S., Linfield College, 2014; M.N.E., Oregon Health & Science University, 2017. At Portland, 2019—

Kelly Fox, D.N.P.

Assistant Professor, Nursing

B.S., University of Portland, 1990; M.N., University of Washington, 2009; D.N.P., Yale University, 2017. At Portland, 2019—

Bradley R. Franco, Ph.D.

Associate Professor, History

B.A., State University of New York, 2002; Ph.D., Syracuse University, 2010. At Portland, 2010—

Colleen French, B.S.N.

Instructor, Nursing

B.S.N., University of Portland, 2015. At Portland, 2019—

David Fuentes, Pharm.D.

Professor, Nursing

Pharm.D., University of the Pacific, 2003; M.S. Southern New Hampshire University, 2019; At Portland, 2021—

Christine Gallagher, M.S.N.

Instructor, Nursing

B.S.N., University of Portland, 2003; M.S.N., Western Governors University, 2018. At Portland, 2021—

Benjamin Gallegos, Ph.D.

Assistant Professor, School of Education

B.I.S., University of Texas-El Paso, 1997; M.Ed., *ibid*, 2012; Ph.D., University of Central Florida, 2016. At Portland, 2017—

Layla Garrigues, Ph.D.

Assistant Professor, Nursing

B.S., University of Illinois, Urbana-Champaign, 1991; B.S., University of New Mexico, 1995; Ph.D., Oregon Health & Science University, 2014. At Portland, 2018—

Alice B. Gates, Ph.D.

Associate Professor, Social Work

B.A., Grinnell College, 1997; M.A., University of Michigan, 2007; Ph.D., *ibid*, 2011. At Portland, 2011—

Rebecca J. Gaudino, Ph.D.

Lecturer, Theology

B.A., Friends University, 1975; M.A., Kansas State University, 1978; M.Div., Columbia Theological Seminary, 1994; Ph.D., University of California, 1994. At Portland, 2008—

Hillary Ann Gaudio, Ph.D.

Associate Professor, Education

B.A., Washington State University, 2001; M.A., *ibid*, 2002; Ph.D., *ibid*, 2008. At Portland, 2008—

Jeffrey A. Gauthier, Ph.D.

Professor, Philosophy

B.A., Wadham's Hall College, 1980; M.A., Bowling Green State University, 1985; Ph.D., University of Michigan, 1992. At Portland, 1992—

Punam Ghimire, M.S.

Instructor, Physics

B.S., Mount Carmel College-India, 2010; B.S., University of Texas, 2013; M.S., *ibid*, 2015. At Portland, 2017—

Margaret Goddard, D.N.P.

Instructor, Nursing

M.S.N., University of Akron, 2002; D.N.P., Oregon Health & Science University, 2019. At Portland, 2021—

Rev. Mark Ghyselinck, C.S.C., M.F.A.

Instructor, Fine Arts

B.A., University of Notre Dame, 1980; M.Div., *ibid*, 1987; M.F.A., Western Michigan University, 2001. At Portland, 2005—

Eli E. Goldwyn, Ph.D.

Assistant Professor, Mathematics

B.A., Pomona College, 1999; M.S., N.Y. University, 2003; Ph.D. University of California, Davis, 2008. At Portland, 2017—

Lara-Zuzan Golesorkhi, Ph.D.

Assistant Professor, Political Science and Global Affairs

M.A., Milano School of International Affairs, Management, and Urban Policy (N.Y.), 2012; M.Phil., New School for Social Research, 2015; Ph.D., *ibid*, 2018. At Portland, 2018—

Andrew W. Golla, M.F.A.

Associate Professor, Theater

B.A., Carleton College, 1993; M.F.A., University of Iowa, 2003. At Portland, 2009—

Anita Gooding, Ph.D.

Assistant Professor, Sociology and Social Work

B.A., Trinity College, 2007; M.S.W., University of Pennsylvania, 2012; Ph.D., Portland State University, 2020. At Portland, 2020—

Col. R. Scott Grainger, M.M.A.S.

Professor, Air and Space Studies

B.S., University of Portland, 1994; M.S., University of Missouri, 1998; M.M.A.S., Air University, 2007. At Portland, 2005—

Jennifer Grassman, M.S.N.

Instructor, Nursing

B.S.N., University of Portland, 2009; M.S.N., Western Governors University, 2020. At Portland, 2021—

Adrienne Greaves, M.S.

Lecturer, Biology

B.S., Stanford University, 2011; M.S. Yale University, 2011. At Portland, 2008—

Teri Grimmer, M.S.

Instructor, Business

B.S., University of Montana, 1996; M.S., *ibid*, 1995. At Portland, 2014—

Naveen Gudigantala, Ph.D.

Associate Professor, Business

B.A., Osmania University, 1998; M.B.A., Institute of Public Enterprise, 2000; M.S., Texas Tech University, 2004; Ph.D., *ibid*, 2009. At Portland, 2009—

Andrew M. Guest, Ph.D.

Professor, Psychology

B.A., Kenyon College, 1994; M.S., Miami University, 1996; M.A., University of Chicago, 2001; Ph.D., *ibid*, 2004. At Portland, 2004—

Christopher J. Hainley, Jr., M.S.

Instructor, Engineering

B.S. University of Portland, 2008; M.S., Massachusetts Inst. of Technology, 2011. At Portland, 2016—

Katya Hall, M.A.

Instructor, International Languages and Cultures

B.A., Pontificia Universidad Católica del Ecuador, 1996; M.A., Portland State University., 2000; M.A., ibid, 2000.

W. Paige Hall, Ph.D.

Assistant Professor, Chemistry

B.S., University of Notre Dame, 2004; Ph.D., Northwestern University, 2010. At Portland, 2018—

Christopher C. Hallstrom, Ph.D.

Associate Professor, Mathematics

B.A., Reed College, 1992; M.S., University of Chicago, 1994; Ph.D., ibid, 2000. At Portland, 2003—

Christin Lee Hancock, Ph.D.

Associate Professor, History

B.A., University of Notre Dame, 1996; A.M., Brown University, 1999; Ph.D., ibid, 2005. At Portland, 2007—

Nicole Leupp Hanig, D.M.A.

Associate Professor, Performing & Fine Arts

B.M., Concordia College, 1992; M.M., University of Colorado, 1995; D.M.A., University of Illinois, 2009. At Portland, 2012—

Ross Hanig, Ph.D.

Instructor, Economics

B.S., University of California, Davis, 1999; M.S., University of Massachusetts, 2005; Ph.D., University of Illinois, 2005. At Portland, 2012—

Rev. William P. Hannon, C.S.C., M.Div.

Instructor, English

B.S., University of Portland, 1982; B.A., ibid, 1982; M.Div., University of Notre Dame, 1988. At Portland, 2008—

Rebekah Hanson, D.M.A.

Assistant Professor, Music

B.S., George Fox University, 2004; B.A., ibid, 2004; M.A., University of Oregon, 2006; D.M.A., ibid, 2010. At Portland, 2020—

Lizhong Hao, Ph.D.

Associate Professor, Business

B.A., Hebei Normal University, China, 1995; M.A., ibid, 1999; M.A., Kent State University, 2005; M.S., ibid, 2008; Ph.D., Florida Atlantic University, 2013. At Portland, 2017—

Kristine Harrington, D.N.P.

Assistant Professor, Nursing

B.A., Davidson College, 2003; B.S.N., University of Portland, 2012; M.S.N., ibid, 2012; D.N.P., Duke University School of Nursing, 2018. At Portland, 2019—

Christina Hennelly, M.S.N.

Instructor, Nursing

B.S.N., Concordia University, 2013, M.S.N., Western Governors University, 2018. At Portland, 2020—

Nina Henrichs-Taraskova, Ph.D.

Instructor, Theology

B.A., Warner Pacific College, 2000; M.A., Ashbury Theological Seminary, 2002; Ph.D., Brunel University, 2013. At Portland, 2016—

Cara Hersh, Ph.D.

Associate Professor, English

B.A., Haverford College, 1997; Ph.D., Duke University, 2006. At Portland, 2006—

Randy Hetherington, Ed.D.

Assistant Professor, Education

B.Ed., University of Victoria, 1985; M.Ed., University of Northern British Columbia, 2003; Ed.D., University of Alberta, 2014. At Portland, 2016—

Hannah L. Highlander, Ph.D.

Professor, Mathematics

B.A., Wesleyan College, 2001; M.S., Vanderbilt University, 2003; Ph.D., *ibid*, 2007. At Portland, 2009—**Alexandra Merley Hill, Ph.D.**

Professor, German

B.A., Vassar College, 2001; M.A., University of Massachusetts, 2004; Ph.D., *ibid*, 2009. At Portland, 2009—**Gregory Hill, Ph.D.**

Professor, Mathematics

B.S., University of Arizona, 1981; M.S., University of Oregon, 1984; Ph.D., *ibid*, 1987. At Portland, 2000—**Molly H. Hiro, Ph.D.**

Associate Professor, English

B.A., Georgetown University, 1994; M.A., University of California, Los Angeles, 1999; Ph.D., *ibid*, 2005. At Portland, 2005—**Montana Hisel-Cochran, M.A.**

Instructor, Business

B.A., Adams State College, 1998; M.A., West Texas A&M University, 2007. At Portland, 2016—

Joseph P. Hoffbeck, Ph.D.

Professor, Engineering

B.S.E.E., Purdue University, 1989; M.S.E.E., *ibid*, 1990; Ph.D., *ibid*, 1995. At Portland, 1997—**Sr. Angela Hoffman, O.S.B., Ph.D.**

Professor, Chemistry

B.A., St. Martin's College, 1972; M.A., Pacific Lutheran University, 1979; Ph.D., Oregon Graduate Institute, 1989. At Portland, 1989—

Samuel S. Holloway, Ph.D.

Professor, Business

B.A., Willamette University, 1997; B.S., Columbia University, 1998; M.A.T., Pacific University, 2001; Ph.D., University of Oregon, 2009. At Portland, 2009—

Sally H. Hood, Ph.D.

Associate Professor, Education

B.A., Indiana University, 1982; Ph.D., *ibid*, 2002. At Portland, 2005—**René M. Horcicka, Ph.D.**

Director, Portland Culture Program in Salzburg

M.Phil., University of Salzburg, 2005; Ph.D., *ibid*, 2014. At Portland (Salzburg), 2009—**David Houglum, Ph.D.**Adjunct Assistant Professor, Education³B.S., Pacific Lutheran University, 2003; M.A., Gonzaga University, 2008; Ph.D., *ibid*, 2012. At Portland, 2013—**Rachel Hutcheson, Ph.D.**

Associate Professor, Chemistry

B.S., Seattle University, 2005; Ph.D., Montana State University, 2012. At Portland 2015—

Aziz S. Inan, Ph.D.

Professor, Engineering

B.S., San Jose State University, 1979; M.S., Stanford University, 1980; Ph.D., *ibid*, 1983. At Portland, 1989—**Christina Ivler, Ph.D.**

Assistant Professor, Mechanical Engineering

B.S., University of California at Davis, 2003; M.S., University of California at Davis, 2005; Ph.D., Stanford University, 2013. At Portland, 2017—

Wilson Jacob, Ph.D.

Visiting Instructor, Chemistry

B.S., Mahatma Gandhi University, 1994; M.S., *ibid*, 1996; Ph.D., Indian Institute of Technology, 2007. At Portland, 2020—

Carolyn James, Ph.D.

Instructor, Mathematics

B.A., Carleton College, 2003; M.B.A., Johannes Kepler Universität, 2005; M.S., Oregon State University, 2009; Ph.D., Portland State University, 2015. At Portland, 2015—

Jeri Sara Janowsky, Ph.D.

Professor, Education⁴

B.A., Reed College, 1978; Ph.D., University of Ithaca, 1985. At Portland, 2011—

Kevin R. Jones, Ph.D.

Assistant Professor, Social Work

B.A., University of South Carolina, 2000; M.A., Pacific Lutheran University, 2003; M.A., Portland State University, 2010; Ph.D., *ibid*, 2015. At Portland, 2011—

Deana L. Julka, Ph.D.

Associate Professor, Psychology

B.A., Carrol College, 1992; M.A., University of Notre Dame, 1995; Ph.D., *ibid*, 1998. At Portland, 1997—

James J. Jurinski, J.D.

Professor, Business

A.B., Hamilton College, 1972; M.L.S., University of British Columbia, Canada, 1976; M.T., Portland State University, 1980; J.D., Lewis & Clark Law School, 1980; C.P.A., 1981. At Portland, 1987—

Julie Shalhope Kalnin, Ph.D.

Associate Professor, Education

B.A., University of Oregon, 1985; M.S., Northwestern University, 1987; Ph.D., University of California, 2000. At Portland, 2010—

Deirdre Katz, Ph.D.

Assistant Professor, Education

B.S., Loyola University College, 2002; M.Ed., Harvard Graduate School of Education, 2011; Pennsylvania State University, 2016. At Portland, 2019—

Mark S. Kennedy, Ph.D.

Professor, Engineering

B.S., University of Nebraska, 1977; M.S., University of Wisconsin, 1979; Ph.D., Purdue University, 1984. At Portland, 1996—

Ryan J. Kenton, Ph.D.

Assistant Professor, Biology

B.S., University of Illinois, 2002; Ph.D., University of Iowa, 2009. At Portland, 2013—

Jeff Kerssen-Griep, Ph.D.

Professor, Communication Studies

B.A., Concordia College, 1983; M.A., University of Washington, 1986; Ph.D., *ibid*, 1997. At Portland, 1998—

James King, C.S.C., M.Div.

Instructor, Theology

B.A., University of Notre Dame, 1981; M.Div., *ibid*, 1987; M.A., University of Wisconsin, 1992; M.N.A., University of Notre Dame, 2007. At Portland, 2018—

Michelle King, B.S.N.

Instructor, Nursing

B.S.N., University of Portland, 2012. At Portland, 2017—

Madhuparna Kolay, Ph.D.

Associate Professor, Finance

B.T., University of South Pacific, 2000; M.B., Monash University, 2003; M.S., University of Florida, 2005; Ph.D., University of Utah, 2012. At Portland, 2012—

Steven A. Kolmes, Ph.D.

Molter Chair in Science

Professor, Environmental Science

B.S., Ohio University, 1976; M.S., University of Wisconsin-Madison, 1978; Ph.D., *ibid*, 1984. At Portland, 1995—

Jakob Kotas, Ph.D.

Assistant Professor, Mathematics

B.S., Cornell University, 2009; M.Eng., Ibid, 2011; Ph.D., University of Washington, 2016. At Portland, 2016—

Matthew R. Kuhn, Ph.D.

Professor, Engineering

B.S., University of Missouri, 1975; M.S., University of California, Berkeley, 1984; Ph.D., ibid, 1987. At Portland, 1987—

Rebecca Kunz, M.S.

Visiting Instructor, Nursing

B.A., University of Nebraska, 1997; M.S., University of Northwestern St. Paul, 2014. At Portland, 2016—

Andrew J. Lafrenz, Ph.D.

Associate Professor, Nursing

B.S., University of Portland, 2002; M.S., University of Georgia, 2004; M.P.H., Oregon State University, 2014; Ph.D., ibid, 2014. At Portland, 2004—2015; 2020—

Tyler Laird-Magee, D.B.A.

Instructor, Business

A.A., Cypress College, 1977; B.A., Marylhurst University, 1989; M.A., University of Portland, 1994; D.B.A., George Fox, 2011. At Portland, 2015—

Lawrence S. Larsen, M.F.A.

Professor, Theater

B.A., Trinity University, 1983; M.F.A., University of Washington, 1986. At Portland, 1994—

Lars Erik Larson, Ph.D.

Associate Professor, English

B.A., University of Pennsylvania, 1993; M.A., University of California, Los Angeles, 1998; Ph.D., ibid. At Portland, 2005—

Bohn D. Lattin, Ph.D.

Associate Professor, Communication Studies

B.A., Moorhead State University, 1979; M.A., Idaho State University, 1984; Ph.D., University of Oregon, 1992. At Portland, 1992—

Lisa Le-Vaughan, M.S.N.

Instructor, Nursing

B.S.N., University of Portland, 2015; M.S.N., University of Texas - Tyler, 2020. At Portland, 2019—

Christopher Lee, Ph.D.

Associate Professor, Mathematics

B.A., University of Wyoming, 2000; M.S., University of Georgia Athens, 2004; Ph.D., University of Illinois Urbana, 2009. At Portland, 2009—

Larizza A. Limjuco, M.S.N.

Instructor, Nursing

B.S.N., University of Portland, 2008; M.S.N., Grand Canyon University, 2011. At Portland, 2015—

Henshiu (Cecelia) Lin, Ph.D.

Associate Professor, Business

B.S., San Jose State University, 1990; M.S., ibid, 1994; Ph.D., University of Texas, 2000. At Portland, 2006—

Roberta D. Lindahl, M.B.A.

Assistant Professor, Business⁴

B.S., University of Portland, 1997; M.B.A., ibid, 2000. At Portland, 2000—

Ellen Lippman, Ph.D.

Professor, Business

B.A., Colorado College, 1975; M.S., University of Wisconsin, 1978; Ph.D., University of Oregon, 1991. At Portland, 1983-85; 1988—

Chloe Littzen, Ph.D.

Assistant Professor, Nursing

A.S.N., Yavapai College, 2012; B.S.N., Grand Canyon University, 2014; M.S.N., ibid, 2017; Ph.D., University of Arizona,

2021. At Portland, 2021—

Mindi L. Logan, M.F.A.

Associate Professor, Theater

B.A., University of Idaho, 1986; M.F.A., Rutgers University, 1989. At Portland, 1999—

Jessica E. Logue, Ph.D.

Lecturer, Philosophy

B.A., State University of New York, 2001; M.A., Syracuse University, 2004; Ph.D., *ibid*, 2006. At Portland, 2008—

Amy M. Long, M.S.N., G.N.P.-B.C.

Instructor, Nursing

B.A., Western Washington University, 1995; M.S.N., Case Western Reserve University, 2010. At Portland, 2021—

Lora L. Looney, Ph.D.

Associate Professor, Spanish

B.A., Colorado College, 1987; M.A., University of Chicago, 1990; Ph.D., *ibid*, 1997. At Portland, 1998—

Jennette P. Lovejoy, Ph.D.

Associate Professor, Communication Studies

B.A., Whitman College, 2001; M.S., Ohio University, 2007; Ph.D., *ibid*, 2010. At Portland, 2010—

Kenneth E. Lulay, Ph.D.

Associate Professor, Engineering

B.S., University of Portland, 1984; M.S., *ibid*, 1987; Ph.D., University of Washington, 1990. At Portland, 1998—

Deborah A. Macey, Ph.D.

Visiting Instructor, Communication Studies

B.B.A., Saint Louis University, 1992; M.A., *ibid*, 1998; Ph.D., University of Oregon, 2008. At Portland, 2020—

Priya Mani, Ph.D.

Lecturer, Biology

B.S., St. Xavier's College, University of Mumbai-India, 1999; M.S., Abasaheb Garware College, University of Pune-India, 2001; Ph.D., Michigan State University, 2006. At Portland, 2018—

Norah Martin, Ph.D.

Professor, Philosophy & Environmental Studies

B.A., Connecticut College, 1984; M.Litt., University of Edinburgh, 1989; Ph.D., State University of New York at Stony Brook, 1994. At Portland, 1994—

Kala Mayer, Ph.D.

Assistant Professor, Nursing

B.S.N., University of Texas, 2005; Ph.D., University of Washington, 2013; M.P.H., *ibid*, 2014. At Portland, 2014—

Shannon Kathleen Mayer, Ph.D.

Professor, Physics

B.S., Pacific Lutheran University, 1987; M.S., Oregon State University, 1989; Ph.D., *ibid*, 1997. At Portland, 2002—

Steven G. Mayer, Ph.D.

Professor, Chemistry

B.S., Pacific Lutheran University, 1987; M.S., Montana State University, 1997. At Portland, 2002—

Rev. Charles F. McCoy, C.S.C., Ph.D.

Associate Professor, Mathematics

B.S., Baylor University, 1995; M.S., University of Notre Dame, 1998; Ph.D., *ibid*, 2000. At Portland, 2009—

Susan E. McDaniel, M.M.

Lecturer, Music

B.A., Linfield College, 1997; M.M., Manhattan School of Music, 2001. At Portland, 2018—

John McDonald, M.A.

Lecturer, English

B.A., SUNY College at Buffalo, 1990; M.A., Portland State University, 1994. At Portland, 2000—

Claire McKinley Yoder, Ph.D.

Assistant Professor, Nursing

B.S., Oregon State University, 1997; B.S.N., University of Pennsylvania, 1999; M.S.N., *ibid*, 2000; Ph.D., Villanova University, 2020. At Portland, 2020—

Matthew J. McQuesten, M.A.

Instructor, Mathematics

B.A., Western Washington University, 2002; M.A., California State University, 2008. At Portland, 2011—

Joseph Nick McRee, Ph.D.

Professor, Sociology

B.A., Pacific University, 1992; M.A., The University of Texas, 1996; Ph.D., *ibid*, 1999. At Portland, 1999—

Patricia McShane, Ph.D.

Associate Professor, Philosophy

B.A., DePauw University, 2007; M.S., Georgetown University, 2013; Ph.D., Georgetown University, 2015. At Portland, 2015—

Mark R. Meckler, Ph.D.

Professor, Business

B.A., Brandeis University, 1985; M.B.A., Michigan State University, 1991; Ph.D., Florida Atlantic University, 2000. At Portland, 1999—

Herbert A. Medina, Ph.D.

Professor, Mathematics³

B.S., University of California, Los Angeles, 1985; M.S., University of California, Berkeley, 1987; Ph.D. *ibid*, 1992. At Portland, 2018—

Jeffrey Meiser, Ph.D.

Associate Professor, Political Science and Global Affairs

B.A., Seattle University, 1999; MESM, University of California, 2001; Ph.D., John Hopkins University, 2011. At Portland, 2014—

Gregg Meyer, M.S.

Instructor, Engineering

B.S., Santa Clara University, 1987; M.S., Georgia Institute of Technology, 1991. At Portland, 2018—

Stephanie Meyer, M.S.N.

Instructor, Nursing

B.S.N. University of Portland, 2008; M.S.N., University of Phoenix, 2013. At Portland, 2017—

Stephanie Michel, M.L.S.

Senior Librarian, Clark Memorial Library

B.A., Linfield College, 1996; M.L.S., Indiana University, 1997. At Portland, 2002—

Gary Mitchell, Ph.D.

Professor, Business

B.A., University of California, 1984; M.B.A., *ibid*, 1988; Ph.D., University of Washington, 2005. At Portland, 2005—

Poulami Mitra, Ph.D.

Visiting Instructor, Biology

B.Sc., University of Calcutta, India, 2000; M.Sc., All India Institute of Medical Sciences, India, 2002; Ph.D., Medical College of Virginia, 2007. At Portland, 2021—

Kathryn Michurski, B.S.N.

Visiting Clinical Teaching Associate, Nursing

B.S.N., University of Portland, 2015. At Portland, 2021—

Joane T. Moceri, Ph.D.

Professor, Nursing

B.S.N., University of Washington, Seattle, 1979; M.N., University of Washington, Tacoma, 2000; Ph.D., University of Washington, Seattle, 2006. At Portland, 2012—

Elise Marie Moentmann, Ph.D.

Associate Professor, History³

B.A., Louisiana Tech University, 1985; M.A., *ibid*, 1988; Ph.D., University of Illinois, 1998. At Portland, 1998—

Kay Molkentin, M.B.A.

Professor of Practice of Entrepreneurship, Business

B.S., Cleveland State University, 1987; M.B.A., Case Western Reserve University, 1997. At Portland, 2019—

Martin A. Monto, Ph.D.

Professor, Sociology

B.A., Kansas State University, 1987; M.A., University of California, Los Angeles, 1988; Ph.D., *ibid*, 1992. At Portland, 1992—

Tamar More, Ph.D.

Associate Professor, Physics

B.S., M.I.T., 1987; M.S., Brown University, 1990; Ph.D., *ibid*, 1996. At Portland, 2000—

Elizabeth Morton, Ph.D.

Instructor, Chemistry

B.S., University of New Haven, 2008; Ph.D., Pennsylvania State University, 2013. At Portland, 2015—

Aaron Moss, M.S.

Assistant Professor, Engineering

B.S., University of New Brunswick, 2011; M.S., *ibid*, 2012. Portland, 2019—

Patrick C. Murphy, D.M.A.

Associate Professor, Music

B.M.Ed., Washington State University, 1994; M.A.M.Ed., University of Minnesota, 1997; D.M.A., The University of Arizona, 2008. At Portland, 2008—

Susan Murray, Ph.D.

Associate Professor, Biology

B.S., University of Wisconsin-Madison, 1994, Ph.D., Oregon Health & Science University, 2002. At Portland, 2014—

Dakshina Murty, Ph.D.

Professor, Engineering

B.Tech., IIT Kanpur, India, 1974; M.S.Nuc.E., Univ. of Oklahoma, 1977; M.S.M.E., *ibid*, 1977; Ph.D., University of Texas Austin, 1982. At Portland, 1981—

Elliot Mylott, Ph.D.

Instructor, Physics

B.S. Portland State University, 2011; M.S., *ibid*, 2015; Ph.D., *ibid*, 2017. At Portland, 2017—

Maren Nelson, D.N.P.

Assistant Professor, Nursing

B.A., Saint Olaf College/Harris Manchester College, Oxford University, 1995; B.S.N., University of Portland, 2009; D.N.P., *ibid*, 2015. At Portland, 2019—

September T. Nelson, M.S.

Assistant Professor, Nursing

B.S., Pepperdine University, 1993; M.S., University of Oregon, 1997; M.S., University of Portland, 2008. At Portland, 2010—

Natalie Nelson-Marsh, Ph.D.

Associate Professor, Communication Studies

B.A., University of Utah, 2000; M.A., *ibid*, 2002; Ph.D., University of Colorado, Boulder, 2006; At Portland, 2016—

Alisa Newhall, B.S.N.

Instructor, Nursing

B.S., University of Oregon, 2010; B.S.N., Oregon Health & Science University, 2017. At Portland, 2020—

Hans Nordstrom, Ph.D.

Associate Professor, Mathematics

B.A., Lewis & Clark College, 1996; M.S., University of Oregon, 2001; Ph.D., *ibid*, 2005. At Portland, 2005—

Don Norton, D.A.

Assistant Professor, Music

B.M., Northern Illinois University, 2006; M.M., New England Conservatory of Music, 2008; D.A., University of Northern Colorado, 2015. At Portland, 2018—

Andrew M. Nuxoll, Ph.D.

Associate Professor, Engineering

B.S., Rose-Hulman Institute of Technology, 1995; Ph.D., University of Michigan, 2007. At Portland, 2007—

Daman Oberoi, M.S.

Instructor, Engineering

B.S., University of Portland, 2004; M.S., Oregon State University, 2006. At Portland, 2019—

Neil Oculi, Ph.D.

Assistant Professor, Environmental Studies

A.S., Simon Bolivar United World College, Venezuela, 2007; B.A., College of the Atlantic, 2011; M.A., University of Connecticut, Storrs, 2014; Ph.D., *ibid*, 2018. At Portland, 2021—

Oluwatoyin Olukotun, Ph.D.

Assistant Professor, Nursing

B.S.N., University of Wisconsin-Milwaukee, 2013; Ph.D., *ibid*, 2018. At Portland, 2020—

Amy Ongiri, Ph.D.

Professor, Ethnic Studies

B.A., Bryn Mawr College, 1990; M.A. University of Texas at Austin, 1994; Ph.D., Cornell University, 2000. At Portland, 2021—

Salvador Orara, M.F.A.

Professor of Practice of Innovation, Engineering

B.F.A., University of the Arts, 2005; M.F.A., Art Center College of Design, 2012. At Portland, 2019—

Kathleen O'Reilly, Ph.D.

Professor, Biology

B.A., University of California, Berkeley, 1988; Ph.D., University of Washington, 1995. At Portland, 1997—

John Clarke Orr, Ph.D.

Professor, English³

B.A., Hardin-Simmons University, 1980; M.A., University of Oklahoma, 1983; Ph.D., Duke University, 1992. At Portland, 1993—

Daniel Osborne, Ph.D.

Instructor, Chemistry

A.A., Holmes Community College, 1998; B.S., Mississippi College, 2000; M.S., Ph.D., University of Memphis, 2006. At Portland, 2021—

Robert B. Pamplin, Jr., Ph.D.

Professor, Business⁴

B.S., Lewis & Clark College, 1964, 1965, 1966; M.B.A., University of Portland, 1968; M.Ed., *ibid*, 1975; Ph.D., California Coast University, 1976; D.Min., Western Conservative Baptist Seminary, 1982. At Portland, 1999—

Ian D. Parkman, M.B.A.

Associate Professor, Business

B.A., University of Arizona, 2001; M.B.A., University of New Mexico, 2005; Ph.D., University of Oregon, 2010. At Portland, 2013—

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Senior Librarian, Clark Library

B.A., John Carroll University, 1992; M.L.I.S., University of Washington, 1998. At Portland, 2007—

Rev. Dan Parrish, C.S.C., Ph.D.

Associate Professor, Business

B.A., UP, 1996; M.A., University of Notre Dame, 2008; Ph. D., University of Michigan, 2015. At Portland, 2015—

Sarjit Patel, M.A.

Visiting Instructor, Computer Science, Engineering

Bsc., University of Manchester, UK, 1992; M.A., MIT Media Laboratory, 2002. At Portland, 2021—

Valerie J. Peterson, Ph.D.

Associate Professor, Mathematics

B.S., Santa Clara University, 2001; M.S., University of Illinois, 2002; Ph.D., *ibid*, 2009. At Portland, 2009—

Mark R. Pitzer, Ph.D.

Associate Professor, Psychology

B.A., University of Nebraska, 1989; M.A., University of Illinois, 1994; Ph.D., *ibid*, 1998. At Portland, 2011—

Cara Poor, Ph.D.

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B.S., OSU, 1997; M.S., University of California at Davis, 1999; Ph.D., OSU, 2006. At Portland, 2015—

Corey S. Pressman, M.A.

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B.A., SUNY Oneonta, 1991; M.A., Washington State University, 1993. At Portland, 2020—

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Associate Professor, Biology

B.S., University of Montana, 1998; B.A., *ibid*, 2000; Ph.D., *ibid*, 2005. At Portland, 2010—

Alicia Printemps-Herget, M.S.N.

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B.S.N., Oregon Health & Science University, 2005; M.S.N., *ibid*, 2018. At Portland, 2019—

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B.A., University of Oklahoma, 1994; M.A., University of Arizona, 1997; M.L.S., *ibid*, 2005; Ed.D., Lindenwood University, 2021. At Portland 2019—

Gregory L. Pulver, M.A.

Associate Professor, Theater

B.A., Humboldt State University, 1987; M.A., *ibid*, 1993. At Portland, 2012—

Anjanette M. Raber, Ph.D.

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B.S., Walla Walla University, 2001; M.S., University of Indianapolis, 2006; Ph.D., Oregon Health & Science University, 2013. At Portland, 2017—

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Associate Professor, Education

B.A., Linfield College, 2004; M.Ed., University of Nevada, 2007; Ph.D., University of Washington, 2013. At Portland, 2014—

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B.S., University of Alexandria, Egypt, 1982; M.S., University of Wisconsin-Madison, 1986; Ph.D, *ibid*, 1992. At Portland, 2018-2019; 2020—

Michele Renninger, M.S.M.S.

Instructor, Nursing

B.S., Seattle Pacific University, 1996; M.S.M.S., Drexel University, 2020. At Portland, 2021—

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B.A., University of Oklahoma, 1984; J.D., Duke University of School of Law, 1988. At Portland, 1997—

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B.A., Instituto Tecnológico de Estudios Superiores de Monterrey, 1998; M.S., New Mexico State University, 2000; Ph.D., University of Wisconsin, 2014. At Portland, 2015—

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B.S. Oregon State University, 2011; M.Ed., Pennsylvania State University, 2016; Ph.D., *ibid*, 2017. At Portland, 2022—

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B.S., Slippery Rock University, 2002 ; M.B.A., Pacific Lutheran University, 2013. At Portland, 2019—

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B.S.N., University of Portland, 2020. At Portland, 2021—

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Associate Professor, Sociology

B.A., Eastern Washington University, 2000; M.A., University of Montana, 2003; Ph.D., Washington State University, 2009. At Portland, 2009—

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B.S.N., Case Western Reserve University, 1977; M.S.N., University of Hawaii at Manoa, 1983. At Portland, 2015—

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B.A., University of Portland, 2003; Ph.D., University of Nebraska, 2011. At Portland, 2014—

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B.A., University of Rhode Island, 2004; M.A., Portland State University, 2007; Ph.D., *ibid*, 2013. At Portland 2017—

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B.A., University of Michigan, 1997; M.A., Boston College, 1999; Ph.D., UCLA, 2005. At Portland, 2005—

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B.A., California State University, Fresno, 1990; B.A., *ibid*, 1992; M.A., University of California, Irvine, 2001. Ph.D., *ibid*. At Portland, 2003—

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B.S., Viterbo College, 1988; M.A., University of Nebraska-Lincoln, 1991; Ph.D., University of Maryland, 2000. At Portland, 2008—

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B.S., University of Oregon, 1997; Ph.D., New York University, 2003. At Portland, 2015—

Kindra T. Scanlon, D.N.P.

Assistant Professor, Nursing

B.F.A., Art Institute of Atlanta, 2004; B.S.N., Oregon Health & Science University, 2011; M.S.N., *ibid*, 2013; D.N.P., University of Portland, 2020, At Portland, 2021—

Elizabeth Schallert, M.S.W.

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B.S.W., George Fox University, 2009; M.S.W., Monmouth University, 2010. At Portland, 2020—

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M.S., Lund University, 2001; M.S., University of Washington, 2002; Ph.D., *ibid*, 2005. At Portland, 2012—

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B.A., Concordia University, 2007; M.A., Dalhousie University, 2008; Ph.D., Columbia University, 2015. At Portland, 2015—

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B.S., California State University, Fresno, 1977; M.S., Oregon State University, 1980; Ph.D., *ibid*, 1986. At Portland, 1985—

Buck L. H. Taylor, Ph.D.

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B.A., Willamette University, 2007; Ph.D., University of California-Irvine, 2012. At Portland 2017—

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Associate Professor, Biology

B.A., University of Connecticut, 1994; B.S., *ibid*, 1994; M.S., University of Michigan, 1996; Ph.D., *ibid*, 2001. At Portland, 2010—

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Instructor, Education

B.A., Carroll College, 1975; M.A.T., Lewis and Clark College, 1978; Ed.D., University of Portland, 2017. At Portland, 2013—

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Lara Trout, Ph.D.

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B.A., Rockhurst College, 1991; M.A., Marquette University, 1995; Ph.D., Pennsylvania State University, 2005. At Portland, 2005—

Kate Trumbo, D.N.P.

Assistant Professor, Nursing

B.S.N. University of Northern Colorado, 2012; M.S.N., Vanderbilt University, 2013; D.N.P. Regis University, 2019. At Portland, 2021—

David Turnbloom, Ph.D.

Associate Professor, Theology

B.A., University of St. Thomas, 2006; M.S., Weston Jesuit School of Theology, 2008; Ph.D., Boston College, 2015. At Portland, 2015—

Eugenijus Urnezis, Ph.D.

Associate Professor, Chemistry

D.S., Vilnius University, 1992; Ph.D., Case Western Reserve University, 1999. At Portland, 2009—

Edward J. Valente, Ph.D.

Professor, Chemistry

B.S., University of California, 1971; Ph.D., University of Washington, 1977. At Portland, 2009—

Jacqueline Van Hoomissen, Ph.D.

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Tammy VanDeGrift, Ph.D.

Professor, Engineering

B.A., Gustavus Adolphus College, 1999; M.S., University of Washington, 2001; Ph.D., *ibid*, 2005. At Portland, 2005—

Naga Vemprala, Ph.D.

Assistant Professor, Business

B.Eng., Andhra University, 2006; Ph.D., University of Texas at San Antonio, 2021. At Portland, 2021—

Steven R. Vegdahl, Ph.D.

Associate Professor, Engineering

B.S., Stanford University, 1976; Ph.D., Carnegie-Mellon University, 1982. At Portland, 1996—

Amber Vermeesch, Ph.D.

Associate Professor, Nursing

B.A., Davidson College, 2001; M.S.N., Vanderbilt University, 2006; Ph.D., University of Miami, 2011. At Portland, 2014—

Shazib Z. Vijlee, Ph.D.

Associate Professor, Mechanical Engineering

B.S., University of Texas, 2004; M.S., *ibid*, 2006; Ph.D., University of Washington, 2014. At Portland, 2014—

Philip Vue, M.L.S.

Associate Librarian, Clark Library

B.A., Oregon State University, 2006; M.L.S., University of Washington, 2011. At Portland, 2017—

Jacqueline M. Waggoner, Ed.D.

Professor, Education

B.S., Portland State University, 1973; M.S., *ibid*, 1975; Ed.D., *ibid* and University of Oregon, 1983. At Portland, 2004—

Valerie Walters, Ph.D.

Instructor, Chemistry

B.A., Kalamazoo College, 1978; M.Phil, M.S., Yale University, 1982; Ph.D., *ibid*, 1985; M.S., Drexel University, 2007; At Portland, 2013—

Nikki Warthen, M.S.N.

Instructor, Nursing

B.S.N., University of San Francisco, 1994; M.S.N., Grand Canyon University, 2015. At Portland, 2018—

Matthew D. Warshawsky, Ph.D.

Professor, Spanish

B.A., Swarthmore College, 1992; M.A., Ohio State University, 1998; Ph.D., Ohio State University, 2002. At Portland, 2002—

John L. Watzke, Ph.D.

Professor, Education³

B.A., University of Iowa, 1990; M.A., *ibid*, 1994; Ph.D., *Ibid*, 2000. At Portland, 2010—

Sarah Nike Weiger, Ph.D.

Associate Professor, English

B.A., University of Michigan, 2003; M.A., Cornell Univ., 2007; Ph.D., *ibid*, 2011. At Portland, 2011—

Christine Lynn Weilhoefer, Ph.D.

Associate Professor, Biology

B.A., Connecticut College, 1994; M.A., University of Texas, 1998; Ph.D., Portland State University, 2005. At Portland, 2012—

Bruce N. Weitzel, Ph.D.

Associate Professor, Education

B.S., Portland State University, 1969; M.S., *ibid*, 1971; Ph.D., Michigan State University, 1980. At Portland, 2004—

Rev. Arthur F. Wheeler, C.S.C., Ph.D.

Associate Professor, History

B.S.F.S., Georgetown University, 1973; M.A., University of Notre Dame, 1976; Ph.D., *ibid*, 1979; M.Div., *ibid*, 1983. At Portland, 1987—

Rachel Wheeler, Ph.D.

Assistant Professor, Theology

B.A., Linfield College, 1997; M.A., Humboldt State University, 2005; B.A., *ibid*, 2004; M.A., Saint John's School of Theology-Seminary, 2012; Ph.D., Graduate Theological Union Berkeley, 2015. At Portland, 2017—

John White, M.S.

Lecturer, Biology

B.S., California State University Hayward, 1991; M.S., *ibid.* At Portland, 2015—**Gordon Williamson, M.S.N.**

Instructor, Nursing

B.S.N., University of Washington, 1994; M.S.N., Western Governors University, 2018. At Portland, 2018—

Timothy Winslea, M.S.N.

Instructor, Nursing

B.A., College of Wooster, 1988; M.Div., San Francisco Theological Seminary, 1994; B.S.N., Linfield, 2009; M.S.N., University of Phoenix, 2019. At Portland, 2020—

Jordyn Wolfand, Ph.D.

Assistant Professor, Civil Engineering

B.S., Tufts University, 2011; M.S., Stanford University, 2015; Ph.D., *ibid.* At Portland, 2020—**Warren J. L. Wood, Ph.D.**

Associate Professor, Chemistry

B.S., Willamette University, 2000; Ph.D., University of California, 2005. At Portland, 2007—

Blair D. Woodard, Ph.D.

Associate Professor, History & Environmental Studies

B.A., University of California, 1992; M.A., University of New Mexico, 2001; Ph.D., *ibid.*, 2010. At Portland, 2012—**Aaron Wootton, Ph.D.**

Professor, Mathematics

B.Sc., University of Southampton, 1998; Ph.D., University of Arizona, 2004. At Portland, 2005—

David J. Wynne, Ph.D.

Assistant Professor, Biology

B.A., Amherst College, 2001; Ph.D., University of California, Berkeley, 2010. At Portland, 2017—

Halina Z. Wyss, Ph.D.

Associate Professor, Nursing

B.S., University of Portland, 2002; M.S.N., *ibid.*, 2004; Ph.D., University of Washington, 2013. At Portland, 2013—**Min Yu, Ph.D.**

Associate Professor, Business

B.E., Tongji University, 2005; M.E., *ibid.*, 2008; Ph.D., University of Massachusetts Amherst, 2012. At Portland, 2012—

Emeritus Faculty

updated: 6/1/2021

Blaine C. Ackley, Ed.D.

Associate Professor Emeritus, Education

B.A., University of Montana, Missoula, 1965; M.A.T., University of Oregon, 1973; Ed.D., *ibid.*, 1991. At Portland, 1991—2010.**Michael W. Akerman, Ph.D.**

Associate Professor Emeritus, Mathematics

B.A., Portland State University, 1964; M.A., University of Arizona, 1966; Ph.D., Oregon State University, 1973. At Portland, 1979—2009.

Robert J. Albright, Ph.D.

Professor Emeritus, Engineering

Rev. David Tyson, C.S.C. Distinguished Professorship

B.S., Oregon State University, 1963; M.S., *ibid.*, 1965; Ph.D., University of Washington, 1971. At Portland, 1970—2020.**Robin D. Anderson, Ed.D.**

Dean Emeritus, Professor, Business

Franz Chair in Entrepreneurship

B.A. University of Nebraska at Kearney, 1970; M.A.T., University of Nebraska-Lincoln, 1972; Ed.D., *ibid*, 1984. At Portland, 1998—2020.

Ellyn Arwood, Ed.D.

Professor Emerita, Education

B.A., University of Oregon, 1971; M.A., Washington State University, 1973; Ed.D., University of Georgia, 1977. At Portland, 1986—2021.

Herman L. Asarnow, Ph.D.

Professor Emeritus, English

B.A., Trinity College, 1972; M.A., University of Denver, 1974; Ph.D., *ibid*, 1981. At Portland, 1979—2014.

Matthew J. Baasten, Ph.D.

Associate Professor Emeritus, Theology

B.A., University of Notre Dame, 1972; M.Div., Western Theological Seminary, 1975; M.A., University of Notre Dame, 1978; Ph.D., *ibid*, 1983. At Portland, 1981—2017.

Susan D. Baillet, Ph.D.

Associate Professor Emeritus, Psychology

B.S., Trinity College, 1974; M.S., University of Denver, 1976; Ph.D., *ibid*, 1981. At Portland, 1983—2014.

Raymond R. Bard, Ph.D.

Associate Professor Emeritus, Chemistry

B.A., Hamline University, 1970; Ph.D., University of Vermont, 1977. At Portland, 1986—2015.

Rev. E. William Beauchamp, C.S.C.

Professor Emeritus, Business

B.B.A., University of Detroit, 1964; M.B.A., *ibid.*, 1966; J.D., University of Notre Dame, 1975. At Portland, 2002—2014.

Helmut Becker, D.B.A.

Professor Emeritus Business

B.B.A., University of Portland, 1962; M.B.A., University of Oregon, 1967; D.B.A., Indiana University, 1971; C.P.A., Oregon State Certificate, 1983. At Portland, 1973—1999.

Rev. Richard F. Berg, C.S.C., Ph.D.

Professor Emeritus, Psychology

A.B., University of Notre Dame, 1959; S.T.B., Gregorian University, 1963; M.A., University of Portland, 1967; Ph.D., *ibid*, 1969. At Portland, 1974—1998.

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B.S., William Carey College, 1997; M.B.A., Henderson State University, 1998; Ph.D., Louisiana State University, 2006. At Portland, 2007—2021.

Rev. George C. Bernard, C.S.C., S.T.D.

Associate Professor Emeritus, Theology

A.B., University of Notre Dame, 1945; S.T.L., Catholic University of America, 1950; S.T.D., *ibid*, 1952. At Portland, 1969—1987.

Edward K. Bowen, Ph.D.

Professor Emeritus, Performing & Fine Arts

B.T., Willamette University, 1976; M.A., Western Oregon State College, 1982; Ph.D., University of Stirling, 1985. At Portland, 1991—2012.

Barbara J. Braband, Ed.D.

Associate Professor Emerita, Nursing

B.A.N., Augustana College, 1976; M.A., University of Northern Iowa, 1986; M.S.N., Clarkson College, 2001; Ed.D., College of St. Mary, 2009. At Portland, 2010—2021.

Russell A. Butkus, Ph.D.

Associate Professor Emeritus, Theology & Environmental Studies

B.A., St. Lawrence University, 1974; M.Th., Boston College, 1978; Ph.D., *ibid*, 1985. At Portland, 1985—2019

Robert F. Butler, Ph.D.

Professor Emeritus, Environmental Science

B.S., Oregon State University, 1968; M.S., Stanford University, 1970; Ph.D., *ibid*, 1972. At Portland, 2004—2016.

James B. Carroll, Ph.D.

Professor Emeritus, Education

B.A., University of California, Davis, 1976; M.F.A., Washington State University, 1978; Ph.D., *ibid*, 1990. At Portland, 1996—2020.

George T. Chou, Ph.D.

Professor Emeritus, Business

B.A., University of Washington, 1967; M.A., *ibid*, 1968; Ph.D., *ibid*, 1973. At Portland, 1971—1998.

Richard S. Christen, Ph.D.

Professor Emeritus, Education

B.S., Minot State University, 1975; M.A., University of Montana, 1980; Ph.D., University of Minnesota, 1994. At Portland, 1998—2018.

Sr. Maria J. Ciriello, O.P., Ph.D.

Professor Emerita, Education

B.S.E., St. John College, 1966; M.S.E., University of Dayton, 1971; Ph.D., Catholic University of America, 1987. At Portland, 1996—2009.

Rev. James T. Connelly, C.S.C., Ph.D.

Associate Professor Emeritus, History

B.A., University of Notre Dame, 1960; S.T.B., Pontifical Gregorian University, 1963; M.A., University of Notre Dame, 1968; Ph.D., University of Chicago, 1977. At Portland, 1993—2007.

Michael Connolly, D.M.A.

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B.A., B.M., University of Washington, 1977; M.M., University of Southern California, 1983; D.M.A., *ibid*, 1986. At Portland, 1988—2018.

Dan G. Danner, Ph.D.

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B.A., Abilene Christian College, 1961; M.A., *ibid*, 1963; Ph.D., University of Iowa, 1969. At Portland, 1969—2000.

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B.A., Miami University, Ohio, 1970, M.S.N., University of Cincinnati, 1973; Ph.D., Portland State University, 1982. At Portland, 1973—2015.

Will H. Deming, Ph.D.

Professor Emeritus, Theology

B.A., College of William and Mary, 1978; Ph.D., University of Chicago, 1991. At Portland, 1992—2020.

Bruce H. Drake, Ph.D.

Professor Emeritus, Business

B.A., Dartmouth College, 1966; M.B.A., Stanford University, 1968; Ph.D., University of Washington, 1976. At Portland, 1988—2011.

Robert W. Duff, Ph.D.

Professor Emeritus, Sociology

Rev. David Tyson, C.S.C. Distinguished Professorship

B.A., University of Notre Dame, 1966; M.A., *ibid*, 1970; Ph.D., *ibid*, 1971. At Portland, 1972—2014.

Verne A. Duncan, Ph.D.

Professor Emeritus, Education

B.A., Idaho State University, 1960; M.Ed., University of Idaho, 1964; M.B.A., University of Portland, 1976; Ph.D., University of Oregon, 1968. At Portland, 1989—1996.

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B.S.N., University of Illinois at Chicago, 1969; M.S., University of Oregon, 1974; M.N., Oregon Health Sciences University, 1983; Ph.D., University of Oregon, 1984. At Portland, 1985—2002.

Todd Easton, Ph.D.

Associate Professor Emeritus, Business

B.A., University of California, Santa Cruz, 1975; M.A., University of California, Berkeley, 1980; Ph.D., *ibid*, 1984. At Portland, 1981—2021.

Mark A. Eifler, Ph.D.

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B.A., University of California, Berkeley, 1984; M.A., *ibid*, 1987; Ph.D., *ibid*, 1992. At Portland, 2000—2020.

Thompson M. Faller, Ph.D.

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B.A., St. Mary's, 1962; M.A., Xavier University, Ohio, 1964; Ph.D., University of Salzburg, Austria, 1969. At Portland, 1964—2014.

Howard D. Feldman, Ph.D.

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B.B.A., University of Cincinnati, 1971; M.B.A., Georgia State University, 1978; Ph.D., *ibid*, 1983. At Portland, 1991—2016.

Joseph Gallegos, Ph.D.

Professor Emeritus, Social Work

B.S., Portland State University, 1972; M.S.W., *ibid*, 1973; Ph.D., University of Denver, 1978. At Portland, 1988—2011.

Thomas G. Greene, Ed.D.

Provost Emeritus Professor, Education

B.S., Portland State University, 1970; M.A., Lewis & Clark College, 1975; Ed.D., Portland State University/University of Oregon, 1984. At Portland, 1983—2020.

Richard D. Gritta, D.B.A.

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B.B.A., University of Notre Dame, 1965; M.B.A., Indiana University, 1967; D.B.A., University of Maryland, 1972. At Portland, 1976—2020.

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Dean Emerita, Clark Library

B.A., Fort Lewis College, 1973; M.L.S., University of Oregon, 1976. At Portland, 2006—2016.

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R.N., Oklahoma Baptist Hospital, 1957; B.S., Northwestern State University of Louisiana, 1960; M.S.N., Case Western Reserve University, 1964; Ph.D., North Texas State University, 1977; Fellow, American Academy of Nursing, 1997. At Portland, 1978—2002.

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Jill Peterson Hoddick, M.A., M.F.A.

Professor Emerita, Performing and Fine Arts

B.A., University of the Pacific, 1972; M.A., California State University (Fresno), 1974; M.F.A., University of Southern California, 1977. At Portland, 1977—2012.

Margaret M. Hogan, Ph.D.

Professor Emerita, Philosophy

McNerney-Hansen Chair in Ethics

A.B., Immaculata College, 1963; M.A., Fordham University, 1968; Ph.D., Marquette University, 1991. At Portland, 2003—2009.

Rev. Thomas E. Hosinski, C.S.C., Ph.D.

Professor Emeritus, Theology

A.B., University of Notre Dame, 1969; M.Th., *ibid*, 1972; M.A., University of Chicago, 1976; Ph.D., *ibid*, 1983. At Portland, 1978—2016.

Rev. William B. Hund, C.S.C., Ph.D.

Associate Professor Emeritus, Philosophy

A.B., University of Notre Dame, 1954; M.A., *ibid*, 1960; Ph.D., University of Fribourg, 1964. At Portland, 1972—2002.

Rev. Bernard Kuo-Wei Hwang, S.T.D.

Assistant Professor Emeritus, Theology

B.S., St. John's University, 1949; S.T.D., Sant Anselmo, 1953; M.A., University of Portland, 1968. At Portland, 1964-65; 1976—1982.

Mehmet I. Inan, D.C.E.

Associate Professor Emeritus, Engineering

B.S.C.E., Middle East Technical University, Ankara, 1971; M.S.C.E., *ibid*, 1973; D.C.E., University of Miami, 1977. At Portland, 1977—2021.

Khalid H. Khan, Ph.D.

Professor Emeritus, Engineering

B.S., West Pakistan University of Engineering and Technology, 1967; M.S., North Carolina State University at Raleigh, 1972; Ph.D., *ibid*, 1975. At Portland, 1979—2018.

Kenneth A. Kleszynski, Ph.D.

Professor Emeritus, Music

B.M.Ed., Benedictine College, 1972; B.A., *ibid*, 1972; M.A., Arizona State University, 1976; Ph.D., Michigan State University, 1984. At Portland, 1987—2015.

Jack N. Kondrasuk, Ph.D.

Associate Professor Emeritus, Business

B.S., University of Wisconsin, 1964; M.A., University of Minnesota, 1966; Ph.D., *ibid*, 1972. At Portland, 1974—2012.

Lawrence D. Lewis, Ph.D.

Professor Emeritus, Business

B.B.A., University of Missouri, 1967; M.A., *ibid*, 1972; Ph.D., University of Nebraska, 1984. At Portland, 2001—2016.

Sr. Sandra E. Lincoln, S.H.C.J., Ph.D.

Professor Emerita, Chemistry

B.A., Smith College, 1960; M.S., Marquette University, 1970; Ph.D., State University of New York, Stony Brook, 1982. At Portland, 1982—2009.

Wayne (Yuin-Hwa) Lu, Ph.D.

Associate Professor Emeritus, Engineering

B.S., Chung-Chen Institute of Technology, Taiwan, 1973; M.S., University of Oklahoma, 1981; Ph.D., *ibid*, 1988. At Portland, 1988—2017.

Lewis Lum, Ph.D.

Professor Emeritus, Mathematics

B.S., Oregon State University, 1968; Ph.D., University of Oregon, 1973. At Portland, 1989—2014.

James W. Male, Ph.D.

Professor Emeritus, Engineering

Sweo Chair in Engineering

B.S., Union College, 1968; Ph.D., Johns Hopkins University, 1973. At Portland, 1997-2017.

Gary L. Malecha, Ph.D.

Professor Emeritus, Political Science and Global Affairs

Rev. David Tyson, C.S.C. Distinguished Professorship

B.A., College of St. Thomas, 1976; M.A., University of Notre Dame, 1978; Ph.D., *ibid*, 1987. At Portland, 1992—2021.

Caroline E. Mann, M.S.L.S.

Senior Librarian, Emerita, Clark Memorial Library

B.A., University of North Carolina at Chapel Hill, 1975; M.S.L.S., *ibid*, 1982. At Portland, 1998—2014.

Louis J. Masson, Ph.D.

Professor Emeritus, English

Rev. David Tyson, C.S.C. Distinguished Professorship

B.A., LeMoyne College, 1964; M.A., Syracuse University, 1967; Ph.D., *ibid*, 1971. At Portland, 1970—2011.

Franz Karl Mayr, Ph.D.

Professor Emeritus, Philosophy

Ph.D., University of Innsbruck, 1957. At Portland, 1964-65; 1968—2002.

Joane T. Moceri, Ph.D.

Dean Emerita, Nursing

B.S.N., University of Washington, Seattle, 1979; M.N., University of Washington, Tacoma, 2000; Ph.D., University of Washington, Seattle, 2006. At Portland, 2012—2018.

Judith Montgomery, M.M.

Lecturer Emerita, Music

B.M.Ed., University of Portland, 1968; M.M., *ibid*, 1984. At Portland, 1984—2012.

Patricia D. Morrell, Ph.D.

Professor Emerita, Education

B.S., SUNY College of Environmental Science & Forestry, 1978; M.S., Oregon State University, 1988; Ph.D., *ibid*, 1992. At Portland, 1996—2018.

Susan Randles Moscato, Ed.D.

Professor Emerita, Nursing

Rev. David Tyson, C.S.C. Distinguished Professorship

B.S.N., University of Portland, 1968; M.N., University of California, L.A., 1973; Ed.D., Portland State University, 1987. At Portland, 1996—2011.

Michael P. Mulcrone, Ph.D.

Associate Professor Emeritus, Communication Studies

B.A., Ohio University, 1971; M.S., University of Oregon, 1988; Ph.D., University of Washington, 1993. At Portland, 1993—2010.

Karen Nelson, Ph.D.

Associate Professor Emerita, Mathematics

B.A., Lawrence University, 1979; M.B.A., American University, 1981; Ph.D., University of Maryland, 1992. At Portland, 1998—2015.

Peter M. Osterberg, Ph.D.

Associate Professor Emeritus, Engineering

S.B. & S.M., Massachusetts Institute of Technology, 1980; Ph.D., *ibid*, 1995. At Portland, 1996—2021.

Dann L. Pierce, Ph.D.

Associate Professor Emeritus, Communication Studies

B.A., University of Portland, 1976; M.A., *ibid*, 1979; Ph.D., University of Iowa, 1985. At Portland, 1987—2021.

Rev. Stephen C. Rowan, Ph.D.

Professor Emeritus, English

B.A., Fairfield University, 1966; S.T.B., St. Mary's Seminary & University, 1968; M.A., the University of British Columbia, 1975; Ph.D., *ibid*, 1985. At Portland, 2007—2012.

W. Stephen Royce, Ph.D.

Associate Professor Emeritus, Psychology

A.B., Stanford University, 1971; M.S., University of Oregon, 1974; Ph.D., *ibid*, 1976. At Portland, 1977—2008.

Rev. H. Richard Rutherford, C.S.C., Drs. Theol.

Professor Emeritus, Theology

B.A., University of Notre Dame, 1961; S.T.L., Gregorian University, 1965; Drs. Theol., Catholic University of Nijmegen, Netherlands, 1970. At Portland, 1976—2012.

Sr. Joan Saalfeld, S.N.J.M., Ph.D.

Associate Professor Emerita, English

B.A., Marylhurst College, 1964; M.A., Portland State University, 1971; Ph.D., University of Denver, 1976. At Portland, 1977—2004.

Elayne J. Shapiro, Ph.D.

Associate Professor Emerita, Communication Studies

B.A., University of Illinois, 1967; M.A., University of Minnesota, 1973; Ph.D., University of Minnesota, 1993. At Portland, 1987—2015.

James W. Seal, Ph.D.

Associate Professor Emeritus, Business

B.S., University of Southern Mississippi, 1969; M.S., *ibid*, 1970; Ph.D., University of Illinois, 1977. At Portland, 1977—2016.

Michael D. Snow, Ph.D.

Professor Emeritus, Biology

Rev. David Tyson, C.S.C. Distinguished Professorship

B.A., Sacramento State College, 1967; Ph.D., Washington State University, 1974. At Portland, 1970—2010.

Br. Donald J. Stabrowski, C.S.C., Ph.D.

Professor Emeritus, History and Political Science

B.A., St. Edward's University, 1963; M.A., Indiana University, 1967; M.S., *ibid*, 1969; M.A., University of Notre Dame, 1979; Ph.D., *ibid*, 1985. At Portland, 1988—2012.

Agnes Tenney, Ph.D.

Associate Professor Emerita, Chemistry

A.B., Regis College, Mass., 1968; Ph.D., Indiana University, 1975. At Portland, 1977—2005.

Peter Thacker, Ed.D.

Associate Professor Emeritus, Education

B.A., Antioch College, 1971; M.A.T., Lewis and Clark College, 1981; Ed.D., Harvard University, 1990. At Portland 2003 - 2018

Joanne R. Warner, Ph.D.

Dean Emerita, Nursing

B.A., Augustana College, 1972; M.A., Univ. of Iowa, 1976; Ph.D., Indiana Univ., 1990. At Portland, 2005—2015.

Karl Wetzel, Ph.D.

Professor Emeritus, Physics

B.S., Georgetown University, 1959; M.S., Yale University, 1960; Ph.D., *ibid*, 1965. At Portland, 1969—2001.

Anita Lee Malen Wynne, Ph.D.

Professor Emerita, Nursing

B.S., San Diego State University, 1972; M.S., University of Colorado, 1974; Ph.D., University of Oklahoma, 1982; F.N.P., Gonzaga University, 1996. At Portland, 1981—2006.

Zia A. Yamayee, Ph.D.

Professor Emeritus, Engineering

Br. Godfrey Vassallo, C.S.C. Distinguished Professorship

B.S.E.E., Kabul University 1972; M.S.E.E., Purdue University, 1976; Ph.D., *ibid*, 1978. At Portland, 1996—2017.

DEGREES CONFERRED

§ Summa Cum Laude
 ‡ Maxima Cum Laude
 ~ Magna Cum Laude
 * Cum Laude
 # Honors Program

August 7, 2020

Graduate School

Master of Education

Georgia Jamieson Arnautou
 Kyoko Leanne Bernadette Aura
 Madison Jean Caley
 Deborah Melissa Clark
 Andrea Lynn Facendi
 Breanne Laura Fiege
 Karen Darlene Gartner
 Olivia Victoria Guerra
 Macy Melia Hartman
 Justine Lynn Holland
 Caitrin Anne Holohan
 Annalise Marie Howe
 Haley Michelle Huggins
 Sherri Lee Humphrys
 Bailey Ireland Kelso
 Caterina Talia Lazor
 Melissa Faye Maduro
 Michael David Mun
 Kercelyn Tricia Pasternak
 Kristie Ann Phelan
 Karen Elizabeth Plant
 Amanda Lee Schulz
 Caitlin Christina Smith
 Caroline Rebecca Tran
 Lauren Elliott Uhl
 Janelle Anna Vanderhelm
 Alex Willis-Polanski Master of Arts in Teaching
 Matthias Romain François-Xavier Baudinet
 Brendan Thomas Bewley
 Michael Morgan Jerome Birkhead
 Karina Maria Chamorro Rodriguez
 Jane Emily Grosvenor
 Morgan Rose Hazel
 Brendan Pryor Kehoe
 Anna Rose McCarthy
 Anna Grace McLean
 Amanda Marie Mosler
 Emily Grace Okupski
 Brittany Anne Restic
 Madeleine Therese Savage
 Kelly Victoria Strauch

Madeleine Elizabeth Tomich
 Malgorzata Maria Waz
 Clarisse Ann Wilson

Master of Business Administration

Kathleen Keegan Barker
 Matthew James Belesiu
 Logan Scott Emory
 Ester Magdalena Gaiy
 Collin Christopher Haahr
 Ali Hussain
 Anja Katarina Koehler
 Lance Lorenz
 Elli Kayla Reed
 Morgan Miranda Robinson
 Naren Vallam

Master of Business Administration in Nonprofit Management

Olivia Frances Breting
 Steven Patrick Chinn
 Luke James Cirillo
 Janice Crane
 Patricia Lipton Forsi
 Molly Catherine Viarengo Gray
 Bernadette Theresa Stetz

Master of Science

Jacob James Hamlin
 Major: Finance
 Jose Alfredo Hernandez Larrieta
 Major: Finance
 Kostiantyn Nesterenko
 Major: Finance
 Matthew Michael Schumann
 Major: Finance

College of Arts and Sciences

Bachelor of Arts

Nicholas Bartels
 Major: Political Science
 Second Major: Organizational Communication
 Fiona Marie Dekker
 Major: Psychology
 James Weston Edwards
 Major: Communication
 Minor: Sustainability
 Llasmine Renee Hernandez
 Major: Sociology
 Concentration: Criminology

Shayla Taylor Hoeft
Major: Psychology
Eliana Koshiba-Panuelo
Major: Psychology
Minor: Fine Arts
Second Minor: Global Business
Samantha Elizabeth Leicht
Major: English
Minor: Music
Kristoffer Nile Reaves
Major: Political Science
Emily Graydon Whitehead
Major: Communication
Second Major: Spanish
Minor: Education

Bachelor of Science

Natalie Teresa Avila
Major: Biology
Minor: Spanish
Demi Grace Bacani Cerrillo
Major: Biology
Minor: Environmental Science
Anhthu Le
Major: Biology
Tiffanie Thao Nguyen
Major: Biology
Minor: Neuroscience

School of Nursing

Bachelor of Science in Nursing

Conner Nicholas Bejar Arroyo Perry
Justin Doyle Borden
Lauren Renée Bryant
Sharren Jazel Cabanatuan
David Allen Castillo*
Jessica Wailee Chan
Seabre Eva Church
Chloe Brianne Collingwood
Karen Cortes-Ortiz
Gillian Andreea Davidson
Kianni Maile Demmert
Caroline Munro Devlin
Tiegan Allyn Fortes
Katie Elizabeth Gallagher
Alexus Elisa García
Minor: Spanish
Ellona Patricia-Marie Gehman
Alexandra Elizabeth Gini
Emelia Mary Grasser*
Dylan Alexander Greenhoe
Kyle Victor Guthrie
Sara Marie Hermens
Diem Huynh*
Caitlyn Antoinette Igarta

Allyson Kathleen Kowalchuk
Aubrey Elizabeth LaBonte-Clark
Jessica Ann Lemon
Alysa Brynn Leonard
Hannah S Lewis
Kate Jane Linehan~
Phuongthao Ngoc Ly
Kiana Christina Lyons
Jordan Olivia Macklin
Lindsay Allison Maher
Sophia Eleni Marckwordt
Marissa Marie Martinelli
Sarah Mieke Matsuura
Caroline Catherine Mull*
NgânTranh Nguyễn
Uzoamaka Obioma Okoye
Tisien Wawani Venice Palacio
Minor: Psychology
Lucas Gene Porter
Mitchell James Porterfield
Emily Kathryn Rettmann
Darcy Anne Sigler
Christina Dilbudech Spires
Rachel Yurika Tacha
Caitlyn Irene Thompson
Hollie Noelle Tomic*
Kathy L Truong
Olivia Gloria Valenzuela
Frances Josie Warszalek
Michael David Williams
Rachel Skye Willson
Madison Woodson
Julie Zavala
Minor: Spanish

Dr. Robert B. Pamplin School of Business Administration

Bachelor of Business Administration

Scott Mitsugi Cohen
Major: Operations & Technology Management
Grace Lucille Cruickshank
Major: Marketing
Abigail Gracia*
Major: Accounting
Second Major: Finance
Shannon Margaret Grady
Major: Marketing
Hugh M Douglas Hogland
Major: Finance
Melanie Sarah Ngai
Major: Marketing
Minor: Fine Arts
Andrew Rollin Rogers
Major: Marketing

Celia Ayrton Tonkin~
Major: Finance

Donald P. Shiley School of Engineering

Bachelor of Science in Mechanical Engineering

Ryan Joseph Helbling
Adam Dylan Len
Kurtis Teruo Shibata

School of Education

Bachelor of Arts in Elementary Education

Elizabeth Anne Judge

December 11, 2020

Graduate School

Master of Arts

Maram Saad Alzahrani
Major: Education
Basmah Mansour Diaa-Aldeen
Major: Education

Master of Arts in Higher Education and Student Affairs

David Alan Deis
Adam Taylor Hintze
Jessica Mary Navlet

Master of Engineering

Mary Cathleen Ryan

Master of Business Administration

Michael Argento
Matthew Dean Coffey
Michelle Jewell
Zhijie Li
Claire Amada Moore
Jason David Shaw
Roslyn Anne Biddle Stapleton
Brendon Thomas Sullivan

Master of Business Administration in Nonprofit Management

Andrew Michael DelGreco
Jesús Javier Huerta
Navaraj Lamichhane

Master of Science

Maxwell Harrison Hazel
Major: Finance
Stephen Luke Loutzenhiser
Major: Operations & Technology Management
Elise Claire Willey
Major: Finance

College of Arts and Sciences

Bachelor of Arts

Batool Zakaria Alrashid
Major: Political Science
Minor: Communication
Elena Catherine Beeck~
Major: Social Work
Minor: Psychology
Gabrielle Megan Brummett‡
Major: Sociology
Giovanni Jordan Chang
Major: Biology
Yusuf Cavid Cueceoglu
Major: Economics
Minor: Sociology
Morgen Marie Dempsey
Major: Political Science
Second Major: Spanish
Sophia Madeline Giuliano
Major: Psychology
Anush Hakobyan*
Major: Communication
Aidan Hall‡
Major: Political Science
Minor: Spanish
Spencer William Henningsgard
Major: Communication
Jessica Vivian Houghton
Major: Political Science
Minor: Constitutional Studies
Abigail Elizabeth Huston
Major: History
Minor: Education
Second Minor: Gender & Women's Studies
Tirza Tamar Hutabarat
Major: Sociology
Meghan Mikhaila Jackson‡
Major: Political Science
Merel Burleigh Jacobs~
Major: Psychology
Minor: Neuroscience
Jessica McKenna Leroux
Major: Communication
Angelena Marie Marello
Major: Psychology
Second Major: Sociology
Ariana D McConnell‡

Major: Political Science
 Minor: Psychology
 Jacqueline Conway Mills
 Major: Political Science
 Second Major: French Studies
 Allison Ann Palazzotto*
 Major: Psychology
 Jesse Thomas Persing
 Major: Communication
 Jamie Catherine Rita
 Major: Psychology
 Adrian Javier Rodriguez
 Major: Social Work
 Leah Winter Rowse~
 Major: Theater
 Concentration: Design/Technical
 Alexander Mark Soares
 Major: Biology
 Marina Vecherkina
 Major: Psychology
 Isabel Yulisa Velez
 Major: Communication
 Second Major: Spanish
 Courtney Michelle Warta
 Major: Biology

Bachelor of Science

Gabrielle Claire Casentini
 Major: Biology
 Second Major: Spanish
 Elijah Gregory Earle Conway
 Major: Biology
 Foster Matthew Dennin
 Major: Organizational Communication
 Minor: Spanish
 Audrey Ann Ellias
 Major: Biology
 Kirsten Talbert Foster
 Major: Applied Mathematics
 Minor: Computer Science
 Trenton M Gerber
 Major: Environmental Science
 Concentration: Earth Science
 Morgan Taylor Glaub
 Major: Organizational Communication
 Audrey Michelle Houllis~
 Major: Environmental Science
 Concentration: Biology
 Erika Mikaela Kankfelt
 Major: Organizational Communication
 Emma Komers
 Major: Biology
 Minor: Chemistry
 Elena Van Le
 Major: Biology
 Eliza Mathieson Ludlam
 Major: Biology

Minor: Chemistry
 Abigail Ku‘ualoha Toyoko Mahoe
 Major: Biology
 Minor: Chemistry
 Jordyn Beth Mayer
 Major: Organizational Communication
 Anh Ho Hoang Nguyen~
 Major: Biology
 Anthony An-Minh Nguyen#
 Major: Biology
 Taylor Aric Odem
 Major: Mathematics
 Daniel John Politoski~
 Major: Environmental Science
 Concentration: Biology
 Second Major: Economics
 Genesis Eileen Quezada
 Major: Biology
 Michael Thomas Shea~
 Major: Biology
 Minor: Chemistry
 Rheanna Marie Skelton
 Major: Organizational Communication
 Minor: Business Administration
 Angelica Feline Stabs*
 Major: Organizational Communication
 Alexis Takara
 Major: Environmental Science
 Concentration: Biology
 Minor: Psychology
 Madison Rose Thibado‡#
 Major: Environmental Science
 Concentration: Biology
 Minor: Sustainability
 Sydney Claire Wells
 Major: Applied Mathematics
 Second Major: Theater
 Elliott Anne Winkelmann
 Major: Environmental Science
 Concentration: Earth Science
 Minor: History

Dr. Robert B. Pamplin School of Business Administration

Bachelor of Business Administration

Cameron Taylor Boyer*
 Major: Marketing
 Carter Alexander Cedergreen
 Major: Marketing
 Minor: Communication
 Alexa Marie Efraimson*
 Major: Finance
 Easton David Embley
 Major: Marketing
 David Estrin

Major: Marketing
 Faris Hassan Jamjoom
 Major: Operations & Technology Management
 Aileen Jornacion
 Major: Finance
 Sunny H. A. Kāne
 Major: Marketing
 Hunter Stanley Kern
 Major: Operations & Technology Management
 Gabriel Joseph Lipari
 Major: Operations & Technology Management
 Minor: Economics
 Blake Charles Randal Morasch
 Major: Marketing
 Dehlila Hoa Nguyen
 Major: Operations & Technology Management
 Minor: Economics
 Paul Joseph Schireman
 Major: Marketing
 Cauã Szot Soares*
 Major: Operations & Technology Management
 Brett Watanabe
 Major: Marketing
 Jade Choe Yun
 Major: Marketing
 Minor: Spanish

Donald P. Shiley School of Engineering

Bachelor of Science in Mechanical Engineering

Daniel Rene Guzman
 Sean M Joyce
 Brady O'Connor
 Wyatt Chester Stoltzfus

Bachelor of Science in Computer Science

Polina Gannotskaya
 Cole Nathaniel Holbrook
 Minor: Sociology
 Tawny Akiko Motoyama†
 Taylor Aric Odem
 Kollin Ahto Raudsepp

May 9, 2021

Graduate School

Doctor of Education

Miranda Adams
 Yvonne Tracy Ayesiga
 Katelyn M. Blake
 Bobbie Lyn Ann Brown
 Robert Dee Cantwell
 Annie Mackenzie Cole

Linda Ann Fergusson-Kolmes
 Francisco Garcia
 Jennifer Rose Gfroerer
 Sarah Ellen Hedges
 Gary Lee Hortsch
 Jeffrey Ross Laff
 Rebecca Dorothy Levison
 Sarah Christine Meiser
 Christopher Alan Merideth
 Ana Lia Oliva
 Jeffrey M. Welch

Doctor of Nursing Practice

Teresa Renee' Biggs
 Marina Viktorovna Dolmatova
 Inga Marie Giske
 Sandra M Hanson
 Stephanie Lynn Jacobson
 Kathleen S Polito
 Kellie Elizabeth Wilcox

Master of Arts

Brittani Lauren Klindworth
 Major: Communication

Master of Education

Pauline Lee
 Katherine Anne Meredith
 Jennifer Anne Louise Upchurch

Master of Arts in Teaching

Samantha De La Cruz Albotra
 Sophia Marie Allen
 Collin Maxwell Anderson
 Daniel Anders Berglund
 Emily Anne Brackett
 Jordan Elizabeth Daleson
 Katherine Anne Damon
 Arran Bucher Fagan
 Rebecca Lynn Fischer
 Amy Andelle Fish
 Stephanie Lynn Haas
 Kari A Hatlestad
 Bradford Lee Hedrick
 Amanda Lynn Hendrickson
 Kerrigan Honn
 Austin Johnson
 Justin William Loye
 Zachary McGarvey
 Ireland Elizabeth McNeill
 Megan Marie Nary
 Angela K Nguyen
 Signe Kay Olson
 Jacqueline Frances Ott
 Jessica Lynn Otto

Laura Elizabeth Payne
 Oleksandr Pilat
 Shanley Elizabeth Porter
 Kevin Brian Ramsden
 Kong Connie Shiu
 Connor N Simmons
 Tyler Lyndon Soldat
 Stephanie Alison Teuchert
 Nicolas G Vavuris
 Michael Kelly Watson
 Brooklyn N Wease
 Cassidy Elizabeth Wood

Master of Arts in Higher Education and Student Affairs

Brendan Thomas Brunner
 Lindsay C. Chelton
 Ellen M Dishman
 Conrad Gooley
 Trent Reno Mazelli
 Stephanie Christine Sprute
 Caleb Joseph Webb

Master of Biomedical Engineering

Nathan William Bergstrom
 Kenra Leigh DeAngelis

Master of Engineering

Emily Haruko Soares

Master of Business Administration

Brett Hansen Anderson
 Morgan Anne Betka
 Anne Marie Boyd
 Alexander Magnus Fisher
 Lavar Albert Harewood
 Joshua James Miller
 Allison Renai Nelson
 Seth O Roessmann
 Eric Walter Sloan
 Luke Daniel Swancutt
 John Paul Tarantino
 Patricia Annette Thornton
 Isaiah Rodney Wayman White
 Douglas A. Witham

Master of Business Administration in Nonprofit Management

David Turnbloom
 Victoria Alice Louise Weir

Master of Science

Luisa Brandalesi
 Major: Operations & Technology Management
 Carlos Donat Arjona

Major: Finance
 Mathieu Garcia
 Major: Finance
 Joshua Conrad Hanson
 Major: Operations & Technology Management
 Yury Kucherenco
 Major: Operations & Technology Management
 Jonathan David Mills
 Major: Operations & Technology Management
 Steve Santiago Salgado
 Major: Operations & Technology Management
 Albert Serkovich
 Major: Operations & Technology Management
 Patricia Annette Thornton
 Major: Finance
 Dung Quoc Nguyen Tran
 Major: Operations & Technology Management
 Erin Mackinnon Weld Phillips
 Major: Operations & Technology Management

College of Arts and Sciences

Bachelor of Arts

Nataliya Kahiahunamaikamakaina Apa
 Major: Psychology
 Second Major: Sociology
 Concentration: Sociology
 Minor: Education
 Sabrina C. Arquieta
 Major: Psychology
 Minor: Neuroscience
 Abigail Teresa Aspinwall~#
 Major: Social Work
 Minor: Political Science
 Amanda Fadi Azar~
 Major: Biology
 Minor: Sociology
 Patrick Lorcan Barnes
 Major: English
 Samantha Sheng-Yi Barrett
 Major: Social Work
 Minor: Psychology
 Devonna Florence Begay
 Major: Sociology
 Concentration: Criminology
 Minor: Psychology
 Margaret Bender-Stephanski*
 Major: Environmental Ethics & Policy
 Minor: Social Justice
 Second Minor: Theology
 Sidney Michelle Bennett
 Major: English
 Minor: Philosophy
 Trenton Walter Birch
 Major: Psychology
 Minor: Neuroscience
 Patrick Alexander Boldt

Major: Psychology
 Alexandra Stuart Bryce
 Major: Social Work
 Minor: Psychology
 James Jackson Bulger
 Major: Theater
 Minor: Education
 Second Minor: English
 Emma Anais Castillo Gonzalez
 Major: Biology
 Minor: Spanish
 Second Minor: Sociology
 Kira Elaine Champelli
 Major: English
 Emilia Belle Christopherson*
 Major: Theater
 Minor: French
 Nicholas Toshio Chun
 Major: Psychology
 Second Major: French Studies
 Minor: Neuroscience
 Alannah Therese Clay
 Major: Social Work
 Second Major: Psychology
 Carolina Cortes
 Major: Psychology
 Minor: Political Science
 Second Minor: Spanish
 Kiara Suzanne Cruz
 Major: Political Science
 Minor: Communication
 Gayle Gatdula Dahilig
 Major: Psychology
 Minor: Neuroscience
 Elisabeth Hope Davies
 Major: English
 Minor: Communication
 AmandaMarie Makalani DeRego
 Major: Theater
 Second Major: English
 Gabriella Mia DiPaulo
 Major: Psychology
 Minor: Communication
 Second Minor: Sociology
 Caroline Anne Fen Dolan
 Major: Economics
 Minor: Political Science
 Elisha Kekaulike Sala Faagai
 Major: Psychology
 Second Major: Organizational Communication
 Siena Marie Falzon
 Major: Psychology
 Minor: Neuroscience
 Jasmine Cassandra Fehr~
 Major: Psychology
 Emma K. Finney
 Major: English
 Second Major: Psychology

Cole Walter Fitter
 Major: Spanish
 Second Major: Philosophy
 Johanna Schinnell Geisen*
 Major: English
 Minor: Spanish
 Stella Marie Gillman
 Major: Biology
 Minor: Neuroscience
 Second Minor: Psychology
 Julia Oksana Goldman
 Major: Communication
 Minor: Social Justice
 Second Minor: Gender & Women's Studies
 Katherine Kalanima'ema'e Gomes*
 Major: Environmental Ethics & Policy
 Minor: Sociology
 Natalie Goodpaster
 Major: Music
 Second Major: French Studies
 Jayce N. Gorzeman
 Major: Biology
 Minor: Psychology
 Hannah Renee Green
 Major: Sociology
 Concentration: Criminology
 Second Major: Psychology
 Minor: Social Justice
 Lauren Lindsey Guerin
 Major: Music
 Cassidy Rae Hall
 Major: Social Work
 Haley Marie Hamilton‡
 Major: Theater
 Concentration: Production Management
 Second Major: Communication
 Jordan Faith Hammock
 Major: Psychology
 Gabriel Francis Happ-Shine
 Major: Psychology
 Second Major: Spanish
 Katherine Harder
 Major: Communication
 Second Major: Political Science
 Matiana Marie Hébert
 Major: Biology
 Second Major: Sociology
 Concentration: Criminology
 Minor: Spanish
 Benjamin George Hecko*#
 Major: History
 Minor: Spanish
 Fin Luc Amon Hendel
 Major: Communication
 Rachel Elizabeth Horning~
 Major: Psychology
 Second Major: English
 Burke Lawrence Hoss

Major: Theology
Minor: Education
Kellie Lynn Hughes
Major: Biology
Minor: Spanish
Savannah Marie Inman
Major: Social Work
Samantha K Ishihara
Major: Sociology
Concentration: Criminology
Second Major: Environmental Ethics & Policy
Taylor Lee Jacobson
Major: Psychology
Minor: Philosophy
Andre Rodolfo Jaurigui
Major: Psychology
Second Major: Spanish
Minor: Social Justice
Perry M Jensen
Major: Psychology
Minor: Neuroscience
Karl Tshikudi Kahambwe
Major: Political Science
Abigail Elisabeth Kassa
Major: Psychology
Minor: Neuroscience
Mikelle Kenzi Kamal Kelly
Major: Theater
Ashley Aeri Kim
Major: Mathematics
Minor: Computer Science
Caitlin Eileen Kirk~#
Major: Psychology
Minor: Spanish
Gabriella Carol Knott
Major: Biology
Minor: Environmental Science
Madeline M Korhel
Major: Political Science
Dustin Avery Kua
Major: Psychology
Minor: Neuroscience
Kevin Philippe Kuester
Major: Biology
Minor: French
Sarah Maxine Larson
Major: Environmental Ethics & Policy
Second Major: Spanish
Nolan Anthony Lease
Major: Social Work
Clara Frances Lietz~
Major: Environmental Ethics & Policy
Second Major: Spanish
Minor: Economics
Taryn Elize Ligot
Major: Sociology
Ruby Ann Lindgren\$#
Major: German Studies

Second Major: Theology
Izaya Lingo
Major: Psychology
Sydney Ann Livingston*
Major: Environmental Ethics & Policy
Minor: Psychology
Cristina Elena Lopez-Hernandez
Major: Psychology
Minor: Spanish
Mary Ruth Lowney~#
Major: Environmental Ethics & Policy
Minor: Spanish
Second Minor: Social Justice
Margaux Renee Lynch~
Major: Communication
Minor: English
Jean-Luc Cherif Machi
Major: Political Science
Minor: French
Giovanni Magaña-Rivera
Major: Communication
Minor: Spanish
Heather Yun Jeun Mar
Major: Psychology
Minor: Neuroscience
Jordan Isaiah Marquez
Major: Sociology
Concentration: Sociology
Rebecca Ann Martin
Major: History
Minor: Sociology
Ashley Christine Martinez
Major: Social Work
Second Major: Spanish
Reid Stephenson McBride
Major: Political Science
Minor: Philosophy
Keely Anne McCormick~
Major: Psychology
Minor: Biology
Meredith Eileen McMurray*#
Major: Political Science
Second Major: Philosophy
Minor: Sociology
Second Minor: Economics
Third Minor: Gender & Women's Studies
Erin Eileen Melcher
Major: Psychology
Thadamonique Mey
Major: Biology
Jenn Mickelson
Major: Political Science
Minor: Chemistry
Hunter Montgomery
Major: Sociology
Kaitlin Elizabeth Moore
Major: Communication
Jazmin Esmeralda Moreno-García

Major: English
 Minor: Environmental Ethics & Policy
 Second Minor: Spanish
 Sharif Khaim Morton
 Major: Political Science
 Christopher Jordan Mosby Milton
 Major: English
 Minor: Psychology
 Megan Maia Musquiz
 Major: Political Science
 Second Major: Philosophy
 Minor: Social Justice
 Kassidy Kaimana Naone
 Major: Communication
 Sophia Renee Neuweiler
 Major: Sociology
 Concentration: Criminology
 Fiona Rae O'Brien
 Major: Political Science
 Minor: History
 Max Andrew Oishi
 Major: Psychology
 Minor: Spanish
 Natalie Katherine Olsen
 Major: Communication
 Minor: Spanish
 Diego Ordonez-Potter
 Major: Social Work
 True Ocean Overlie
 Major: Psychology
 Minor: Fine Arts
 Nathan Joseph Packard
 Major: Sociology
 Lily Caroline Pantlick
 Major: Communication
 Berenice Pantoja
 Major: Psychology
 Minor: Spanish
 Georgia Louise Paulk
 Major: Biology
 Minor: Environmental Science
 Second Minor: Education
 Jennifer Nicole Payne
 Major: Psychology
 Minor: Business Administration
 Arianna Nicole Perez-Wolfe†#
 Major: Environmental Ethics & Policy
 Minor: Environmental Science
 Second Minor: Spanish
 Gabriella Maria Petrossi-Baughman
 Major: English
 Minor: Political Science
 Victoria Petz
 Major: Biology
 Minor: Integrative Health & Wellness
 Nicholas Robert Pisani
 Major: History
 Second Major: Economics

Minor: French
 Shannan Elizabeth Readen
 Major: Psychology
 Second Major: Sociology
 Concentration: Criminology
 Minor: Gender & Women's Studies
 Second Minor: Philosophy
 Elizabeth Jan Reich
 Major: German Studies
 Second Major: Environmental Ethics & Policy
 Sydney Olivia Reid*
 Major: Sociology
 Concentration: Criminology
 Richard Senna Ressa
 Major: History
 Minor: Economics
 Emma Shuksan Welch Riedel*
 Major: Political Science
 Trevor Bryan Riedmann
 Major: Political Science
 Rosemary Bridget Riley
 Major: Environmental Ethics & Policy
 Minor: Political Science
 Alberto Enrique Rincón-Pardo
 Major: Music
 Concentration: Vocal Performance
 Bibiana Rivera Espindola
 Major: Social Work
 Minor: Spanish
 Jesi Robison
 Major: Theater
 Concentration: Production Management
 Second Major: Spanish
 Minor: Psychology
 Katherine Cristina Rojas
 Major: Political Science
 Second Major: Philosophy
 Minor: Social Justice
 Aaron Theoger Rosel
 Major: Sociology
 Concentration: Criminology
 Second Major: Psychology
 Douglas James Rossi*
 Major: Environmental Ethics & Policy
 Mollie Amanda Rutz~
 Major: Economics
 Second Major: Political Science
 Amanda Rose Ryan
 Major: Theater
 Brandon J Salazar-Ramos
 Major: Spanish
 Dulce Baneli Sanabria Garcia
 Major: Biology
 Minor: Mathematics
 Second Minor: Sociology
 Mireya Leilani Sanders
 Major: Spanish
 Caitlin Anne Schaeffer

Major: Communication
Macey Alina Schondel*#
Major: Environmental Ethics & Policy
Minor: Gender & Women's Studies
Second Minor: Sustainability
John Robert Paul Schuster
Major: Music
Maya Al-Haddad Sellier
Major: Psychology
Second Major: German Studies
Minor: Communication
Zachary Grady Sessa~#
Major: Social Work
Second Major: Spanish
Minor: Political Science
Elaine Victoria Shaw
Major: Psychology
Second Major: Biology
Callahan Bradford Shelley
Major: Political Science
Second Major: German Studies
Audrey Marie Shellum Gonzalez
Major: Political Science
Minor: Constitutional Studies
Second Minor: Spanish
Lily Ann Shove
Major: Psychology
Minor: Education
Second Minor: Neuroscience
Daniel Lee Smith
Major: Psychology
Kathryn Elizabeth Smith*
Major: Music
Concentration: Instrumental Performance
Maria Alannah Spong
Major: Psychology
Minor: English
Meika Sorsha Stites
Major: Psychology
Minor: Theology
Marcus Jack Swinkels
Major: Psychology
Sage Joseph Taylor
Major: Political Science
Second Major: Theology
Minor: History
Grace Elizabeth Tester
Major: Psychology
Brianna Fay Kinau Thompson
Major: Biology
Minor: Psychology
Ryan Michael Thoms*
Major: Political Science
McKennah Kathleen Thornton
Major: Music
Concentration: Pre-Music Education
Minor: Education
Christopher James Tibbitts

Major: Communication
Mary Grace Sabangan Tiglaio
Major: Psychology
Minor: Sociology
Trudi Marie Timperman‡
Major: Environmental Ethics & Policy
Minor: Global Business
Sheryl Ann Fernandez Tomas
Major: Psychology
Jerome Darius Canilao Torres
Major: Communication
Minor: Fine Arts
Joslin Kaylee Torres
Major: Political Science
Audrey Jade Tsai
Major: Social Work
Samantha Valentine Van Norstrand
Major: Social Work
Minor: Theater
Camille Amelie Vezinet
Major: Biology
Second Major: French Studies
Kira Megan Vollans
Major: Political Science
Minor: Spanish
Samantha Michelle Walsh
Major: Psychology
Minor: Communication
Emma Marie Wells‡#
Major: Political Science
Minor: History
Second Minor: Communication
Catherine Lily Wojda‡
Major: English
Second Major: Spanish
Katarina Sun-Hi Yo
Major: Theater
Concentration: Design/Technical
Minor: Fine Arts
Second Minor: Hellenic Studies

Bachelor of Science

Sydney Ka'opuaokalani Adams
Major: Biology
Minor: Chemistry
Second Minor: Neuroscience
Alyssa Marie Agatep
Major: Biology
Minor: Spanish
Quinn James Anderson
Major: Organizational Communication
Minor: Business Administration
Second Minor: Theater
Seth Jantzen Arakawa
Major: Chemistry
Concentration: Biochemistry
Minor: Neuroscience

Alexandra Lynn Ball	Second Minor: Biology Major: Biology Second Major: Spanish	Concentration: Biochemistry: ACS Second Major: Mathematics Third Major: Biology Minor: Physics
John Eamon Bennett*	Major: Biology Minor: Business Administration Second Minor: Chemistry	Rebecca Smith Cole Major: Biology Second Major: Spanish
Erik Thanh Best	Major: Biology Second Major: Theology	Kyle Robert Cooper Major: Biology Minor: Spanish
Isaac Long Best	Major: Biology Minor: Chemistry	Ryan Johannes Dexheimer* Major: Biology Second Major: Chemistry Concentration: Biochemistry
Connor Ford Bishop	Major: Organizational Communication	Tahirou Diabaté Major: Organizational Communication Minor: French
Patrick Alexander Boldt	Major: Biology Minor: History	Mitchell Patrick Dignan Major: Biology Minor: Spanish
Grace Elina Boyle	Major: Organizational Communication	Kristin Pham Dinh Major: Biology Minor: Chemistry
Daniel Arturo Bracho	Major: Chemistry Concentration: Biochemistry Minor: Neuroscience	Karyssa Nicole Domingo* Major: Biology Second Major: Spanish Minor: Chemistry
Nicole Lynn Brandt	Major: Organizational Communication Minor: Music Second Minor: Gender & Women's Studies	Sophie Suzanne Wittmann Downing* Major: Organizational Communication Second Major: English Minor: Social Justice
Katherine Eileen Brings	Major: Environmental Science Concentration: Earth Science	Erin Leigh Dunnington Major: Chemistry Concentration: Biochemistry Minor: Spanish
Jonathan Cole Carden	Major: Organizational Communication	Anyu Ju Hie Forma Major: Biology Minor: Spanish Second Minor: Chemistry
Lauren Elizabeth Carlos§	Major: Organizational Communication	Terese Rose Foster*# Major: Biology Minor: Neuroscience
Danielle Carmeci~	Major: Biology Minor: Neuroscience	D'Onna MayLee Franco Major: General Studies
Casey Robert Carr	Major: Mathematics Minor: Computer Science	Mya Olivia Franco Major: Biology Minor: Chemistry
Sofia Castiglioni§#	Major: Biology Minor: Mathematics Second Minor: Spanish	Luke Elliott Frost Major: Organizational Communication
Kira Elaine Champelli	Major: Biology Minor: Chemistry	Kaylyn Sachie Fukuji* Major: Biology
Jaycie Rebekah Cruz Chan	Major: Biology Minor: Chemistry	Striesand Tumaneng Galdones Major: Biology Minor: Chemistry
Carmen Lucy Charles	Major: Biology Minor: Chemistry Second Minor: Neuroscience	Andrew Wallace Gibson# Major: Environmental Science Concentration: Earth Science Second Major: French Studies
Alyssa Lai Lin Ching	Major: Chemistry	

Jacob Clarence Godshalk
Major: Mathematics
Minor: Business Administration

Alexandra Gonzalez~

Major: Biology

Giovanna Sarahi Gutierrez

Major: Organizational Communication

Alea Ha

Major: Chemistry

Concentration: Biochemistry: ACS

Minor: Neuroscience

Jeffrey Wil Hayashi*

Major: Biology

Minor: Chemistry

Emily Rose Heath‡

Major: Biology

Minor: Chemistry

Second Minor: Neuroscience

Gabriela Hernandez Duran~

Major: Biology

Minor: Spanish

Second Minor: Chemistry

Ryan Heron

Major: Biology

Minor: Psychology

Hope Lydia Herrington

Major: Organizational Communication

Minor: Psychology

Aislinn Irene Hill

Major: Environmental Science

Concentration: Biology

Minor: Sustainability

Molly Renee Hitchens*

Major: Biology

Minor: Integrative Health & Wellness

Anthony Hoang

Major: Biology

Maxwell James Hopper

Major: Biology

Emily Miyoko Hosoume

Major: Environmental Science

Concentration: Biology

Minor: Sustainability

Caitlyn Marie Hott*

Major: Biology

Minor: German

Second Minor: Chemistry

Josette Christina Hughes*

Major: Environmental Science

Concentration: Biology

Bryan Keeney Hunter

Major: Chemistry

Concentration: Biochemistry: ACS

Minor: Spanish

Andrew Eric Jauhiainen

Major: Biology

Second Major: Political Science

Taylor Anne Jensen

Major: Environmental Science

Concentration: Biology

Second Major: Philosophy

Ethan Thomas Jones~

Major: Biology

Minor: Chemistry

Second Minor: Neuroscience

Payton Jordan Kirtley

Major: Biology

Jacob Benjamin Klemz

Major: Organizational Communication

MaryKathryn Viola Kordash

Major: Biology

Minor: Chemistry

Emily Jayne Kozickowski~

Major: Chemistry

Concentration: Biochemistry

Second Major: Biology

Minor: Neuroscience

Megan Elizabeth Lacy

Major: Organizational Communication

Nathan Yuk-Lun Lam

Major: Mathematics

Lillyanne Mckenzie Landers

Major: Chemistry

Concentration: Biochemistry: ACS

Shannon Nicole Leffler

Major: Biology

Minor: Psychology

Second Minor: Neuroscience

Brittany Rose Ligman‡

Major: Biology

Minor: Psychology

Aysha Reiko Namba Limatoc

Major: Biology

Madison Ellen Lindell

Major: Organizational Communication

Second Major: Spanish

Tristan Alvin Low

Major: Chemistry

Concentration: Chemistry

Phuong Linh Ngoc Ly~

Major: Biology

Minor: Chemistry

Natasha Shana Ma~

Major: Biology

Minor: Psychology

Jommel Tangonan Macaraeg

Major: Biology

Minor: Psychology

Jack Henry Margheim

Major: Environmental Science

Concentration: Biology

Emily Marie May‡

Major: Biology

Minor: Spanish

Second Minor: Theology

Third Minor: Psychology

Hugh Noland McGirt	Minor: Chemistry
Major: Chemistry	Second Minor: Fine Arts
Concentration: ACS	
Madison Suzanne McLaughlin*	Aubrey Michelle Putansu
Major: Organizational Communication	Major: Chemistry
Minor: Sustainability	Concentration: Biochemistry: ACS
Saron Asfaw Mekonnen	Minor: Mathematics
Major: Biology	Isabelle Hannah Galvez Rabelas
Minor: Neuroscience	Major: Biology
Second Minor: Chemistry	Minor: Psychology
Third Minor: Psychology	Hector Alejandro Ramos Diaz
James Meza	Major: Mathematics
Major: Organizational Communication	Minor: Spanish
Minor: Business Administration	Ryan Jack Regier\$#
Spencer Russell Moffat	Major: Mathematics
Major: Environmental Science	Brennan Weston Robinson
Concentration: Earth Science	Major: Organizational Communication
Minor: Environmental Ethics & Policy	Michelle Andrea Rodriguez
Kailin Marie Mooney~	Major: Chemistry
Major: Chemistry	Concentration: Biochemistry: ACS
Concentration: Biochemistry: ACS	Hailey Ana Rosario
Minor: Neuroscience	Major: Biology
Second Minor: Biology	Minor: Fine Arts
Mellonie Kighenda Mwawai	Michael Juan Rosario
Major: Chemistry	Major: Organizational Communication
Concentration: Biochemistry	Floyd Jensen Rubonal*
Alysha Anne Kanoelani Naone	Major: Biology
Major: Environmental Science	Pallavi Saharia
Concentration: Chemistry	Major: Biology
Jennifer Takemi Ng*	Minor: Neuroscience
Major: Environmental Science	Second Minor: Chemistry
Concentration: Biology	Jacob Straube Saldivar
Minor: Sustainability	Major: Biology
Second Minor: English	Minor: Chemistry
Jacob Tod Nguyen	Lindsey Renee Savoy*
Major: Environmental Science	Major: Biology
Concentration: Biology	Minor: Education
Minor: Biology	Lauren Isabelle Say
Michelle Nhu Quynh Nguyen	Major: Organizational Communication
Major: Biology	Minor: Sustainability
Brian James O'Hara	Anna Grace Schuster\$
Major: General Studies	Major: Applied Mathematics
Laura Okazaki	Minor: English
Major: Biology	Tess Diana Schwesinger
Gillian Dempsey Oldridge	Major: Biology
Major: Biology	Minor: Chemistry
Aubrienne Jase Llarenas Pangindian	Magdalena Melina Simons
Major: Biology	Major: Biology
Minor: Neuroscience	Carlee Amber Slovarp
Alyssa Gianna Perez	Major: Biology
Major: Biology	Kathryn Elizabeth Smith*
Alaina Rose Petrella	Major: Chemistry
Major: Biology	Concentration: Biochemistry: ACS
Meghan Marian Powers	Dillon Michael Steigenga
Major: Organizational Communication	Major: Biology
Minor: Social Justice	Noah Alexander Stickels
Jessica Sourey Prettyman	Major: Biology
Major: Biology	Minor: Chemistry
	Second Minor: Neuroscience

Lauryn Hoi Yin Tachino
 Major: Biology
 Minor: Environmental Science
 Chrystal Alexis Le'a Tamoria
 Major: Biology
 Minor: Neuroscience
 Amelia Tannouri
 Major: Biology
 Benjamin Michael Teeter
 Major: General Studies
 Minor: History
 Katie Marie Thomas
 Major: Biology
 Jimmy Van Tran
 Major: Biology
 Minor: Chemistry
 Jonny Van Tran
 Major: Biology
 Minor: Chemistry
 Dominic Matthew Triolo
 Major: Organizational Communication
 Michael Truong
 Major: Biology
 Minor: Chemistry
 Second Minor: Psychology
 Valerie Truong~#
 Major: Biology
 Kristen Elizabeth Uskovich‡#
 Major: Biology
 Second Major: Psychology
 Mireysi Evenlyn Ventura Rivera
 Major: Organizational Communication
 Minor: Spanish
 Sabina Elizabeth Wahed
 Major: Biology
 Minor: Spanish
 Lauren Marie Walker
 Major: Biology
 Minor: Psychology
 Conor Douglas Walsh
 Major: Biology
 Minor: Chemistry
 Second Minor: Psychology
 Jason Patrick Ware
 Major: Chemistry
 Concentration: Biochemistry: ACS
 Minor: Environmental Science
 Collen Najja Warner
 Major: General Studies
 Carey Anelaonalani Lalomanu Williams
 Major: General Studies
 Harrison Alexander Wiltrout
 Major: General Studies
 Sara Tesfaye Worku
 Major: Biology
 Minor: Psychology
 Brennan Yoshiro Yamamoto
 Major: Biology

Minor: Chemistry
 Aaron J Yamasaki
 Major: Biology
 Minor: Chemistry
 Victoria Zottarelli
 Major: Chemistry
 Concentration: Biochemistry: ACS
 Maayan Zuniga~
 Major: Biology
 Minor: Neuroscience
 Second Minor: Chemistry

Dr. Robert B. Pamplin School of Business Administration

Bachelor of Business Administration

Ethan Parker Adams
 Major: Marketing
 Chanson WKL Aki
 Major: Marketing
 Minor: Philosophy
 Jaden Paul Anderson
 Major: Marketing
 Minor: Economics
 Shelby Akemi Arakawa
 Major: Accounting
 Joseph Vaughn Bacon
 Major: Marketing
 Minor: Entrepreneurship & Innovation
 Management
 Christopher Kazuo Bates
 Major: Marketing
 Mackenzie Hanaye Bates
 Major: Marketing
 Jacob Henry Bawden
 Major: Accounting
 Second Major: Economics
 Cameron Olivier Beillard
 Major: Accounting
 Minor: Computer Science
 Kayla Marie Benson~
 Major: Accounting
 Minor: Entrepreneurship & Innovation
 Management
 Nicodemus J. Berbos
 Major: Accounting
 Audrey Helen Berghoff*
 Major: Accounting
 Dennis Juan Cruz Biersack
 Major: Marketing
 Matthew Robert Branick
 Major: Operations & Technology Management
 Olivia Marie Brimhall
 Major: Marketing
 Henry Edward Burreson*
 Major: Operations & Technology Management

Minor: Entrepreneurship & Innovation
 Management
 Tyler Robert Cameron
 Major: Accounting
 Kyle William Chandler
 Major: Marketing
 Minor: Entrepreneurship & Design Management
 Kiane Charfauros
 Major: Marketing
 Andrew Kent Christiansen
 Major: Marketing
 Quinn Nicholas Clelland
 Major: Marketing
 Kiley Rae Collins-Wright‡
 Major: Accounting
 Minor: Spanish
 Jensen Joseph Crisler
 Major: Marketing
 Joseph Denis Crowley
 Major: Finance
 Second Major: Operations & Technology
 Management
 Giancarlo Carmen Danese
 Major: Operations & Technology Management
 Immanuel Andrew Aditya Darmadji#
 Major: Accounting
 Second Major: Finance
 Paige Yukiko Deguchi
 Major: Accounting
 Minor: Global Business
 Emily Lyn DeMots
 Major: Finance
 Rebecca Michelle Dobson*
 Major: Finance
 Minor: Economics
 Second Minor: Spanish
 Peter John Earnshaw
 Major: Operations & Technology Management
 Phoenix Monroe Etheridge
 Major: Operations & Technology Management
 Takiula Weston Whetu Fahrensohn
 Major: Marketing
 Jonathan Joseph Fernandez
 Major: Accounting
 Second Major: Finance
 Bradley Bartalo Fischer
 Major: Marketing
 Minor: Entrepreneurship & Innovation
 Management
 Ann Catherine Fisher~
 Major: Marketing
 Minor: Spanish
 Hannah Margaret Franchetti
 Major: Marketing
 Minor: Communication
 Benjamin Keegan Fuller
 Major: Operations & Technology Management
 Benjamin Joseph Furstman‡

Major: Operations & Technology Management
 Natalia Marie Gonzalez
 Major: Operations & Technology Management
 Second Major: Finance
 Nicholas Jan Gravesen
 Major: Finance
 Second Major: Operations & Technology
 Management
 Matthew Corrigan Daesung Green
 Major: Accounting
 Second Major: Finance
 Thomas James Morrison Hann
 Major: Accounting
 Kevin Patrick Haudbine
 Major: Finance
 Taylor Nicole Heidema~
 Major: Accounting
 Second Major: Operations & Technology
 Management
 Luis Gerardo Hernandez
 Major: Finance
 Robert Anthony Herrera
 Major: Marketing
 Marc Torres Hilderbrand
 Major: Operations & Technology Management
 Minor: Economics
 Kenneth Mitsuyoshi Hiraoka~
 Major: Accounting
 Second Major: Finance
 Abby Wu Qing Holland
 Major: Operations & Technology Management
 Rachel Anne Marie Hu
 Major: Marketing
 Minor: Spanish
 Eric Gregory Huebner
 Major: Finance
 Robert Livingston Hughes
 Major: Finance
 Emily Inman
 Major: Marketing
 Ryan David Jarvis
 Major: Accounting
 Minor: Entrepreneurship & Innovation
 Management
 Conner Michael Karsseboom
 Major: Accounting
 Robert Benjamin Kayser*
 Major: Marketing
 Jackson Francis Kenton Braden
 Major: Marketing
 Minor: Global Business
 Griffin Thomas King~
 Major: Accounting
 Minor: Economics
 Second Minor: Entrepreneurship & Innovation
 Management
 Brent Kenichi Kosaki
 Major: Accounting

Nicholas Krajewski
Major: Accounting

Stephen Roland Laphen
Major: Marketing

Jacob Don Laurente
Major: Accounting

Sandra YongShan Li
Major: Accounting

Katharine Grace Livingston
Major: Marketing

Erin Marie Lynch
Major: Marketing

Tanyan Makai Lynch
Major: Operations & Technology Management

Cameron James Lyons*
Major: Finance
Minor: Entrepreneurship & Innovation Management

Joy Victoria Padilla Macalanda‡
Major: Economics
Concentration: International Economics

Charles Thomas Mayne
Major: Marketing

Henry Benjamin McCaddin
Major: Accounting

Mitchell Aaron McCauley
Major: Finance

Samuel Everett McCool
Major: Accounting

Ian Winslow McCurdy
Major: Marketing
Minor: Environmental Science

Jackson Gregory Miller*
Major: Accounting

Rilee Jean Monroe-Jones
Major: Finance

Maxwell Thomas Morgan
Major: Accounting

Aimee Megan Morlatt~
Major: Finance
Minor: Global Business

Elijah Grant Morse
Major: Marketing

John Mikhail Mosunic
Major: Operations & Technology Management

Madeline Mae Muhlheim~
Major: Accounting

Edward James Murphy IV
Major: Finance

Kathryn Murray
Major: Marketing
Minor: Theology

Cindy Diem Suong Ong
Major: Finance

James Roger Parker
Major: Accounting
Minor: Entrepreneurship & Design Management

Jessie Peng

Major: Operations & Technology Management
Second Major: Marketing

Nicolas Andrew Peres
Major: Finance

Daniella Sol Perez
Major: Marketing

Grace Anna Perkins*
Major: Marketing

Justine N. Phan*
Major: Accounting
Second Major: Finance

Michael Lawrence Rewers
Major: Finance
Minor: Sustainability

Nicholas Worsley Sather Robinson
Major: Finance
Minor: Entrepreneurship & Innovation Management

Tessa Jean Rodgers
Major: Finance
Minor: Entrepreneurship & Innovation Management

Douglas James Rossi~
Major: Marketing

Kauanui Kichizo Sabas
Major: Operations & Technology Management

Nicholas Kenneth Saisi
Major: Operations & Technology Management

Brandon J Salazar-Ramos
Major: Finance
Minor: Global Business

Mireya Leilani Sanders
Major: Marketing

Mario Alexander Sarich~
Major: Finance
Second Major: Political Science
Minor: Constitutional Studies

Dillon Thomas Scarboro
Major: Operations & Technology Management

Nicholas James Seiler‡
Major: Accounting
Minor: Psychology

Jacob Samuel Silver*
Major: Marketing
Minor: Sustainability

Gabriel Jack Skoro
Major: Finance

Peter Jon Smith Jr
Major: Finance

Wyatt Jinks-Dale Stanley
Major: Finance

Chad David Stevens*
Major: Finance

Kara Kiyomi Suemori
Major: Accounting

Anna Helena Supple
Major: Accounting

Luke Owen Travins*

Major: Finance
 Christian Travis Turney
 Major: Marketing
 Minor: Fine Arts
 Payton McKenzie Tyacke
 Major: Marketing
 Samuel Christopher Ulum
 Major: Marketing
 Thomas Harold Vogl III
 Major: Marketing
 Minor: Entrepreneurship & Design Management
 Brayton Daniel Walls
 Major: Marketing
 Aiden Scott Woodworth
 Major: Finance
 Larissa Kaiulani Yee
 Major: Marketing
 Minor: Communication
 Thomas J Yow
 Major: Finance
 Second Major: Operations & Technology
 Management
 Addie Zhao*
 Major: Marketing
 Minor: Sustainability

Donald P. Shiley School of Engineering

Bachelor of Science in Mechanical Engineering

Elena Alison Alvarez
 Rachel Kaye Anderson
 Minor: Environmental Engineering
 Weston Beilsmith*
 Joel Thomas Biamont
 Benjamin Holt Bishop
 Minor: Mathematics
 Jordan Arina Byers
 Courtney Respicio Cadiz~
 Patrick Tyler Carr‡
 John Alfred Chiala III
 Ian Alexander Citron
 Wyatt Palmer Couey
 Jeremiah Louis Eriksen
 William Patrick Eyre
 Graham Geoffrey Foster*##
 Thomas Michael Fritz
 Chloe Gwyneth Gan
 Minor: Computer Science
 Sydney Isabella Gardner
 Cole Allmeyer Green
 Jake Douglas Greenlee
 Matthew D. Greisen
 Maria Hye Rahn Grossen
 Minor: Theology
 Kaylee Ann Guerrero
 Minor: Mathematics
 Kevin Randall Hendersen

Carl Justin Mangali Hermosura
 Joseph Timothy Hopper
 Joshua Ikaika Kiyoshi Ito
 Lester Hiroo Canete Iwata~
 Conner Anthony King
 Dale Andrew King
 Bennet Henry Konrad
 Samuel Jacob Kreifels*
 Ian William Legge
 Jaren Elijah Lopez-Arballo
 Travis Tokio Matsukawa
 Minor: Philosophy
 Marygrace Guang McKeirnan
 Drew Munechika
 Evangeline M.D. Muyoano
 Elijah S Nishihira
 Minor: Business Administration
 Nicholas Takayoshi Ohara~
 Minor: Computer Science
 Dean Kazuyuki Omura
 Maxwell McRae Parker~#
 Olivia Alexandra Prymak*
 Jacob Bryan Schulz
 Christopher John Schuring*
 Minor: Mathematics
 Lillia Rae Smith*
 Nora Jane Smith
 Minor: Gender & Women's Studies
 David P. Sperling~
 Ryan Henry Szto*
 Ian Pearson Tachibana
 Kosta Voukidis
 Matthew Dane Watanabe
 Kai Alan Weyland
 Samuel E Winston~
 Trey Kisei Yogi
 Brady Thomas Zickel
 Ryan Craig Ziegler
 Ernesto Abimelek Zurita Ruiz
 Minor: Entrepreneurship & Innovation
 Management

Bachelor of Science in Electrical Engineering

Delaney H Barnett
 Minor: Spanish
 Second Minor: Computer Engineering
 Haley Elle Diment~
 Brandon Elliott Eusebio
 Joseph Timothy Gabriel
 Minor: Computer Engineering
 Tyler J Gilliland*
 Michael Hamilton
 Minor: Mathematics
 Cameron Brewster King
 Minor: Mathematics
 Franklin T Kuss
 Minor: Music

Second Minor: Computer Engineering

Benjamin DeLand LaFave

Minor: Computer Science

Second Minor: Entrepreneurship & Innovation

Management

Chandler Chi Yong Lau

Minor: Computer Science

Scott Allen Leahy

Noa Manu Leslie

Erik Tsuyoshi Liu

Minor: Computer Science

Gregory Ka'ulukoakupono Kin Leong Ng

Minor: Computer Science

Eric Nzayirama

Stelios Papoutsakis~

Minor: Computer Science

Cole William Pobanz*

Spencer Hayes Rose‡

Minor: Computer Science

Alex Arun Schendel~

Adam Nathaniel Simmons

Jason Robert Twigg‡

Minor: Computer Science

Samuel Spisak Warrick

Minor: Computer Science

Bachelor of Science in Civil Engineering

Desly Elisah Buenaventura Amurao

Ryan Jacob Bowers

Hunter J Cuasmas

Haley Nichole Davis

Diana Alicia Galindo

Kaitlyn Nicole Gores

Minor: Environmental Engineering

Olivia Kay Helinski#

Rebecca Louise Hoffman

Mason Patrick Jarvis

Nicholas Musashi Kanno

Minor: Environmental Engineering

Brianna Joyce Leible

Jonathan Robert Leonard

Minor: Entrepreneurship & Innovation

Management

Erin Anne McConville*#

Troy Ea Membrere

Minor: Environmental Engineering

Jared Toshiro Miyasato

Minor: Environmental Engineering

Tyler Dean Murphy

Wade Garrett Reynolds

David Stanley Robeck

Minor: Environmental Engineering

Benjamin Richard Slakey#

Minor: Mathematics

Kaden David Tallman

Matthew Joseph Tarabochia

Minor: Environmental Science

Erin Chiemi Uehira

Evan Mitsugi Yamamoto

Bachelor of Science in Computer Science

Michael Richard Antkiewicz

Nicholas Dillon Baldwin

Paul Patrick Timblique Bellosillo*

Daniel Steven Borg

David Lee Campbell

Minor: Chemistry

Sizhe Cao

Second Major: Mathematics

Kelsi Elizabeth Cruz

Dylan Rudolph DeGrood

Christopher Jay Fishback

Ryan Taylor Story Fredrickson

Andrew Robert Harrah

Jordan Jun-Kin Ho

Minor: Business Administration

Pelenalako Oliwa Kamala

Andrew John Lang

Kaitlin Chou Larson

Minor: Mathematics

Samuel Joseph Lemly

Hayden Alana Ling Liao‡#

Minor: Music

Niraj Lal Mali

Srikavya Reddy Mandla

Minor: Business Administration

Meredith Catherine Marcinko

Minor: Communication

Anthony Michael Moran

Minor: Computer Engineering

Ashika Mulagada*

Huy Minh Nguyen

Dylan Christopher Pascua

Benjamin Daniel Pirk

Maximilian Silvio Puglielli

Ryan Jack Regier\$#

Philip Benedict Robinson

Alex Arun Schendel~

Kamalei Aloha Simon

Minor: Mathematics

Samuel Peter Symmes

Minor: Mathematics

Andrew Shigeo Tagawa

Minor: Computer Engineering

David N. Vargas Puga*

Second Major: Spanish

Alexander Charles Weininger*

School of Education

Bachelor of Arts in Education

Rachel Nicole Carbary*

Second Major: Spanish

Ellisandra Grace Cordova
 Concentration: Special educator
 Minor: Psychology
 Allison Kristine Haakenson
 Concentration: Reading
 Alexis Janice Lee Henderson
 Concentration: Special educator
 Minor: Psychology
 Braelyn Jean Higdon
 Minor: Psychology
 Chloe YunYi Mar*
 Concentration: Reading
 Minor: History
 Claire Dorothee Nelson‡
 Minor: Theology
 Brielle Mackenzie Schrader*
 Concentration: Basic mathematics
 Rylee Ann Seekins
 Concentration: Reading
 Kali Kei Tagomori-Lai
 Concentration: Special educator
 Brienne Minami Tajima
 Katarina Marie Veliz
 Minor: Spanish
 Anna Clare Wanner§
 Concentration: Basic mathematics
 Minor: Theology
 Jessica Marie Wehber
 Minor: Psychology
 Eryn Shizuko Yamashiro
 Marissa June Yliniemi

Second Concentration: Basic mathematics
 Cierra Elaine Soukesian
 Concentration: ESOL
 Second Major: Spanish
 Severin Wold
 Second Major: Mathematics

Bachelor of Science in Secondary Education

Rachel Ann Blakely
 Second Major: Mathematics
 Minor: Psychology
 Rachel Nicole Booth
 Second Major: French Studies
 Crisanto Cendana de Guzman II
 Second Major: History
 Francesca Margherita Duncan~
 Second Major: History
 Minor: Spanish
 Morgan Fiona Gerlach
 Second Major: English
 Abigail Marie Groh~
 Second Major: English
 Margaret Olivia Loft
 Second Major: History
 Minor: Political Science
 Thomas James Mensing
 Second Major: Philosophy
 Dominic Robbert Nouwens
 Second Major: Mathematics
 Marissa Michael Rowley*
 Concentration: Special educator
 Second Major: Spanish

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