

Table of Contents

College of Liberal Arts and Sciences Academic Handbook | Page 4

College of Liberal Arts and Sciences | Page 4
College of Liberal Arts and Sciences Directory | Page 4
History | Page 4
Academic Mission | Page 5
Mission to Students, Faculty, and Staff | Page 5
Office for Undergraduate Students | Page 6
Office for Undergraduate Students Directory | Page 6
Vision | Page 6
Mission | Page 6
Academic Advising | Page 6
Exploratory Science Advising | Page 7
Health Professions Advising | Page 7
Internship Program | Page 7
Leadership and Professional Development | Page 7
The Bridge Society | Page 8
The Core Curriculum | Page 8
Core Curriculum Overview | Page 8
Summary of Core Curriculum Course Requirements | Page 8
Fulfilling Core Curriculum Course Requirements | Page 9
Learning Outcomes and Assessment | Page 12
University and CLAS Policies | Page 12
Academic Bankruptcy | Page 12
Academic Dismissal | Page 12
Academic Integrity | Page 13
Academic Probation | Page 13
Academic Progress | Page 13
Academic Standing | Page 13
Advanced Placement and International Baccalaureate Credit | Page 13
Apply for Re-Admission | Page 15
Attendance | Page 15
Auditing a Course | Page 16
CLAS Students Taking College of Professional Studies Courses | Page 16
Closed Section | Page 16
Complaints Against Faculty | Page 16
Confidentiality | Page 16
Credit by Exam | Page 16
Credit Increases | Page 17
Cross College Majors | Page 17
Dean's List | Page 17
Declaring or Changing a Major for CLAS Students | Page 17
Declaring a CLAS Minor or Concentration | Page 18
Degree Requirements | Page 18
Disclosure of Student Records | Page 18
Double Majors/Primary & Secondary Majors | Page 18
Drop/Add | Page 18
Dual Degree Policy | Page 18
F Grade | Page 19
Fast Forward Courses | Page 19
Final Exams and Finals Week | Page 19
Full-Time Student Status vs. Part-Time Student Status (i.e. Scholastic Load) | Page 19
Grade Appeals | Page 19
Grade Changes | Page 19
Grade Definitions and Values | Page 19
Grade Point Average (GPA) | Page 20
Grade Reports | Page 21
Graduation Honors | Page 21
Grade Extensions on Incomplete Grades | Page 21

Incomplete Grades for Undergraduate Students | Page 21
Laboratory Science Accommodation for Student with Disabilities | Page 21
Leave of Absence | Page 22
Mathematics Placement | Page 22
Medallion of Excellence | Page 22
Medical Leave of Absence | Page 22
Official Date of Graduation | Page 22
Overload Policy | Page 22
Phi Beta Kappa (ΦBK) | Page 23
Refunds/Tuition Reversal | Page 23
Removal of AP Course Credit | Page 23
Repeat Course Request | Page 23
Required Units for Admission | Page 24
Residency Requirement for Graduation | Page 24
Satisfactory/Unsatisfactory Grades | Page 24
Students with Disabilities | Page 24
Transfer Credit Hours | Page 24
Transfer Students | Page 25
Unauthorized Withdrawal | Page 26
Undergraduates Taking Graduate Level Courses | Page 26
Withdrawal from the University | Page 26
W Grade | Page 26
Walkers at Commencement | Page 26
Withdrawal from a Course | Page 26
WX Grade | Page 27
Y Grade | Page 27

Degrees | Page 28

Aerospace Studies (Air Force ROTC) | Page 28
Africana Studies | Page 28
Arab and Islamic Studies | Page 29
Arabic Language | Page 29
Art History | Page 30
Asian Studies | Page 32
Astrophysics and Planetary Science | Page 33
Biochemistry | Page 35
Biology | Page 37
Business | Page 39
Center for Irish Studies | Page 40
Chemistry | Page 41
Chinese Language | Page 44
Classical Studies | Page 45
Cognitive Science | Page 46
Communication | Page 49
Comprehensive Science | Page 52
Computing Sciences | Page 53
Criminology | Page 55
Economics | Page 57
Education and Counseling | Page 59
English | Page 63
Ethics | Page 67
French and Francophone Studies | Page 69
Gender and Women's Studies | Page 70
Geography and the Environment | Page 71
Global Interdisciplinary Studies | Page 79
History | Page 91
Honors | Page 92
Humanities | Page 95
Italian | Page 96
Japanese Language | Page 98
Latin American Studies | Page 98
Liberal Arts | Page 99

Mathematics and Statistics | Page 99
Military Science (Army ROTC) | Page 104
Naval Science (Navy ROTC) | Page 104
Peace and Justice | Page 104
Philosophy | Page 105
Physics | Page 107
Political Science | Page 109
Psychological and Brain Sciences | Page 112
Public Administration | Page 116
Russian Studies | Page 117
Sociology | Page 118
Spanish Studies | Page 119
Theatre | Page 121
Theology and Religious Studies | Page 123
Writing and Rhetoric | Page 126

Course Descriptions | Page 130

Accounting | Page 130
Aerospace Studies (Air Force ROTC) | Page 132
Africana Studies | Page 132
American Sign Language | Page 133
Arab and Islamic Studies | Page 133
Arabic Language | Page 133
Art History | Page 134
Astrophysics and Planetary Science | Page 136
Biology | Page 137
Business Administration | Page 144
Business Law | Page 145
Center for Irish Studies | Page 145
Chemistry | Page 146
Chinese Language | Page 154
Classical Studies | Page 155
Cognitive Science | Page 156
Cognitive and Behavioral Neuroscience | Page 157
Communication | Page 157
Computing Sciences | Page 166
Counseling | Page 172
Criminology | Page 172
Cultural Studies | Page 174
Economics | Page 174

Education | Page 178
English | Page 183
Entrepreneurship | Page 190
Ethics | Page 190
Finance | Page 191
French and Francophone Studies | Page 193
Gender and Women's Studies | Page 196
Geography and the Environment | Page 196
Global Interdisciplinary Studies | Page 202
Greek | Page 205
History | Page 206
Honors | Page 213
Human Services | Page 217
Humanities | Page 217
Italian | Page 220
Japanese Language | Page 223
Latin | Page 224
Latin American Studies | Page 225
Leadership | Page 225
Liberal Arts | Page 226
Management | Page 226
Marketing | Page 228
Mathematics and Statistics | Page 230
Meteorology | Page 234
Naval Science (Navy ROTC) | Page 234
Organizational Development Management | Page 235
Peace and Justice | Page 236
Philosophy | Page 238
Physics | Page 242
Political Science | Page 245
Psychological and Brain Sciences | Page 250
Public Administration | Page 252
Russian Studies | Page 252
Sociology | Page 253
Spanish Studies | Page 255
Statistics | Page 258
Theatre | Page 260
Theology and Religious Studies | Page 262

College of Liberal Arts and Sciences Academic Handbook

College of Liberal Arts and Sciences

College of Liberal Arts and Sciences Directory

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Emory Woodard, Ph.D., Dean, Graduate Studies
Crystal J. Lucky, Ph.D., Associate Dean for Baccalaureate Studies
Barry Selinsky, Ph.D., Associate Dean for Research and Faculty Development
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Set love as the criterion of all that you say, and whatever you teach, teach in such a way that the person to whom you speak, by hearing, may believe, by believing hope, and by hoping love.

THE INSTRUCTION OF BEGINNERS

St. Augustine

History

The College of Liberal Arts and Sciences of Villanova University was founded by the Augustinian Order in 1842. The College traces its

origins to old St. Augustine's Church in Philadelphia, which the Augustinians founded in 1796, and to its parish school, St. Augustine's Academy, established in 1811.

In 1842 the Augustinians purchased "Belle Air," the country estate of John Rudolph, a Revolutionary War officer and Philadelphia merchant. There they established the "Augustinian College of Villanova," under the patronage of St. Thomas of Villanova, a 16th century Augustinian educator and Bishop of Valencia, Spain. Eventually the College came to be known as Villanova and gave its name to the town which grew up around it.

Classes for the new college began on September 18, 1843, when 13 students embarked on a traditional liberal arts curriculum. At the outset, however, difficulties plagued the new college. The anti-Catholic "Know Nothing" riots in Philadelphia in 1844 resulted in the burning of St. Augustine's Church. The need to rebuild the church and maintain the new college created a financial crisis for the Order. As a result, the College closed its doors on February 20, 1845. It was able to reopen in September, 1846, with a student population of 24; the first commencement took place on July 21, 1847. The following year, on March 10, 1848, the Governor of Pennsylvania, Francis R. Shunk, signed the Act of Legislature incorporating the College.

In 1857, Villanova College closed for a second time. Demands on the services of priests through the expansion of parishes in the area created staffing problems for the Augustinians, while the "Panic of 1857" brought on hard economic times. The onslaught of the Civil War in 1860 affected student enrollment, and the College was not reopened until September 1865.

In the years that followed, the College prospered, increasing its student population and adding significantly to its physical facilities. Although in the first 50 years of its existence the College concentrated exclusively on the liberal arts, it nevertheless remained open to the changes in curriculum which were required to meet the needs of the time and the demands for specialization.

Today, the College continues to offer a variety of educational programs that are aimed at the total growth of the individual and which prepare students for viable careers. Graduates of the College have taken their place in almost every field of endeavor, serving in education, business,

government, law, medicine, and research, where they make vital contributions to the communities and the world in which they live.

Academic Mission

The College of Liberal Arts and Sciences exists to provide an atmosphere of responsible learning to a varied group of students who are called to intellectual, moral, and professional leadership. To fulfill these goals, the College seeks to promote intellectual curiosity and rigor within the university; to instill the fundamentals of critical insight, mature judgment, and independent thinking; and to awaken in its students a sense of the importance of values and the moral responsibility of caring for others and working for the betterment of society.

Villanova has always openly and proudly declared that it is a Catholic institution of higher learning. The University maintains a strong respect for the beliefs of its diverse community of faculty, students, and staff. In keeping with its central place in a Catholic university, the College of Liberal Arts and Sciences has a special commitment to the Christian belief that creation is an expression of the divine truth through the redemptive life, death, and resurrection of Jesus Christ, the incarnate Word of God. It also seeks to provide a Christian intellectual and moral environment, and believes that it is the common right of all to participate in creation, to seek truth, and to apply such truth attained to protect and enrich personal and communal life.

Villanova's special Augustinian heritage enables the College to draw upon the dynamic legacy of St. Augustine, whose passionate pursuit of wisdom, understood through the metaphor of one heart and one mind, inspires its own quest for knowledge in open, intelligent, responsible, and mutually respectful interaction of points of view. This legacy is classically illustrated by the Augustinian Order's impact on the medieval universities, its distinguished cultivation of Renaissance art, and its fostering of the scientific discoveries of Gregor Mendel. It is further expressed in the conviction that all authentic human wisdom is ultimately in harmony with Divine Wisdom, and it invites collaboration with other Christians and peoples of other traditions who might share at least the general features and dynamics of this Augustinian vision.

In light of this legacy, the College has developed a diversified academic program and a core curriculum that provide students with a scale of

well-defined universal values that equips them to be wise critics of the society in which they live, and which sustains a moral base and social consciousness that transcends economic barriers and questions of race, gender, and creed.

Mission to Students, Faculty, and Staff

The College strongly adheres to the principles of the University Mission Statement that commits Villanova to "developing and sustaining an academic environment in which the potentialities of its members may be realized." In so doing, the College is guided by the teachings of Vatican II, which emphasized that "the human spirit must be cultivated in such a way that there results a growth in its ability to wonder, to understand, to contemplate, to make personal judgments, and to develop a religious, moral, and social sense" (Pastoral Constitution on the Church in the Modern World, 59).

In order to fulfill its academic mission of transmitting, pursuing, and discovering knowledge, the College commits itself to the hiring and retaining of outstanding teacher-scholars and dedicated staff personnel whose academic and professional interests will develop and foster the goals of the University's mission. In hiring faculty and staff personnel, the College further commits itself to the goal of maintaining a richness of diversity by actively recruiting women and minorities. In all hiring strategies and decisions, the College strives to utilize procedures that will reliably determine the best qualified applicants.

While the College is committed to maintaining its Catholic identity, it does not seek a particular religious affiliation within its personnel. Rather, as formulated in the University's mission, it asks that all respect its "attempts to develop an environment in which students, faculty, and staff may experience a Christian intellectual and moral perspective," and have a willingness to enter into the conversation that gives its mission life and character.

The College is strongly committed to academic freedom that makes open discussion and inquiry possible. It believes open discussion among scholars and students is a self-correcting process that is intrinsic to academic freedom and that this process is in accord with responsible freedom, a central value of the Christian tradition, and of the thought of St. Augustine, the great theologian of Christian freedom.

The College seeks to encourage and equitably reward the valuable performance of its faculty and staff by offering competitive salaries and by making available opportunities that will enhance their professional development. It also seeks to promote a congenial work environment that is conducive to self-motivation. In recruiting students, the College seeks to ensure the best applicant pool possible. It strives to retain students by offering excellent academic programs and by providing them with quality campus activities.

The University's LEARNING GOALS may be found on the Provost's website under 'University Learning Goals'.

Office for Undergraduate Students

Office for Undergraduate Students Directory

explore. experience. evolve.

Directory

Susan Jacobs, M.A., Assistant Dean for Undergraduate Students
SaraBeth Baker, Graduation Certification Specialist
Sofia Bermudez, M.Ed., Assistant Director of Professional Development
Linda Boettcher, M.A., Director for Academic Advising
Andy Bove, M.A., Associate Director for Academic Advising
Leslie Castrejon, Retention Coordinator
Charles Francisco, Outreach Specialist
Charlotte Holmes, Coordinator for Professional Development
Kathleen Matkowski, Administrative Coordinator
Betty Lee Patch, M.A., Transfer Student Advisor
Charisma Presley-Dougherty, Retention Manager
Louise Russo, Ph.D., Director of Health Professions Advising
Drew Stackhouse, Assistant Director, Systems Management
Kate Szumanski, M.A., M.S., Director of Professional Development
Jordan Toy, Director of Student Services
Ann Trail, M.Ed., Health Professions Advisor
Christina Winterton, Ph.D., Faculty Advisor, Exploratory Sciences

Office: 107 St. Augustine Center for the Liberal Arts

Telephone: 610-519-3900

Website: <http://ous.villanova.edu>

Vision

The Office for Undergraduate Students aspires to be at the forefront in student support by continuously improving our services and advising in academics, professional development, and experiential education. We strive to create a welcoming and supportive environment for an increasingly diverse student population. We seek to foster collaborative relationships between University community members to promote student growth in mind, body, and spirit.

Mission

The Office for Undergraduate Students guides and supports students from orientation to graduation as they explore the many experiential possibilities that the College of Liberal Arts and Sciences provides. We empower students to begin a process of self-discovery, providing them with the resources to forge their own educational and professional direction.

The Office for Undergraduate Students collaborates with other University resources, enabling students to realize their full potential personally, educationally, and professionally.

Academic Advising

Linda Boettcher, M.A., Director
Andrew Bove, M.A., Associate Director
Kathleen Matkowski, Administrative Coordinator
107 St. Augustine Center for the Liberal Arts
610-519-3900

Academic Advising provides individual attention and guidance to students as they transition into the University and begin to explore their educational interests. Faculty Advisors encourage students to reflect on their course selections and experiential learning opportunities, enabling them to make informed choices about their educational and professional direction. By connecting students to a wide variety of support services, we seek to promote students' development and to facilitate their success.

Through our first-year *Academic Advising* course, we teach students how to obtain the most from their education. Topics include understanding the

value of a liberal arts education and the core requirements, conveying professionalism, assessing and strengthening study skills, learning time management, making informed educational and professional choices, and maintaining student wellness.

Exploratory Science Advising

Christina Winterton, Ph.D., Faculty Advisor,
Exploratory Sciences
107 St. Augustine Center for the Liberal Arts
610-519-3900

Exploratory-Science affords students who have a genuine interest in the natural sciences, but who are somewhat uncertain as to which discipline to pursue, an opportunity to explore a variety of options during their first year at Villanova University. During their freshman year, students enroll in one or two natural science courses with laboratory and mathematics. The Exploratory-Science option provides students with the opportunity to make a considered and data-based decision as to which discipline they wish to pursue for their four years.

Health Professions Advising

Louis Russo, Ph.D., Director Health Professions Advising
Ann Trail, Advisor
143 Mendel Science Center
610-519-4822
hpa@villanova.edu

Those students planning to apply to any health professional degree program (Medical, Dental, Physician Assistant, Veterinary, Optometry, Physical Therapy, etc.) should contact the Health Professions Advising Office for information on prerequisite coursework, pre-admittance examinations, experiential opportunities, and application procedures. Information sessions related to career exploration, program specifications, and application preparation are held throughout the academic year to enhance applicant knowledge and application quality.

Internship Program

Kate Szumanski, M.A., M.S., Director of Professional Development
Sofia Bermudez, M.Ed., Assistant Director of Professional Development
Charlotte Holmes, Coordinator of Professional

Development
107 St. Augustine Center for the Liberal Arts
610-519-4232

The Internship Program provides resources to students, which include individual professional development one-on-one meetings and brainstorming sessions, professional development workshops, and other special events, to assist students as they explore experiential educational opportunities. Through internships, students refine their career interests, develop their professional skills, network with working professionals, and gain valuable experience in a variety of fields. The Internship Program allows students to earn academic credit toward their major or minor, or earn general elective liberal arts credits. Students are required to submit an internship-for-credit application to seek academic credit for their internship experiences. The application is available on the OUS Web site.

Leadership and Professional Development

Kate Szumanski, M.A., M.S., Director of Professional Development
Sofia Bermudez, M.Ed., Assistant Director of Professional Development
117 St. Augustine Center for the Liberal Arts
610-519-3942

The Professional Development area within OUS offers programming, mentoring support, and courses that enable students to identify their strengths, explore professional and educational options, and develop the skills necessary to prepare them for professional life. Through this process, we empower students to pursue their aspirations. The Professional Development curricular component provides students with a foundation for learning how their academic knowledge and skills transfer into the professional world. Students learn how to create a professional résumé, research careers and industries, identify internships, answer job interview questions, and network with alumni. Additional courses offered to enhance professional growth include the Legal Profession, Professional Communication, Networking for Success, Social Networking, Creativity and Innovation, and Introduction to Professional Writing.

The Bridge Society

Kate Szumanski, Advisor
107 St. Augustine Center for the Liberal Arts
610-519-4232

The BRIDGE Society in the College of Liberal Arts and Sciences is designed to: build relationships among students and alumni in the College of Liberal Arts and Sciences; inspire both student professional development and alumni institutional development; provide a forum for students to gain the experiences necessary to forge their future direction. The BRIDGE Society: provides an opportunity for students to identify with the College, in addition to their major; creates the opportunity for student leadership within the College of Liberal Arts and Sciences; gives Arts & Sciences students the opportunity to explore potential career paths and meet alumni & employers in their fields of interest.

The Core Curriculum

Core Curriculum Overview

Every degree program in the College of Liberal Arts and Sciences is made up of three components: the Core Curriculum, courses in the major, and free electives.

Free electives are required for all students in the College of Liberal Arts and Sciences and are often used to explore academic interests and determine educational directions. They may also be used to fulfill minors, concentrations, or additional majors.

Courses in the Core Curriculum treat a broad range of disciplines from a variety of approaches; at the same time, the Core Curriculum strives to ensure depth of study and intellectual sophistication while recognizing that learning implies different modes of inquiry. An essential component of the Core Curriculum is a focus on writing. In the pursuit of their degrees, students take a number of courses in which writing requirements play a central role, from the Foundation Courses, including the Augustine and Culture Seminars and the Core Ethics course, to the Core Literature and Writing Seminar. In addition, each major program includes a required research course, normally taken during junior or sophomore years, and a senior capstone course, which is a significant culminating experience that leads students to reflect on the various components of their major curriculum.

The Core aims to advance culture in a broad sense, training students to understand and to appreciate the interrelated patterns of customary beliefs and practices, social forms, aesthetics, and material traits that act to define a culture and its position within a larger historical and intellectual framework. This educational program does not simply look to the past, but acknowledges that culture is vibrant and continuously redefined. The Core Curriculum challenges students to understand how the present is recognizably formed from past influences, and that in order to assess our culture and arrive at a view of its future, students must be trained to scrutinize and bring into perspective the relationship of the present culture with that of the past.

In fostering active participation in learning, the Core prepares students to become active participants within society, to engage in the process of informed political debate, and to encourage an understanding and appreciation of the diversity of cultures and experiences, a respect for the individual, and the development of a multi-cultural and international perspective. The Core thus encourages personal development in preparing students to regard themselves as citizens living in a democratic society, as belonging to a world community, and as therefore having communal responsibilities.

Summary of Core Curriculum Course Requirements

I. Foundation Courses

- a. Augustine and Culture Seminar (ACS 1000/1001) (2 courses)
- b. Theology and Religious Studies (THL 1000) (1 course)
- c. Philosophy (PHI 1000) (1 course)
- d. Ethics (ETH 2050) (1 course)

II. Language Requirement (Proficiency)

III. Mathematics or Statistics (1 course)

IV. Natural Sciences (2 courses w/ labs)

V. Literature and Writing Seminar (1 course)

VI. History (1 course)

VII. Social Sciences (2 courses)

VIII. Fine Arts (1 course)

IX. Theology and Religious Studies – Upper Division (1 course)

Diversity Requirement

Two of the courses counting towards degree requirements must have a Diversity attribute. Select one course from two of the three possible areas of diversity as indicated by the Diversity 1, Diversity 2, or Diversity 3 attributes. (See detailed explanation below)

Transfer credit will not be accepted for Core Curriculum courses once a student has matriculated into the College of Liberal Arts and Sciences.

Fulfilling Core Curriculum Course Requirements

Foundation Courses

Augustine and Culture Seminar (ACS) Sequence (2 courses)

ACS focuses on the question: Who am I? The first seminar (ACS 1000 Ancients) contains readings from Hebrew and Christian scriptures, Greek and Roman antiquity, Augustine, and the High Middle Ages, and is dedicated to understanding the foundations of our shared intellectual tradition. ACS 1001 Moderns continues to address the question of identity with texts from the Renaissance to the modern era.

The two-semester ACS course sequence must be taken by all students during the first year of study. Because it is important that students take the Augustine and Culture seminars early in their college careers, students are permitted to drop or withdraw from the courses without academic penalty only under special circumstances. Requests to drop or withdraw must be made to the Assistant Dean for Undergraduate Students. If a student receives permission to drop or withdraw, he or she must take the course at the next possible opportunity.

Theology and Religious Studies (1 course)

Faith, Reason, and Culture (THL 1000) studies Christianity with a particular focus on Roman Catholicism. Animated by Augustine's concern to relate Christian faith, reason, and human culture, this foundation course in the Core Curriculum is organized around the fundamental question, What do I believe? Students embark on a journey that engages them in the quest of faith seeking understanding in the context of contemporary global religious, theological, and cultural pluralism. Students explore the faith-

reason-culture relations through the academic lenses of theological and religious studies disciplines.

Philosophy (1 course)

Knowledge, Reality, Self (PHL 1000) explores the philosophical responses to the questions of how we can know, what is real, and what is the nature of the human person.

Ethics (1 course)

The Good Life: Ethics and Contemporary Moral Problems (ETH 2050) provides critical reflection on distinctive and viable visions of the moral life, with particular focus on Christian, especially Roman Catholic, Augustinian accounts, and explores the significance of different visions through an examination of various contemporary moral questions. ETH 2050 is the capstone of the foundation courses. Normally students should take ETH 2050 by the end of their junior year, after taking the other four foundation courses.

Language Requirement (Proficiency)

Language proficiency is required either: 1) through the intermediate level in French, Italian, Spanish, or Latin; or 2) through the introductory level in Ancient Greek, Arabic, Chinese, Irish, Japanese, or Russian. Students who are already proficient in other languages may petition for an exemption from the Core Curriculum Language Requirement subject to the conditions under F below.

Students may satisfy the Core Curriculum Language requirement in one of the following ways:

Option A: Advanced Placement Examination

Students may satisfy the requirement by attaining a score of 4 or 5 on the applicable Advanced Placement exam. Exams that fulfill the requirement and the course equivalency are listed on the Advanced Placement table in Part III of this handbook.

For any language not offered at Villanova (such as German), students will not receive course credit for the AP exam in that language. As with other languages, however, students who attain a score of 4 or 5 will satisfy the language requirement. Students who satisfy the requirement without receiving course credit may need to take additional free elective courses to meet the required number of credits for degree

completion. Any questions regarding Advanced Placement credit should be directed to the Office for Undergraduate Students in SAC 107.

Option B: Comprehensive Examination (Proficiency exam)

Students may satisfy the requirement through satisfactory performance on a proficiency exam administered by the appropriate department. Proficiency exams are administered on specific dates and students must register in advance. Students deemed proficient by achieving a grade of C or better on the proficiency examination may need to take additional free elective courses to meet the required number of credits for degree completion.

Option C: Credit by Exam

Students who would like to pursue credit for language fluency may do so through the Credit by Exam program for any language taught at Villanova other than their native language. Students must meet all conditions in place through the College of Liberal Arts and Sciences to be eligible for the Credit by Exam program. There is an associated fee per credit. Arrangements for Credit by Exam should be made in the Office for Undergraduate Students in SAC 107. Information about Credit by Exam is available under the policies section of this handbook.

Option D: Latin Alphabet Languages - Latin and Romance Languages (French, Italian, Spanish)

Students selecting this option must take courses through the intermediate II level in the language they have chosen. Students who studied French, Italian, Latin, or Spanish in high school must complete an online language placement exam (French, Italian, Spanish) or questionnaire (Latin) to be placed into the appropriate level. Because placement tests provide only a rough indicator of a student's level, students who are placed into the intermediate II level or higher must complete the course to fulfill the requirement. Students who are placed directly into an intermediate II course or higher may need to take an additional course to meet the required number of credits for degree completion.

Option E: Non-Latin Alphabet Languages - Irish And Critical Languages (Ancient Greek, Arabic, Chinese, Japanese, Russian)

Students selecting this option must take courses through the introductory II level for the language they have chosen. These courses are typically four to six credits and meet four to five days per week, depending on the language. Students

should contact individual departments with any questions regarding placement in these languages. Because placement tests provide only a rough indicator of a student's level, students who are placed into the introductory II or higher must complete the course to fulfill the requirement. Students who are placed directly into an introductory II course or higher may need to take an additional course to meet the required number of credits for degree completion.

Option F: Petition for Exemption Due to Documented Language Proficiency

Students who are fluent in languages for which no proficiency exam is offered through the College of Liberal Arts and Sciences may petition for an exemption from the Core Curriculum Language requirement by submitting the Petition for Core Language Requirement Exemption in MyNOVA along with documentation of proficiency from an accredited institution. International students may submit Test of English as a Foreign Language (TOEFL) scores as documentation of proficiency for the purposes of the petition process. Students deemed proficient through the petition process may need to take additional courses to meet the required number of credits for degree completion.

NOTES:

- Placement tests are used to place students only and are not to be confused with a proficiency exam.
- Students seeking accommodations for documented learning disabilities should contact the Office of Learning Support Services in Falvey 212.
- Additional questions regarding the Core Curriculum Language requirement should be addressed to a student's faculty advisor or to the Office for Undergraduate Students in SAC 107.

Mathematics or Statistics (1 course)

Students must take one course in either mathematics or statistics. Any course offered by the Department of Mathematics and Statistics fulfills the requirement, although the department offers courses every semester specifically designed for the Core Curriculum. These specifically designed courses, along with courses offered from other departments designated by the Mathematics A & S Core attribute, fulfill the Core Curriculum requirement.

Natural Science (2 courses with laboratory)

Non-science majors meet the Core Curriculum Natural Science requirement by taking two semesters of Mendel Science Experience (MSE), thematically-based lecture/laboratory courses designed for non-science majors, or two semesters of lecture/laboratory courses designed for science majors.

Science (AST, BIO, BIOC, CHM, CBN, CSC, ENV, MAT, PHY - B.S. only, PSY - B.S. only) majors meet the science requirement through the regular program of study in their major.

Literature and Writing Seminar (1 course)

All students take a thematic literature and writing seminar course. Courses designated with the Core Lit & Writing Sem attribute fulfill the requirement.

History (1 course)

This requirement is met by taking a specifically designed course designated by the Core History attribute.

Social Sciences (2 courses)

Students satisfy the requirement by taking two courses designated by the Core Social Sciences attribute.

Students majoring in Criminology, Economics, Geography and the Environment, Political Science, Psychology, or Sociology fulfill the Core Social Science requirement through the regular program of study in their major.

Fine Arts (1 course)

The requirement is met through courses that focus on the creative processes that go into making a work of art or on analysis and interpretation of the products of that artistic creativity. Courses designated with the Fine Arts Requirement attribute, fulfill the Core Curriculum requirement.

Theology and Religious Studies (1 course)

The upper division Theology and Religious Studies Core Curriculum requirement develops the theme of faith seeking understanding, engaging culture from a specific disciplinary perspective. Students must take THL 1000 before taking this upper division course designated by the Core Theology attribute.

Diversity Requirement (2 courses)

Consistent with the University's Mission Statement and its implementation of the new Core Curriculum in the College of Arts and Sciences, students will take at least two courses designated as "diversity." Learning to see through the eyes of other peoples and cultures is essential to becoming a citizen of the world. Beyond introducing students to the contextual study of diverse groups, diversity education must foster understanding of how individuals are affected within systems of power, oppression, deprivation, marginalization, and privilege.

Students are required to select two courses, covering two out of the three areas below:

Diversity 1: Courses that focus on populations (often named as non-dominant, minority, or impoverished groups) in the U.S. or Western Europe, and the systems or mechanisms that give rise to the experiences of power, privilege, and marginalization.

Diversity 2: Courses that focus on women's experiences and/or highlight the relationship between gender, culture, and power.

Diversity 3: Courses focus on the culture, economics, politics or ecology of societies and nations other than those of Western Europe and the United States and that emphasize power, privilege, and marginalization or a critical analysis of how these cultures define and express themselves.

NOTES:

- Service-learning courses, internships, and other experiential or community-based learning courses may be applied toward this requirement, provided they include a significant reflective component, just as traditional diversity courses do, and have been pre-approved for diversity course credit.
- Study abroad courses may be applied toward this requirement; such courses will be assessed the same way as courses at Villanova.
- A student may not use a single course to fulfill more than one category of the diversity requirement.
- The diversity requirement cannot be fulfilled by independent study or a senior thesis.
- Language courses cannot fulfill the requirement, although literature courses in another language may fulfill the requirement if they are designated with a diversity attribute.
- A student may take three 1-credit IGR workshops, which fulfill one course towards the Core Diversity requirement (Diversity 1).

A student may take three 1-credit IGR workshops, which then fulfill one course towards the Core Diversity requirement (Diversity 1).

Learning Outcomes and Assessment

University and CLAS Policies

University and CLAS Policies

Unless otherwise noted, the College of Liberal Arts and Sciences follows the general University academic policies and regulations listed in the University Catalog. It is the responsibility of the student to know and comply with all academic policies and regulations of the University and the College of Liberal Arts and Sciences. Such policies may change without prior notice. The policies in this handbook are a sample of University and College policies that are frequently referenced by students and are intended for summary purposes only.

Academic Bankruptcy

The Academic Standing Committee may allow a freshman student to declare academic

bankruptcy and repeat the semester or academic year with a new start on the cumulative average (though a record of the year's work will remain on the transcript).

Internal transfer students and students who have switched degree programs within the CLAS may be permitted to bankrupt individual courses that do not apply to their new curriculum. CORE requirements or electives cannot be bankrupted, the process is only for courses that are not required for the new major. Before a student may request bankruptcy for specific courses, he or she must have successfully completed two consecutive semesters in the CLAS and attained a minimum GPA of 2.50 in each semester. Bankrupted courses will remain on the student's transcript but will be excluded from the calculation of the GPA and earned credit hours. Students must petition the Assistant Dean for Undergraduate Students for the exclusion (Susan Jacobs in OUS, SAC 107).

All requests for Academic Bankruptcy are granted at the discretion of the Assistant Dean for Undergraduate Students (Susan Jacobs in OUS, SAC 107). Once a course has been bankrupted the action is permanent and cannot be reversed. In no case will tuition be refunded.

Academic Dismissal

A student who has not met the academic standards of the College (as determined by the Academic Standing Committee and described below) will be dismissed from the College of Liberal Arts and Sciences after two consecutive semesters below a 2.0 cumulative grade point average and/or failure to make academic progress (successful completion of at least 12 credits a semester). Additionally, students on probation who have any of the following grades "N", "Y", "F", "NF", "U", or "W" are subject to dismissal from the College. The Assistant Dean for Undergraduate Students (Susan Jacobs in OUS, SAC 107) will inform the student of the dismissal as soon as possible. Typically, the student will be allowed to appeal that dismissal to the Academic Standing Committee and the Assistant Dean for Undergraduate Students. There is no additional process of appeal beyond the Assistant Dean. In some cases (e.g., when the student has had previous warnings or been on probation), the student may, at the determination of the College, be dismissed without right of appeal.

Academic Integrity

Academic integrity is vital to any university community for many reasons. Students receive credit for doing assignments because they are supposed to learn from those assignments, and the vast majority do so honestly. Anyone who hands in work that is not his or her own, or who cheats on a test, or plagiarizes a paper, is not learning, is receiving credit dishonestly and is, in effect, stealing from other students. As a consequence, it is crucial that students do their own work. Students who use someone else's work or ideas without saying so, or who otherwise perform dishonestly in a course, are cheating. In effect, they are lying. Such dishonesty, moreover, threatens the integrity not only of the individual student, but also of the university community as a whole. The full Academic Integrity Policy can be [found at on this webpage](#).

Academic Probation

A student on academic probation will normally be allowed only one semester to raise his or her grade point average to the required minimum. Once a student has been notified of their probationary status, the student is required to contact their faculty advisor immediately to discuss their probationary status and develop an academic plan for success. While on academic probation, a student may be limited to 13 credits (4 courses), is required to pass all courses of three or more credits, and earn a C (2.00) or higher in those courses. Additionally, students on probation must complete all coursework on time and are not eligible for "N" (incomplete) grades and any "Y", "F", "NF", "U", or "W" grades may subject them to dismissal from the College. Students who cannot make satisfactory academic progress (successful completion of a minimum of 12 credits per semester) are also subject to academic dismissal from the College.

Academic Progress

To qualify for a bachelor's degree, a student must earn a cumulative grade point average of at least 2.00 (in addition to completing the studies prescribed for the degree sought). Students must also advance in their studies by successfully completing a minimum of 12 credits per semester. Students who fail to make satisfactory academic progress are subject to review by the Academic Standing Committee. Those students may be placed on Academic Probation. In circumstances involving those students who have entered

Villanova University through the Academic Advancement Program, satisfactory progress of the student will be determined by the Academic Standing Committee and/or Assistant Dean for Undergraduate Students. In the event that, due to poor high school preparation, additional time is necessary for the student to complete the requirements towards graduation, the student will be viewed as being in a five year program. Satisfactory progress will be viewed accordingly.

Academic Standing

The record of any student whose cumulative or semester grade point average falls below 2.00 will be reviewed by the Academic Standing Committee for appropriate action. Students in science programs whose technical grade point average falls below 2.00 will also come before the committee. Typically, the student will either be placed on academic probation or dismissed from the College. Additionally, the committee reviews the records of students who have failed to make satisfactory academic progress by successfully completing a minimum of 12 credits per semester.

Advanced Placement and International Baccalaureate Credit

Students should request that the College Board send Advanced Placement (AP) scores to Villanova University (our code is 2959). AP scores are received in the Registrar's Office and forwarded to our Office for Undergraduate Students, where the determination on credit is made. Most AP scores for incoming freshmen reach Villanova by mid-July. If the scores are received before freshmen classes begin, a representative of the Office for Undergraduate Students will communicate with the student and authorize the Registrar's Office to post the appropriate credit to the academic record. For scores received after classes begin, this representative will simply direct the Registrar to add any credit they approve. All AP/IB scores must be accepted and approved before the completion of two semesters at Villanova in order to be considered for credit. AP credits appear in the "Transfer Credit" area of the student record.

Incoming students who have taken AP or International Baccalaureate Higher Level (IB) exams should check with their academic advisor during the first week of classes to verify Villanova's receipt of the official scores and to

ensure that proper adjustments have been made to their academic record. In some instances, scores are sent to the Villanova Registrar after courses have been assigned based on the student's response to the Incoming Students Questionnaire.

AP and IB credit cannot be used to fulfill any core requirements, with the exception of foreign language, but may fulfill requirements for majors, minors, concentrations and certificates. AP/IB credits will be treated as transfer credits in these cases and all transfer credit policies will apply. The following is the list of tests and scores and their application to the baccalaureate degree. The first table is a list of Higher Level IB tests and scores; the second is a list of AP tests.

Students wishing to remove any AP/IB credit from their record should complete the "Request to Remove AP Credit" form available on MyNova. Once this request has been processed, it cannot be reversed.

**International Baccalaureate
Credit and Course
Equivalence
Note: Credit is Only Given
for Higher Level Exams**

Subject	Score of 5	Credit	Score of 6 or 7	Credit
Biology			BIO 2105	4
			BIO 2106	4
Chemistry			CHM 1103	1
			CHM 1104	1
			CHM 1151	4
			CHM 1152	4
Computer Science HL	CSC 1051	4	CSC 1051	4
Information Technology	CSC 1930	3	CSC 1930	3
Economics	ECO 1001	3	ECO 1001	3
	ECO 1002	3	ECO 1002	3
English	ENG 1050	3	ENG 1050	3
French A2 or B		0	FFS 1121	3
			FFS 1122	3
Geography	GEV 1002	3	GEV 1002	3

History Americas			HIS 4495	3
History Europe			HIS 1021	3
Italian A2 or B		0	ITA 1121	3
			ITA 1122	3
Latin	Placement	0	LAT 1121	3
			LAT 1122	3
Mathematics			MAT 1500	4
Math Further			MAT 1500	4
		MAT 1500	4	MAT 1505
Music			SAR 3030	3
Philosophy			PHI 2990	3
			PHY 1100/11	4
Physics			PHY 1102/13	4
			PSY 1000	3
Psychology			SPA 1121	3
Spanish A2 or B		0	SPA 1122	3

* Sample of lab work needed.

Academic Placement Equivalency Chart

Advanced Placement Subject-Test Number	Score of 3 Courses	Score of 4 or 5 Credits	Courses	Credits
Art History- (13)			AAH 1101 or AAH 1102	3
Biology- (20)			BIO 2105	4
Calculus AB- (66) or Calculus Subgrade- (69)			BIO 2106 MAT 1500	4
Calculus BC- (68)			MAT 1500	4
Chemistry- (25)			MAT 1505 CHM 1103	1 1

	CHM 1104	
	CHM 1151	4
	CHM 1152	4
Chinese Language & Culture- (28)	CHI 1111	6
Computer Science A- (31)	CHI 1112	6
Computer Science Principles- (32)	CSC 1051	4
Economics: Macro- (35)	CSC 1020	3
Economics: Micro- (34)	ECO 1002	3
English Language & Composition- (36) or	ECO 1001	3
English Literature & Composition- (37)	ENG 1050	3
Environmental Science (40)	GEV 1052	3
French Language & Culture- (48)	FFS 1121	3
Government and Politics: Comp- (58)	FFS 1122	3
Government and Politics: US- (57)	PSC 1300	3
History, European- (43)	PSC 1100	3
History, U.S.- (07)	HIS 1021	3
	HIS 1002 or	3
	HIS 1003	
	HIS 1040 or	3
History, World- (93)	HIS 1050	3
Human Geography- (53)	GEV 1002	3
Italian Language & Culture- (62)	ITA 1121	3
Japanese Language & Culture- (64)	ITA 1122	3
Latin- (60)	JPN 1111	6
Placement Only	JPN 1112	6
	LAT 1121	3
Physics C: Mechanics- (80)	LAT 1122	3
	PHY 1100	3
	PHY 1101	1
Physics C: Electricity and Magnetism- (82)	PHY 1102	3
	PHY 1103	1
Psychology- (85)	PSY 1000	3
Spanish Language- (87) or	SPA 1121	3
		3

Spanish Literature &
Culture- (89)

SPA
1122
MAT
1230 **or** 3
CSC
2300

Statistics- (90)

Apply for Re-Admission

Students applying for re-admission to the full-time undergraduate day program should complete the "Application for Re-Admission to the College of Liberal Arts & Sciences" form. Generally, a degree program should be completed within six years of original start date. However, students may return to full-time day student status within approximately ten years of their original date of enrollment. Once more than twelve years have passed from original start date, former students **must** apply to complete their degree through the College of Professional Studies.

If fewer than ten to twelve years have passed, and you wish to take classes in person on a full-time basis, please forward this form and the accompanying items to the Office for Undergraduate Students (SAC 107) via email at as-ous@villanova.edu, fax at (610) 519-6322 or the address below:

Office for Undergraduate Students
Attn: Susan Jacobs
800 E. Lancaster Avenue
SAC 107
Villanova, PA 19085

Applications take several weeks to be reviewed since we may need to access old records. Please submit the application no later than November 15 for a possible spring start, April 15 for a summer start and July 15 for a possible fall start. Applications received less than one month prior to the start of a new semester will be considered for the following semester.

Attendance

Class and laboratory attendance for first year students is mandatory. A first-year student will receive a grade of "Y" (failure) whenever the number of unexcused absences in a course exceeds twice the number of weekly class meetings for the course. For students beyond the first year, attendance policies are determined by

the instructors of the various courses. The full policy regarding attendance is [available on the Provost's website](#).

Auditing a Course

A student may elect to audit a course to reinforce and strengthen his/her current knowledge or to explore new areas without the pressure of tests and grades. No academic credit is earned for auditing a course; however, the audited course is noted on the student's official record. Permission to audit a course must be obtained from the course instructor. Forms to request to audit the course are available online. Visit MyNova and search for OUS Forms.

CLAS Students Taking College of Professional Studies Courses

Students in the College of Liberal Arts & Sciences are not permitted to enroll in courses restricted to the College of Professional Studies. Course restriction information is available through searching the master schedule in MyNova.

Closed Section

Students will not be permitted to enroll in closed sections. Exceptions to this rule will be made only by the chairperson of the academic department offering the course. If other sections or other courses are available to satisfy the degree requirements, then the exception will not be granted. Student employment conflict is not a legitimate reason for admittance to a closed section.

Complaints Against Faculty

Student complaints concerning an instructor's handling of a class, classroom presentation, professional demeanor, or course policies should be directed to the chair of the faculty member involved. Normally, such complaints should be made within six months of the end of the course in which the complaint arose. If the complaint is against the chair the procedures will be modified in accordance with the University's policy regarding complaints against faculty. The full policy and guidelines for enforcement are available [to view on this page](#).

Confidentiality

Villanova University's student records policy was established in accordance with the Family Educational Rights and Privacy Act (FERPA) of 1974 as amended. The complete policy can be viewed in the current Villanova University Catalog. Students who do not wish directory information to be made public must complete and submit a Student Record Confidentiality Request Form (available on the Registrar's website), along with photocopied proof of identification. A student's directory information can only be prevented from appearing in publications compiled after the date on which the Office of the Registrar receives the student's request form; to ensure that your directory information is excluded from the student directory and other annual publications, submit your request form within 10 days of when Fall registration opens. To revoke a confidentiality request, contact the Office of the Registrar in person (Kennedy Hall, 2nd Floor) or mail/fax a written request with photocopied proof of identification.

Credit by Exam

To encourage independent study and recognize personal knowledge and mastery of subject matter, Villanova University provides qualified matriculated students with the opportunity to "test out" of certain courses. The student who successfully passes such an examination satisfies the requirements of and earns the credit for the respective course. For more information, [see the webpage located here](#).

Limitations

Participation in the program is not automatically given, and is contingent upon the following limitations:

1. The student must be matriculated, and offer evidence of sufficient background to the department offering the exam to have a reasonable command of the subject matter;
2. If the student has previously taken the exam to waive course requirements, the student may not take an exam for credit in the same course;
3. A student cannot use this program to pass a course for which the student has failed, either at Villanova or any institution;
4. A student on probation, or who is suspended, may not take an exam for credit;

Conditions

The granting of credit is contingent upon the following conditions:

1. A student may not challenge a foreign language requirement in their primary language. Once a sequence of language has begun, a student may not revert to a lower-level course.
2. A fee of \$130 per credit hour will be levied
3. Credit granted will not exceed that assigned to the course as listed in the University Catalog
4. The maximum credit allowed the student through this program is 30 hours
5. Credit for no more than three courses may be applied to a student's major
6. A passing grade of "CE" will appear on the student's transcript; a failing grade will not be recorded
7. The test dates, determined by the Director of Student Services, will take place shortly after the mid-semester break and before the pre-registration period in the Fall and Spring. The exam is also given in July.

Procedure

1. The application process is the responsibility of the student and must be completed one month before the date of the exam. The student begins the application process with the director who will provide them with the appropriate forms and directions for completion.
2. The form is then taken to the Bursar's Office for validation once the appropriate fee is paid. A "no show" student forfeits all fees.
3. During the week prior to the exam, the department will provide the director with a copy of the exam for each candidate. This will be in a sealed envelope properly identified with the student's name, Banner ID, department, and exam title on its front.
4. Notification of students of time and place of the exam, and other arrangements, are the responsibility of the Director.
5. Students who fail the exam have the right to review it with the faculty in question. Exams are destroyed in the semester in which they are administered.
6. The Director will notify the students and the Registrar's Office of the exam results.

Credit Increases

Students should complete the "Request for a Credit Increase" form if trying to register for five

courses of three or more credits (and additional 1 to 2 credit courses) and need more than 17 credits, if an Arts student, or 19 credits, if a Sciences student. The form should be completed prior to the assigned registration time and submitted it to the Office for Undergraduate Students.

Note: If a student's cumulative GPA is at least 3.0 and she/he/they would like to take a sixth course with credits totaling to 19 credits, the credit limit is raised after the final registration period for students with a cumulative GPA of 3.0 or higher for arts students. Students that fall under this category do not need to fill out a form.

Cross College Majors

Students in the College of Engineering, M. Louise Fitzpatrick College of Nursing, and the Villanova School of Business may pursue a second major in the College of Liberal Arts and Sciences. The CLAS major will be considered a second major added to the student's primary degree program; the student will not be required to complete CLAS Core or Free Elective requirements and will not be awarded a second degree. The second major will be noted on the student's official transcript. Students who wish to pursue this option must complete the appropriate form (available in the Office for Undergraduate Students, SAC 107) and obtain all required signatures.

Dean's List

At the end of the fall and spring semesters, the College of Liberal Arts and Sciences officially recognizes its high-achieving students by including their names on the Dean's List. Inclusion on this list recognizes a student's commitment to an intellectually rigorous education in the liberal arts and sciences, one that fosters critical insight, mature judgment, and independent thinking. Students must complete at least 12 credits of letter grade courses each semester with a minimum GPA of 3.50. No S, WX, or N grades are permitted in these 12 credits.

Declaring or Changing a Major for CLAS Students

Students wishing to declare or change their major/program should complete the "Application to Change or Declare Major" available on MyNova. The department will review and if approved will assign an advisor to the student and forward the form to the Office for

Undergraduate Students. Once received, the Office for Undergraduate Students will notify the student of the status of their request.

Declaring a CLAS Minor or Concentration

To declare a concentration or minor within the College of Liberal Arts and Sciences, complete the "Application to Add or Remove a CLAS Minor or Concentration" available on MyNova. Some CLAS departments have additional requirements to apply to the minor. Consult with the department for additional information.

Degree Requirements

Every degree program in the College of Liberal Arts and Sciences is made up of three components: the Core Curriculum, Courses in the Major, and Free Electives. The Baccalaureate degree is awarded when the curriculum prescribed by the College for one or more of the various degree programs has been satisfied. Candidates for graduation must meet all of the following seven requirements:

1. A minimum of 122 credit hours;
2. The successful completion of the Core Curriculum, academic major requirements, and free electives*;
3. A cumulative GPA of at least 2.00. (Science students must also have a minimum technical grade point average of at least 2.00);
4. A minimum of half of the Core Curriculum requirements must be fulfilled at Villanova University;
5. A minimum of half of the requirements for the major must be fulfilled at Villanova University;
6. The final 30 credits of the degree program must be earned at Villanova University or a Villanova University approved program;
7. At least 61 credits must be earned at Villanova University.

**Please note that a maximum of 10 credits in courses fewer than 3-credits may be applied to a student's free-elective area. Lab courses do not count toward the 10-credit limit. Further restrictions regarding subject of these courses apply.*

See the College of Professional Studies Catalog for information on the Bachelor of Interdisciplinary Studies Degree (BIS), the Bachelor of Arts in General Arts, etc.

Disclosure of Student Records

Villanova University, in accordance with the Family Educational Rights and Privacy Act (FERPA) of 1974, as amended, has adopted a Student Records Policy to address the following issues with respect to education records: (1) disclosure of directory information; (2) confidentiality of personally identifiable information; and (3) student rights to inspect, review and seek amendment of their records. In general, education records are defined as records maintained in any form by the University that are directly related to a student. The full text of this policy is available on the [Provost's webpage](#).

Double Majors/Primary & Secondary Majors

By default, the first major that a student declares is treated as their primary major. A student may not declare a secondary major without first declaring their primary major.

Students may declare a secondary major by completing the "Application to Declare/Change/Drop Major" form available on MyNova. Students may not double major in both Comprehensive Science and in another science OR Liberal Arts and another major.

Drop/Add

During the first five (5) class days of a semester, students are given the option of dropping or adding courses by using their pin number and going online through MyNOVA, or by completion of a paper form available in the Office for Undergraduate Students without incurring academic penalty or affecting the student's official transcript. After this period, students may withdrawal (WX) from courses but may not add a course.

Dual Degree Policy

Normally, a student may receive only one degree, regardless of how many majors the student earns. Students who have completed all the requirements for two or more degrees - e.g., B.B.A. and B.S.A, or B.B.A. and B.A, or B.A. and B.S.. - must choose which degree to take - unless they have completed 43 or more additional credits beyond the greater of the two program credit requirements, in which case they may

receive two degrees and two diplomas. Multiple majors, regardless of college, will appear on a student's transcript.

F Grade

Required courses carrying a final grade of F must be repeated unless the student transfers to another college of the University where the course for which the F grade was received is not a requirement for the degree. The reasons for student deficiencies are reported by the faculty member at mid-semester and at the end of the semester to the Office for Undergraduate Students.

Fast Forward Courses

Transfer Credit will not be awarded for Accelerated or Fast Forward courses. In order for a non-professional three-credit course to be considered for transfer credit, the course must have met on at least 15 different days and with a minimum total meeting time of at least 37 hours. For courses in question, the student must provide documentation stating the manner in which the course was taught along with the official transcript. Courses in professional studies will be evaluated on a case- by-case basis. The College reserves the right to test students to assess course outcomes.

Final Exams and Finals Week

Occasionally students will encounter conflicts in the examination schedule such that two of a student's examinations are scheduled at the same time or three examinations are scheduled on the same day. In the event of such a conflict, the student must notify the instructor at least seven days in advance of the scheduled exam. The instructor will make alternative arrangements for the student to complete the examination. In resolving conflicts, multiple section exams should take precedence over exams for a single section, and courses in the major should take precedence over non-major courses. Extraordinary difficulties encountered in effecting such an arrangement will be resolved by the Assistant Dean for Undergraduate Students (Susan Jacobs in OUS, SAC 107). The full text of this policy is available [on this webpage](#).

Full-Time Student Status vs. Part-Time Student Status (i.e. Scholastic Load)

A student must take a minimum of 12 credits a semester to be a full-time student. Permission to take fewer than 12 credit hours may be obtained in exceptional circumstances with the written approval of the Assistant Dean for Undergraduate Students. In the College of Liberal Arts & Sciences, students with a G.P.A. over 3.0 may overload with registration for the sixth course, possible only after the main registration period is over. No special approval would be needed.

Grade Appeals

Student complaints concerning a grade should be directed to the chair of the faculty member involved. The chair shall normally require, but do no less than urge, a student who brings a complaint about a grade in the first instance to try to resolve the matter with the course instructor. That failing, the chair should attempt to resolve the issue between the student and instructor. The chair may consult with others in connection with his or her review of the complaint. Such complaints should be made according to the following deadlines: Spring Semester and Summer Semester grade complaints: Last Friday in August; Fall Semester grade complaints: Last Friday in January. If the complaint is against the chair, it should be directed to the Dean. The full text of the policy and process regarding grade appeals is available [on this website](#).

Grade Changes

All grades are permanent except for N and NG, which are temporary grades and must be replaced with grades submitted by the instructor. If a change is not submitted, the N or NG automatically becomes an NF. Students must submit all work to instructors by the last Friday in January (Fall semester) or June (Spring semester). Instructors must submit replacement grades by the second Friday in February (Fall semester) or July (Spring semester).

Grade Definitions and Values

A (4.00), A- (3.67)

The highest academic grade possible; an honor grade which is not automatically given to a student who ranks highest in the course, but is

reserved for accomplishment that is truly distinctive and demonstrably outstanding. It represents a superior mastery of course material and is a grade that demands a very high degree of understanding as well as originality or creativity as appropriate to the nature of the course. The grade indicated that the student works independently with unusual effectiveness and often takes the initiative in seeking new knowledge outside the formal confines of the course.

B+ (3.33), B (3.00), B- (2.67)

A grade that denotes achievement considerably above acceptable standards. Good mastery of course materials evident and student performance demonstrates a high degree of originality, creativity, or both. The grade indicates that the student works well independently and often demonstrates initiative. Analysis, synthesis, and critical expression, oral or written, are considerably above average.

C+ (2.33), C (2.00), C- (1.67)

Indicates a satisfactory degree of attainment and is the acceptable standard for graduation from college. It is the grade that may be expected of a student of average ability who gives to the work a reasonable amount of time and effort. This grade implies familiarity with the content of the course and acceptable mastery of course material; it implies that the student displays some evidence of originality and/or creativity, and works independently at an acceptable level and completes all requirements.

D+, (1.33), D (1.00), D- (0.67)

Denotes a limited understanding of the subject matter, meeting only the minimum requirement for passing the course. It signifies work which in quality and/or quantity falls below the average acceptable standard for passing the course. Performance is deficient in analysis, synthesis, and critical expression; there is little evidence of originality, creativity, or both. Note: D- is the lowest passing grade awarded.

F (0.00)

Indicates inadequate or unsatisfactory attainment, serious deficiency in understanding of course material, and/or failure to complete requirements of the course.

N Incomplete: Course work not completed.

S Satisfactory: Assigned in Satisfactory/

Unsatisfactory courses.

SP Satisfactory: Progress (for use at Mid-Term Only)

U Unsatisfactory: Assigned in Satisfactory/Unsatisfactory courses.

WX: Approved withdrawal without penalty.

W: Approved withdrawal with penalty.

AU: Audit.

Y: Unofficial withdrawal from course (or for freshmen, failure for excessive absences)

NG (Or Blank): no grade reported. All grades are permanent except for N and NG, which are temporary grades and must be replaced with grades submitted by the instructor. If a change is not submitted, the N or NG automatically becomes an NF. Students must submit all work to instructors by the last Friday in January (Fall semester) or June (Spring semester). Instructors must submit replacement grades by the second Friday in February (Fall semester) or July (Spring semester).

View the full policy and grading information on the [Office of the Registrar's website here](#).

Grade Point Average (GPA)

In addition to passing all required courses, a cumulative grade point average (GPA) of at least 2.0 is necessary for graduation. For science students, a Technical GPA of at least 2.0 is also required. For Arts students, some majors may also require a minimum GPA for all courses that are used to meet the major requirements. Grades for all courses taken at Villanova University (expect S/U grades and WXs) are calculated in the GPA. If a course is repeated, then both grades are included in the computation. If a transfer course is accepted to fulfill a requirement for a failed Villanova University course, then the failed Villanova course is still included in the GPA computation. The grade point average is determined by taking the number of credits for each course times the quality points earned and dividing the total quality points by the total credit hours attempted. For more information on grade point average, [view the Office of the Registrar's policy here](#).

Example of GPA Calculation

GPA = Total Quality Points / Total Attempted Credits

	Course Grade	Credits	Quality Points
Course #1	B	3	9.00
Course #2	C	3	6.00
Course #3	C	3	6.00
Course #4	C	3	6.00

Total Attempted Credits: 15 Total Earned Credits: 12
Total Quality Points: 27

GPA = $27/15 = 1.80$

Grade Reports

Grade reports are computed at the middle and end of each semester. However, only the grade report at the end of the semester is part of the student's permanent record. These reports are available to students online through their MyNOVA account. Students are directed to [the University Catalog](#) for a complete description of the University Grading System. Any inaccuracy in this record must be reported to the Office of the Registrar within two weeks of its receipt; otherwise, the grade will stand as it is.

Graduation Honors

Graduation honors will be noted on the degrees of graduating students meeting the following requirements:

1. Summa cum laude.....minimum cumulative GPA of 3.90
2. Magna cum laude.....minimum cumulative GPA of 3.75
3. Cum laude.....minimum cumulative GPA of 3.50

Grade Extensions on Incomplete Grades

Students who have taken an incomplete (i.e., "N") grade and need additional time to complete the work due to further extenuating circumstances must first gain the professor's approval. If the professor grants the request, the student and professor must agree upon a completion date for the work, complete a "Request for Grade Extension on an Incomplete Grade" form, and submit it to the Office for Undergraduate Students for the Assistant Dean's approval prior to the initial deadline for the submission of incomplete work, which is posted on the online academic calendar. Students may only extend the deadline for courses in which an incomplete was taken once with the Assistant Dean's approval. Students may be required to submit supporting documentation.

The remaining coursework must be completed and submitted by the established deadline or the grade will convert to an "NF" grade, which is

calculated as an F in the student's GPA. No further grade extensions are possible. Any discrepancies for an Incomplete N grade must be resolved before the completion of the following semester.

Students requesting an extension can complete the "Request for a Grade Extension on an Incomplete Grade" form available on MyNova.

Incomplete Grades for Undergraduate Students

Requests for incompletes are considered for extenuating circumstances only (illness, family emergencies, etc.). Students who request an "N" grade must have completed the majority of their work and must establish with the instructor a plan and a timeline for completing outstanding requirements. Incomplete grades might have an impact on a student's financial aid, so students should consult with their financial aid counselor regarding incomplete grades. Undergraduate students who have two or more incomplete grades at the end of a semester will be reviewed by the Academic Standing Committee. Students who have multiple incomplete grades over the course of an academic year may be placed on academic probation for failure to make satisfactory academic progress.

Laboratory Science Accommodation for Student with Disabilities

Villanova University recognizes its responsibility to provide alternatives to the laboratory experience for those students who have documented physical disabilities and are unable to perform laboratory work. Mendel Science Experience courses are a part of the Core Curriculum in the College of Liberal Arts and Sciences, and each of these courses is coordinated lecture/laboratory. In the event that a student has a proven disability, verified by a physician, the student should meet with the course professor at the start of the semester to discuss alternative to the co-requisite laboratory. In lieu of a laboratory, an appropriate alternative experience may be obtained by performing library research on a specific topic agreed upon by the student and the professor – one relevant to the course material and equivalent in rigor to a three hour laboratory.

The student and faculty member should fill out a form designating, the topic to be researched, the expectations of the faculty member in terms of coverage, rigor, and due date. Both the faculty member and student should sign and date the form prior to sending it to Dr. Crystal Lucky, Associate Dean for Baccalaureate Studies, SAC 105.

Leave of Absence

Students who plan to leave the University on a temporary basis should request a non-medical leave of absence. Official leave of absence from the University must be authorized by the Assistant Dean or Dean's designee. Students interested in pursuing a non-medical or medical leave should contact Ms. Charisma Presley, Retention Manager, to learn more about the process.

The full text of this policy is available [on this webpage](#).

Mathematics Placement

The Core Curriculum requirement for all students in the College of Liberal Arts and Sciences is one course. Science majors and some others are required to take a two-semester sequence or more. Incoming students in the College of Liberal Arts and Sciences will normally take a Math or Statistics course in either the fall or spring semester of their first year. A student's potential choice of major and career plan affects his or her choice of Mathematics courses.

Medallion of Excellence

Each department in the College of Liberal Arts and Sciences may nominate one graduating senior each year to receive a Medallion of Excellence. Generally, to be eligible for nomination, students must have earned a minimum of three fourths of their degree at Villanova in the College of Liberal Arts and Sciences and must have a minimum cumulative GPA of 3.50.

Each department has named its medallion either for a luminary from the past who has deeply affected the discipline or an outstanding person who helped to shape the course of study at Villanova University.

Medical Leave of Absence

A student may experience physical or psychological conditions that significantly impair the student's ability to function successfully or safely in his or her role as a student. In such cases, the student may decide that time away from the University for treatment and recovery can help restore functioning to a level that will enable the student to return to the University and perform successfully in and out of the classroom. Students interested in pursuing a Medical Leave of Absence should contact the Office for Undergraduate Students to review the process and make an appointment with Ms. Charisma Presley, Retention Manager.

Official Date of Graduation

The Academic Calendar for each year shall indicate the official graduation dates for the University. (These dates should not be confused with the dates for the annual commencement exercises). The Deans shall send the Registrar a list of all students in their College or School who have satisfactorily completed by the official graduation date all the requirements for graduation. The Registrar shall issue diplomas only to those students whose names appear on the list.

The current graduation dates are May 31, September 1, and December 31. Students certified after any of these dates will graduate officially at the next commencement.

Overload Policy

The normal course load each semester for full-time students is five courses of three credits or more (excluding labs and other 1-credit courses). The credit limit set by the Registrar during the pre-registration period is 17-credit hours for Arts students and 19-credit hours for Science students. In order to be granted permission for an overload, a student must have a cumulative grade point average of at least 3.0 (2.75 for the summer), or have achieved senior status and need a sixth course to fulfill graduation requirements.

After all students have had the opportunity to register for five courses, credit limits will be raised by the Registrar for students with a GPA of 3.0 or higher and for seniors in order to allow them to register for a sixth course through MyNOVA using their semester PIN. In no case will permission be granted for a student to take 7 courses or more than 21 credits.

Students with a GPA lower than 3.0 that need to enroll in more than 17 credits a semester to achieve the normal course load for full time students of five courses will need to have their credit limit raised prior to the registration period. Students with this circumstance should complete a "Request for Credit Increase" form available on MyNova.

Phi Beta Kappa (ΦBK)

Phi Beta Kappa (FBK) is a National Honors Fraternity for Colleges of Liberal Arts and Sciences. It was founded at the College of William and Mary in 1776. Since that time, its rigorous and comprehensive standards have made election to it a premier sign of excellence. The Sigma of Pennsylvania Chapter of Phi Beta Kappa was founded at Villanova University in April 1986.

Phi Beta Kappa standards reflect the highest ideals of liberal arts education at Villanova: education that is concerned with values and facts, as well as wisdom and knowledge; education that seeks freedom from ignorance, alienation, and inhumanity; education that values intellectual integrity and tolerance over expediency, and breadth of scholarly achievement over specialized expertise.

Juniors and seniors who are candidates for a degree in the College of Liberal Arts and Sciences, whose academic achievements reflect the goals of Phi Beta Kappa, and who meet the following specific criteria shall be eligible for consideration for election to Phi Beta Kappa.

1. Candidates must have a GPA of at least 3.50 (3.80 to be elected as a junior).
2. At least three-fourths of a candidate's academic work must have been taken in the liberal arts and sciences, as distinct from applied or professional work.

The Chapter chooses candidates with evidence of academic achievement that is of exceptional distinction and gives weight to the breadth and the quality of the overall program of courses taken by each candidate.

Election to membership in Phi Beta Kappa is wholly within the discretion of the members of the Chapter, subject only to the limitations imposed by its Constitution and By-Laws. Fulfillment of the minimum qualifications does not assure election to membership.

President

Lynne Hartnett, Ph.D. (History) Associate Professor

Vice President and President-elect

Lauren Shohet, Ph.D.

Secretary/Treasurer

Douglas Norton, Ph.D. (Mathematics and Statistics) Associate Professor and Chair

Refunds/Tuition Reversal

Refunds as a result of official withdrawal will be made according to the schedule [posted here by the Bursar's office](#). Excluded from the refund calculation will be the costs related to on-campus housing and university meal plans. Activity, library, and medical fees are not refundable. There will be no refund for unauthorized withdrawals. Students who do not register or who notify the Registrar's Office prior to the first day of class that they will not enroll are entitled to a full refund. Students should consult the [full policy on the Bursar's website here](#).

Removal of AP Course Credit

Students requesting to remove credit for AP courses should complete the "Request to Remove AP Credit" form available on MyNova to remove credit previously earned through an advanced placement test and submitted to Villanova University. Submitting this request finalizes the removal of the credits from your transcript which cannot be reversed.

Repeat Course Request

Students may request to repeat a course that they have previously taken while at Villanova. The following conditions are in place:

1. The previous course will still be listed on the official transcript; repeating a course does not eliminate the previous attempt taken.
2. A combination of the two course grades will factor into the GPA; getting a different grade on the second attempt of a course does not replace the first attempt's grade with the second attempt's grade.
3. The course repeated will only count for credit once on the transcript; taking a course a second time does not mean a student receives credit for both attempts.
4. No course can be taken a third time; a student may only repeat a course once.

To request to repeat a course, students should complete the "Request to Repeat a Course" form available on MyNova.

Required Units for Admission

Although individual consideration is given to each applicant, it is expected that all applicants, except in the most unusual circumstances, will minimally satisfy the unit requirements listed below. A unit represents a year's work.

For Arts Curricula:

English	4	Mathematics	3
Foreign Language	2	Science	1
History or Social Science	2	Electives	3

For Science and Mathematics Curricula:

English	4	Foreign Language	2
Chemistry	1	Physics	1
Mathematics	4	Electives	4

Residency Requirement for Graduation

Normally, a student must complete the final 30 credit hours of an academic program at Villanova. Exceptions may be made by the College Dean.

Satisfactory/Unsatisfactory Grades

Grades of Satisfactory (equivalent to a "C" or better) and Unsatisfactory (equivalent to a "C-" or worse) are shown on the transcript but not included in the quality point average. Sophomores, juniors, and seniors may take one elective course a semester on a satisfactory/unsatisfactory basis. The Satisfactory/Unsatisfactory (S/U) option may not be used for courses that fulfill core, major, or minor requirements, but individual departments may offer the major seminar on a S/U basis.

Credits for courses with Satisfactory grades are included in credits earned. Students must opt for Satisfactory/Unsatisfactory by the end of the Drop/Add period.

Unsatisfactory grades need not be repeated. Each college may have additional regulations governing the satisfactory/unsatisfactory option, available from the college dean.

Students with Disabilities

Villanova University strives to provide an environment for personal and intellectual growth of all its students, and also complies with the Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973. In order to meet these commitments, Villanova offers educational opportunities and reasonable academic accommodations for the needs of qualified students with disabilities. The University's goal is to provide access and reasonable accommodations in helping the students achieve those expectations. Services for students with physical disabilities are coordinated through the Office of Disability Services. Services for students with disabilities that impact on learning are provided by various offices and coordinated by Learning Support Services (LSS). The full policy regarding students with disabilities is available [may be viewed on the page](#).

Transfer Credit Hours

Transferring Courses from Full-Time Enrollment

Students who wish to receive credit for college courses taken at another institution prior to attending Villanova must present an official transcript, course descriptions, and other documentation as needed to the Office for Undergraduate Students. Transfer credit may be awarded for college-level courses used to meet high school graduation requirements (subject to the criteria listed below). Courses will be considered for transfer credit only upon receipt of an official transcript and copies of official course descriptions. In some cases, it may be necessary to review the course syllabus to determine whether credit may be granted. It is the responsibility of the student to supply all necessary documentation.

Please note the following policies concerning transfer courses:

- In order to receive credit for a course taken at another institution, a student must have earned a grade of C or higher, and there must be an equivalent Villanova course.
- Grades earned in courses taken at other institutions are not factored into a student's Villanova grade point average.
- Transfer credits may be used to fulfill no more than half of courses for each of the following: CLAS degree, major, minor or concentration, and CLAS Core Curriculum.

- Courses taken at two-year institutions, including community colleges, are eligible for transfer credit.
- Students may transfer a maximum of five non-CLAS courses that have equivalents in the other Villanova academic colleges (Business, Engineering, and Nursing). Students who wish to have such courses evaluated for transfer credit must submit course descriptions and/or syllabi to the appropriate college for review.
- Courses should be presented for evaluation prior to a student's first semester at Villanova. Courses presented after the student's first year at Villanova will no longer be eligible for credit.

College Courses Taken Prior to High School Graduation

College-level work completed prior to high school graduation, including college courses that fulfill high school graduation requirements, may be awarded transfer credits upon receipt of the following:

1. an official letter from the high school principal, secondary school counselor or other educational professional describing the college-level program of study.
2. an official letter from the college/university stating that the courses were taught by members of the regular faculty, open to enrollment by and graded in competition with regularly matriculated undergraduates at the college and a regular part of the normal curriculum published in the college catalog;
3. a course syllabus; and
4. an official, seal-bearing transcript from the college/university showing a grade of C or better. Credit or advanced standing for courses taught at the high school will not be accepted.

With respect to courses taught in a distance learning format, and for other requirements, each academic program will review on a case by case basis. Each supporting document is to be sent to the Dean of the College in which the student is enrolling.

All pre-matriculated credit must be accepted and approved before the completion of two semesters at Villanova.

Enrolling in Courses at Another Institution as a Villanova Student

Once a student has matriculated in a degree program at Villanova University, credit for courses from other universities may only be transferred to Villanova under certain circumstances. Students may request to enroll in courses at another institution through filling out the "Request to Enroll in Courses at Another Institution" online form. The Office for Undergraduate Students must receive official transcripts for approved courses taken elsewhere before the completion of two subsequent semesters at Villanova. Credits will not be accepted for courses that take place during terms that do not align with Villanova's academic calendar.

Transfer Students

External Transfer Students

Students wishing to transfer to the College of Liberal Arts and Sciences after having attended a college or university other than Villanova must submit a formal application to the Office of University Admission. Candidates for transfer admission ordinarily will have completed a minimum of five college courses of three credits or more with a grade of C or better in each course and earned a grade point average (GPA) of at least 3.0. Students who previously applied to the College of Liberal Arts and Sciences and were placed on the waiting list will be considered for transfer admission. External transfer applicants must indicate if they are applying to another Villanova academic college in addition to the CLAS. Students who have transferred from another institution to the CLAS are not eligible to transfer internally to any of the other Villanova academic colleges. If you intend to earn a degree from the School of Business, College of Nursing, or College of Engineering, you must apply directly to that college. Transfer applications must be received by June 1 for Fall Semester applicants and November 1 for Spring Semester applicants. Offers of admission are contingent upon successful completion of the current semester's courses and may be rescinded. Applicants must present appropriate documentation in order to receive credit for courses taken at their previous institution (see above criteria). Students intending to transfer more than fifteen courses must apply to and be accepted into a major prior to enrollment.

Internal Transfer Students

Students who wish to transfer to the CLAS from other Villanova academic colleges CLAS must complete the Application to Enter the College of Liberal Arts and Sciences and must read and sign the CLAS Internal Transfer Policy form. (These forms are available on-line and in the Office for Undergraduate Students.) Applicants will be notified of an admissions decision at the end of the semester during which the application was submitted. The minimum criterion for admission to the CLAS is a GPA of 2.33 for all Arts courses taken at Villanova. Students are not permitted to transfer from the College of Liberal Arts and Sciences to the College of Professional Studies.

Unauthorized Withdrawal

Students who leave the University without authorization will be treated as having withdrawn from the University. They may not return to the University without reapplying directly to one of Villanova's colleges.

Undergraduates Taking Graduate Level Courses

Undergraduates may take graduate courses, provided they meet the standards set down by each college: e.g., senior standing (in terms of credits, not in terms of years at Villanova), grade point average, and appropriate permissions (advisor, assistant dean, chair). Undergraduates may take a maximum of two graduate courses in any semester. If an undergraduate takes a graduate class, in that semester the student is limited to taking a maximum of 16 credit-hours of work. Further restrictions and the full policy can be found on the [Provost website](#).

Withdrawal from the University

Students who wish to leave and who do not plan to return to the University should request a Withdrawal. Official withdrawal from the University must be authorized by the Assistant Dean or Dean's designee. In order to request an official withdrawal, students should contact the Office for Undergraduate Students to get information about the process and to make an appointment with the Retention Manager, Ms. Charisma Presley. Students who request an official withdrawal during the semester may be eligible for refund of some or all of the tuition paid for that semester. A student who has

withdrawn from the University who wishes to return, must apply directly to the college the student wishes to attend (admission is granted at the sole discretion of the dean of that college). The full policy addressing University withdrawal is available on the [Provost website](#).

W Grade

Withdrawal after the official deadline is indicated by a W grade, withdrawal with academic penalty. The grade is calculated as an F in determining the GPA.

Walkers at Commencement

Each year there are a small number of students who have not fulfilled all of the requirements for May graduation but who wish to participate in commencement exercises with their entering class. Students who have only three or fewer courses remaining to fulfill the requirements for graduation, or who can complete the degree requirements before the beginning of the next Fall Semester, may petition to participate in the graduation ceremony. The names of all such students throughout the University will not be included in the commencement program until the following May, after they have, in fact, been graduated. Students may participate in only one commencement ceremony.

Students wishing to walk at commencement should complete the petition form available on MyNova and in the Office for Undergraduate Students. This petition is due no later than April 15. Any student wishing to walk must meet with the Director of Student Services.

Withdrawal from a Course

Until the final day for authorized withdrawal from courses, (for an exact date, see the [academic calendar](#)), a student may withdraw from a course without penalty and will receive the grade of "WX." After that date, a student seeking authorized withdrawal without penalty must petition the Dean of his or her college, who has sole authority to grant withdrawals without penalty.

Note that withdrawals without permission will receive a "W" grade, which is calculated as an "F" in computing one's quality point average.

WX Grade

The grade WX indicates an authorized withdrawal; the grade is not considered in the calculation of the GPA and tuition will not be refunded. The last day for Authorized Withdrawal Without Academic Penalty (WX grade) is published on the official University calendar and usually occurs after mid-term grades have been submitted and during the academic advising and course selection period for the upcoming semester. Authorization for such withdrawal may be given only by the Assistant Dean for Undergraduate Students (Susan Jacobs in OUS, SAC 107).

Y Grade

The grade Y is given when a student unofficially withdraws from a course (usually stops attending class). It is reflected in the grade point average (GPA) as an F. If a course is repeated, then the grades in both courses will be included in the GPA calculation. A first-year student will receive a grade of Y (failure) whenever the number of unexcused absences in a course exceeds twice the number of weekly class meetings for the course.

Degrees

Aerospace Studies (Air Force ROTC)

Aerospace Studies Program (Air Force ROTC)

Program offered through St. Joseph's University

About

Villanova students are eligible to participate in the Air Force Reserve Officer Training Corps (AFROTC) through a cross-enrollment agreement with Saint Joseph's University. All Aerospace Studies courses will be held on the Saint Joseph's campus. The AFROTC program enables a college student to earn a commission as a Second Lieutenant in the U. S. Air Force while concurrently satisfying requirements for his/her baccalaureate degree.

Detailed information may be obtained from the Professor of Aerospace Studies, AFROTC Det 750, Saint Joseph's University, Philadelphia, Pennsylvania 19131, (610) 660-3190. Go to <http://www.afrotc.com/> for further details.

Type: Program

Africana Studies

Africana Studies Minor

Contact: [Vincent Lloyd, PhD](#), Director, Africana Studies Program

Location: St. Augustine Center 228

Villanova's Africana Studies Program connects faculty, students, and community members interested in the academic study of Africa and the African diaspora. With 25 faculty affiliates, about 20 courses offered each semester, a robust calendar of public events, and a major and a minor, the Program has grown significantly since its founding in 1994. Whether the topic is politics in Africa, the literature of the Black diaspora in France, the history of the US civil rights movement, or Black theology, the Africana Studies Program encourages critical thinking, crossing disciplinary boundaries, and connecting academic work with lived reality. The Africana Studies Program pursues knowledge that has

often been overlooked or undervalued as we strive to develop deeply inclusive community. Indeed, as an Augustinian Catholic university, Villanova is oriented to its core by the vision of an African diasporic faith leader.

Type: Minor

MINOR (15 credits)

The Africana Studies program consists of 15 credits.

Program Notes:

- Students may combine three 1-credit IGR courses to count as one of the undesignated Africana courses.
- Courses taken as a part of a study abroad program may also be counted toward completion of the requirements.

Required Minor Courses:

Item #	Title	Credits
AFR 3000	Constructs of Blackness	3
	Africana History or Literature Elective	3
	AFR Elective	3
	AFR Elective	3
	AFR Elective	3

Category Descriptions

Africana History or Literature Elective

Credits: 3

Choose one course of three or more credits in History (HIS) or English (ENG) with the Africana Studies (AFR) attribute. Other courses may be taken with approval of the program advisor. Below are examples of eligible courses.

Item #	Title	Credits
ENG 2515	Black Literature: Drama	3
ENG 2520	Black Lit: Short Story	3

AFR Elective

Credits: 3

Any course with the AFR attribute.

Arab and Islamic Studies

Arab and Islamic Studies Minor (GIS)

Program Director: Catherine Warrick, Ph.D.
Office Location: 254 Saint Augustine Center
Telephone: (610) 519-7712
[Website](#)

About

The Arab and Islamic Studies program offers a major and minor within the Department of Global Interdisciplinary Studies (GIS). The major and minor provide an interdisciplinary and comparative approach to deepen students' understandings of the history, politics, culture, religion, and literature of Arab and Islamic societies. The Arab and Islamic Studies major provides outstanding preparation for careers in government, the military, business, and nonprofits, as well as essential training for graduate education. Villanova's Center for Arab and Islamic Studies, created in 1983, offers not only the AIS major and minor, but a range of programs and events on campus every semester.

Type: Minor

MINOR (15 credits)

A minor is open to all students and requires 5 courses and 15 credits.

Required Minor Courses:

Item #	Title	Credits
	AIS Capstone Elective	3
	AIS History, Political Science or Theology Elective	3
	AIS History, Political Science or Theology Elective	3
	AIS Elective	3
	AIS Elective	3

Category Descriptions

AIS Capstone Elective

Credits: 3

One capstone course with an AIS attribute.

AIS History, Political Science or Theology Elective

Credits: 3

Choose a course with an Arabic and Islamic Studies (AIS) attribute in history (HIS), political science (PSC), or theology (THL).

AIS Elective

Credits: 3

Choose any course of three or more credits with the Arab and Islamic Studies (AIS) attribute.

Arabic Language

Arabic Language & Cultural Studies Minor

Coordinator: Barbara Romaine, M.A.
Office Location: 36 Garey Hall
Telephone: (610) 519-6302
[Website](#)

About

The Arabic Language and Cultural Studies program offers Arabic language and linguistic study, and classical and modern literature and cultural study. Arabic is the language of a rich culture and civilization dating back many centuries; it is also the language of Islam and the Quran. This culture has produced such figures as Averroes, the medieval Aristotelian philosopher, Ibn Khaldun, the first social historian, and the modern poet Khalil Gibran. Between the 8th and 15th centuries the volume of literary, scholarly, and scientific book production in Arabic and the level of urban literacy among readers of Arabic were greater than any the world had even known until that time.

The program represents a cutting-edge intellectual experience that provides its minors with an advantage in critiquing, understanding, and navigating the global landscape.

Type: Minor

MINOR (28 credits)

Students can earn a minor in Arabic Language and Cultural Studies with six courses, listed below.

Required Minor Courses:

Item #	Title	Credits
ARB 1111	Basic Arabic I	6
ARB 1112	Basic Arabic II	6
ARB 1121	Intermediate Arabic I	5
ARB 1122	Intermediate Arabic II	5
	ARB Cultural Studies Elective	3
	ARB Cultural Studies Elective	3

Category Descriptions

ARB Cultural Studies Elective

Credits: 3

Choose one course of three or more credits from the following list, or another culture-based course with the Arab and Islamic Studies (AIS) attribute.

ARB Cultural Studies courses

Item #	Title	Credits
ARB 1131	Intensive Adv Arabic I	3
ARB 1132	Intensive Adv Arabic II	3
ARB 2142	Arab Culture Thru Film & Text	3
ARB 2143	Arab Culinary Culture	3
ARB 3412	Special Topics	3
ARB 5900	ARB: Independent Study	3

Art History

Art History, B.A.

Program Director: Timothy McCall, Ph.D.
Office Location: Saint Augustine Center, Room 403
Telephone: (610) 519-3897

About

The Art History Program at Villanova provides students with the knowledge and skills to interpret and critically evaluate art - and its

production, reception, and materiality - from the perspectives of different societies across time. We encourage students to investigate art not only as cultural artifacts that record and reflect particular aspects of the human experience, but also as a dynamic force that has shaped complex interactions of social, political, and economic processes both in the past and the present.

In harmony with the university's Augustinian mission and unique identity, the Art History Program emphasizes the benefits of a broader, liberal arts education. More particularly, art history students can expect to leave Villanova as sophisticated viewers and critical consumers of the visual imagery that surrounds us.

Type: Bachelor of Arts

MAJOR (33 credits)

The Art History major consists of 33 credits.

Required Major Courses

Item #	Title	Credits
AAH 1101	His West Art: Ancient-Med	3
AAH 1102	His West Art: Renaiss - Cont	3
	AAH Pre-1700 Elective	3
	AAH Pre-1700 Elective	3
	AAH Pre-1700 Elective	3
	AAH Post-1700 Elective	3
	AAH Post-1700 Elective	3
AAH 4010	Interpreting Art	3
AAH 5010	Senior Research Seminar	3
	Non-AAH Elective	3-4
	Upper-Level AAH Elective	3

Category Descriptions

AAH Pre-1700 Elective

Credits: 3

Choose a course from the following list:

Item #	Title	Credits
AAH 2000	Ancient Art	3
AAH 2001	Medieval Art	3
AAH 2002	Early Renaissance Art in Italy	3
AAH 2003	Age of Rembrandt & Bernini	3
AAH 2012	High Renaissance Art in Italy	3
AAH 3007	The Art of Ireland	3
AAH 4004	Spec Top: Renais-Baroque	3

AAH Post-1700 Elective

Credits: 3

Choose a course from the following list:

Item #	Title	Credits
AAH 1103	Visual Arts in US 1607-1876	3
AAH 1104	Visual Arts in US 1877-Present	3
AAH 2004	Modern Art	3
AAH 2005	Modern Architecture	3
AAH 2007	Hist. of Western Architecture	3
AAH 2009	Contemporary Art	3
AAH 3001	Women in Art	3
AAH 3002	Art of Philadelphia	3
AAH 3003	Romantic to Post-Impress	3
AAH 3005	Gender Sexuality Visl Culture	3
AAH 4005	Picasso and Friends	3

Non-AAH Elective

Credits: 3-4

From the following list, choose one course related to art history in another discipline; or:

- A team-taught interdisciplinary course with one Art History faculty member (GIS, History, etc.)
- Occasionally courses offered in various departments meet this requirement at the discretion of the Program Director.
- This list also includes PHI 2750.

Item #	Title	Credits
SAR 2010	Intro to Calligraphy	3
SAR 2020	Basic Watercolor Techniques	3
SAR 2021	Basic Drawing Techniques	3
SAR 2022	Basic Oil Painting	3
SAR 2150	Intermediate Watercolor	3
SAR 3031	Special Topics in Studio Art	3
SAR 4007	Painting of Icons	3
SAR 5004	Basic Printmaking	3
HIS 2309	Artifacts in History	3
MSE 2303	CHM:The Science of Art	4
CLA 2051	Cities of Ancient Greece	3
CLA 2052	Rome: The Ancient City	3
COM 1300	Film Analysis	3
HUM 3600	Amer Architecture since 1865	3
ITA 3075	Visual History of Italy	3
PHI 4150	Philosophy & Film	3
ENG 2350	Narrative Television	3
ENG 2360	Adaptation:Film as Literature	3
FFS 2075	Introduction to French Cinema	3
FFS 2076	Intro To Francophone Cinema	3
SPA 3074	Hispanic Cinema	3
COM 2340	Theories of Visual Com & Cultu	3
COM 3243	Performance Art	3
COM 3340	Film History	3
COM 3341	Gender and Film	3
COM 3342	International Cinema	3
COM 3343	Contemporary Cinema	3

Upper-Level AAH Elective

Credits: 3

Choose an upper-level Art History course from AAH 2000 to AAH 4999.

Art History Minor

Program Director: Timothy McCall, Ph.D.
Office Location: Saint Augustine Center, Room 403
Telephone: (610) 519-3897

The Art History Program at Villanova provides students with the knowledge and skills to interpret and critically evaluate art – and its production, reception, and materiality – from the

perspectives of different societies across time. We encourage students to investigate art not only as cultural artifacts that record and reflect particular aspects of the human experience, but also as a dynamic force that has shaped complex interactions of social, political, and economic processes both in the past and the present.

In harmony with the university's Augustinian mission and unique identity, the Art History Program emphasizes the benefits of a broader, liberal arts education. More particularly, art history students can expect to leave Villanova as sophisticated viewers and critical consumers of the visual imagery that surrounds us.

Type: Minor

Minor (18 credits)

The Art History Minor consists of 18 credits and 6 courses.

Program Notes:

One of the art history courses could be substituted for one course related to art history in another discipline (either Studio Art; Artifacts in History 2309, or other Material Culture course; Chemistry and Art 1058 or Science of Art MSE 2303; Philosophy of Art 2075); or, alternatively, a team-taught interdisciplinary course with one Art History faculty member (GIS, History, etc.).

Item #	Title	Credits
	AAH 1101 or AAH 1102	3
AAH 4010	Interpreting Art	3
	Art History Minor Elective	12

Category Descriptions

AAH 1101 or AAH 1102

Credits: 3

Item #	Title	Credits
AAH 1101	His West Art: Ancient-Med	3
AAH 1102	His West Art: Renaiss - Cont	3

Art History Minor Elective

Credits: 12

Choose any four courses with the AAH subject code that are of three credits or more.

One of the art history courses could be substituted for one course related to art history in another discipline (either Studio Art; Artifacts in History 2309, or other Material Culture course; Chemistry and Art 1058 or Science of Art MSE 2303; Philosophy of Art 2075); or, alternatively, a team-taught interdisciplinary course with one Art History faculty member (GIS, History, etc.).

Asian Studies

Asian Studies Minor

Program Director: HaiLin Zhou, Ph.D.

Office Location: Gary Hall 34

Telephone: (610) 519-6996

[Website](#)

About

Asia is a dynamic world region and its cultures and societies are a complex mix of both ancient traditions and modern ideas. Asia has the fastest growing economy in the world and is the birthplace of many of our new technologies. Asia is rapidly changing, democratizing, and internationalizing in ways that present both perils and possibilities for people across the globe.

In the Villanova Asian Studies Program, we offer a Major in Asian Studies as Global Interdisciplinary Studies specialization as a way for undergraduates to learn to examine the world – and themselves – through the lens of another language and culture.

The Asian Studies program offers a major and minor within the Department of Global Interdisciplinary Studies (GIS) that helps students understand the diverse histories, politics, economies, cultures, religions, arts and literatures of Asia. The program encourages in-depth study while also promoting more general inquiry into fundamental issues, such as cultural differences among Asian nations and their social and political implications, as well as learning critical thinking and problem solving to prepare students to be responsible global citizens. The program offers them not only specialized knowledge and appreciation of a region that has had, and will undoubtedly continue to have, a profound impact on the material and spiritual well-being of

humanity, but also prepares them to play their own roles in a globalized world in the “Asian Century.”

Type: Minor

Minor (15 credits or 5 courses)

Program Notes

- Courses taken as part of a Study Abroad program and one internship done abroad may count towards the minor.
- Courses with the ASN attribute may count towards the minor.
- Coursework must be done on more than one country in Asia (e.g. China, Japan, Korea, India, etc.); and in more than one discipline or department (e.g., Political Science, History, Religion, Psychology, Marketing, Economics, Global Interdisciplinary Studies, etc.).

Item #	Title	Credits
	Asian Studies Language Requirement	9-13
	Asian Studies Non-Language Electives	6

Category Descriptions

Asian Studies Language Requirement

Credits: 9-13

Three Chinese, Japanese, or other Asian language courses at the intermediate level or above.

Chinese Language Options

Item #	Title	Credits
CHI 1121	Intermediate Chinese I	5
CHI 1122	Intermediate Chinese II	5
CHI 1131	Advanced Chinese I	3
CHI 1132	Advanced Chinese II	3
CHI 1133	Advanced Chinese III	3
CHI 1134	Advanced Chinese IV	3
CHI 1137	Advanced Chinese V	3
CHI 1138	Advanced Chinese VI	3

Japanese Language Options

Item #	Title	Credits
JPN 1121	Intermediate Japanese I	5
JPN 1122	Intermediate Japanese II	5
JPN 1131	Advanced Japanese I	3
JPN 1132	Advanced Japanese II	3
JPN 1133	Advanced Japanese III	3
JPN 1134	Advanced Japanese IV	3

Asian Studies Non-Language Electives

Credits: 6

Select any two courses of three or more credits numbered above 1150. Below is a sample of courses.

Item #	Title	Credits
CHI 1151	Spec. Top. in Chinese Language	3
CHI 2143	Chinese Culture	3
CHI 3412	Chinese Special Topics	3
CHI 3413	Chinese Calligraphy	3
CHI 5900	CHI:Independent Study	3
JPN 2100	Japanese Lit Eng Trans	3
JPN 2102	Japanese Film	3
JPN 2143	Japanese Animation	3
JPN 2144	Japanese Culinary Culture	3
JPN 3412	Special Topics	3
JPN 5900	JPN:Independent Study	3

Astrophysics and Planetary Science

Astronomy & Astrophysics, B.S.

Chair: Edward L. Fitzpatrick, Ph.D.

Office Location: 456A Mendel Science Center

Telephone: (610) 5019-4820

[Website](#)

About

The APS Department offers a major in Astronomy & Astrophysics, leading to a Bachelor of Science degree. The major combines rigorous academic preparation with a strong research component, which usually culminates in the presentation of original research results at national astronomical conferences. The program is designed to prepare students for graduate studies in astronomy and related fields. In addition, and due to the strong

and balanced Liberal Arts education, the Astronomy & Astrophysics major provides outstanding preparation for careers in science journalism and science education, as well as for essentially any technically based career.

Research facilities utilized by staff and students in the APS Department include a high-speed computing facility and a suite of computer-controlled telescopes located on the roof of Mendel Science Center. In addition, the Department is a member of the Robotically Controlled Telescope consortium, which operates a 1.3 meter telescope located at Kitt Peak National Observatory. Students also have access, via faculty research programs, to state-of-the-art astronomical data from NASA-supported facilities such as the Hubble Space Telescope and the Spitzer Space Telescope, and a variety of national and international ground-based facilities.

Type: Bachelor of Science

MAJOR (86 credits)

The major consists of 86 credits, including courses in astronomy, physics, mathematics, and computer science. Students completing the major will also qualify for a minor in physics.

Required Major Courses

Item #	Title	Credits
AST 2120	Sun and Stars	3
AST 2121	Solar System Astronomy	3
AST 2122	Understanding Our Universe	3
AST 2123	Astrodynamics:Kepler & Beyond	3
AST 2133	Observational Lab I	2
AST 2134	Observational Lab II	2
AST 3141	Galactic Astronomy	3
AST 3142	Intro to Astrophysics	3
AST 3143	Astrobiology, Planets, & Life	3
AST 3148	The Prncpl of Scientific Model	3
AST 4121	Undergrad Research I	3
AST 4122	Undergrad Research II	3
CSC 4630	Software Dev and Systems	3
MAT 1500	Calculus I	4
MAT 1505	Calculus II	4
MAT 2500	Calculus III	4
MAT 2705	Diff Equation with Linear Alg	4
PHY 2410	University Phy:Mechanics	3
PHY 2411	Lab: Mechanics	1
PHY 2412	Univ Physics:Elec & Mag	3
PHY 2413	Lab:Elec & Magnetism	1
PHY 2414	Univ Physics: Thermo	3
PHY 2415	Lab: Thermodynamics	1
PHY 2416	Modern Physics	3
PHY 2417	Lab:Modern Physics	1
PHY 2601	Computational Phy Lab I	1
PHY 2603	Computational Phy Lab II	1
PHY 4100	Mechanics I	3
PHY 4200	Mathematical Physics I	3
	Upper-Level Physics Elective	3
	Upper-Level Physics Elective	3
	Upper-Level Physics Elective	3

Category Descriptions

Upper-Level Physics Elective

Credits: 3

Choose a Physics (PHY) course numbered above 3000.

Astronomy & Astrophysics Minor

Chair: Edward L. Fitzpatrick, Ph.D.
Office Location: 456A Mendel Science Center
Telephone: (610) 5019-4820
[Website](#)

About

The APS Department offers a major in Astronomy & Astrophysics, leading to a Bachelor of Science degree. The major combines rigorous academic preparation with a strong research component, which usually culminates in the presentation of original research results at national astronomical conferences. The program is designed to prepare students for graduate studies in astronomy and related fields. In addition, and due to the strong and balanced Liberal Arts education, the Astronomy & Astrophysics major provides outstanding preparation for careers in science journalism and science education, as well as for essentially any technically based career.

Research facilities utilized by staff and students in the APS Department include a high-speed computing facility and a suite of computer-controlled telescopes located on the roof of Mendel Science Center. In addition, the Department is a member of the Robotically Controlled Telescope consortium, which operates a 1.3 meter telescope located at Kitt Peak National Observatory. Students also have access, via faculty research programs, to state-of-the-art astronomical data from NASA-supported facilities such as the Hubble Space Telescope and the Spitzer Space Telescope, and a variety of national and international ground-based facilities.

Type: Minor

MINOR (24 credits)

A minor is open to all students and requires 9 courses and a minimum of 24 credits.

Required Minor Courses

Item #	Title	Credits
AST 2120	Sun and Stars	3
AST 2121	Solar System Astronomy	3
AST 2122	Understanding Our Universe	3
MAT 1500	Calculus I	4
MAT 1505	Calculus II	4
	Astrophysics Physics Elective	3
	Astrophysics Elective	2-3
	Astrophysics Elective	2-3

Category Descriptions

Astrophysics Physics Elective

Credits: 3

Item #	Title	Credits
PHY 1100	General Physics I	3
PHY 2400	Physics I Mechanics	3
PHY 2402	Physics II Elec & Magnet	3

Astrophysics Elective

Credits: 2-3

Choose one course from the following list:

Item #	Title	Credits
AST 2123	Astrodynamics:Kepler & Beyond	3
AST 3141	Galactic Astronomy	3
AST 3142	Intro to Astrophysics	3
AST 3143	Astrobiology, Planets, & Life	3
AST 3148	The Prncpl of Scientific Model	3

Biochemistry

The biochemistry program is designed for students who are interested in life at the molecular level. In our program, you will study the chemical processes involved in DNA replication, transcription, and translation. The structure of biomacromolecules and the structural implications on cellular processes will also be emphasized.

Most of the biochemistry faculty use their biochemistry training to understand disease at the molecular level, including breast cancer, lung cancer, African sleeping sickness, and pain management. Biochemistry also supports the studies of students majoring in the chemistry and life-sciences by offering introductory courses for students interested in medicine or the allied health fields.

Biochemistry, B.S.

Program Directors: Jennifer Palenchar, PhD.,
Dennis Wykoff, PhD
Office Location: Mendel Science Center Rm. 215
Telephone: (610) 519-4840
[\[Website\]](#)

About

Biochemistry is an interdisciplinary major requiring comprehensive coursework in both Biology and Chemistry. The biological relevance of chemical concepts is stressed throughout the curriculum. Students are encouraged to pursue one of the many available research experiences.

Type: Bachelor of Science

MAJOR (72 credits)

Students are accepted into the major as incoming freshmen, or upon consultation with a program director when achieving a 2.0 or better in required courses.

Required Major Courses

Program Notes:

- The student is required to continue their Physics course sequence in the second semester following their first semester of Physics.

Item #	Title	Credits
CHM 1000	Profesl Development Sem	1
CHM 1151	General Chemistry I	4
CHM 1103	General Chemistry Lab I	1
CHM 1152	General Chemistry II	4
CHM 1104	General Chemistry Lab II	1
CHM 2211	Organic Chemistry I	3
CHM 2201	Organic Chemistry Lab I	1
CHM 2212	Organic Chemistry II	3
CHM 2202	Organic Chemistry Lab II	1
CHM 3417	Biophysical Chemistry	3
CHM 3514	Bioanalytical Chemistry	3
CHM 3503	Bioanalytical Chem Lab	1
CHM 4603	Biochem Tech. and Pract.	1
CHM 4604	Biochem Tech. and Pract II	1
CHM 4621	Biochemistry I: Structure	3
CHM 4622	Biochemistry II:Metabolism	3
CHM 4623	Biochemistry III	3
BIO 2105	General Biology I	4
BIO 3351	Genetics	4
BIO 4505	Molecular Biology	4
MAT 1500	Calculus I	4
MAT 1505	Calculus II	4
	PHY 2410/2411 or PHY 1100/ 1101	4
	PHY 2412/2413 or PHY 1102/ 1103	4
	Approved Chemistry Elective	3
	Approved Biology Elective	3

Category Descriptions

PHY 2410/2411 or PHY 1100/1101

Credits: 4

Choose 1 pair of lecture + lab courses from the following:

Item #	Title	Credits
PHY 2410	University Phy:Mechanics	3
PHY 2411	Lab: Mechanics	1
Item #	Title	Credits
PHY 1100	General Physics I	3
PHY 1101	General Physics I Lab	1

PHY 2412/2413 or PHY 1102/1103

Credits: 4

Choose 1 pair of lecture + lab courses from the following:

Item #	Title	Credits
PHY 2412	Univ Physics:Elec & Mag	3
PHY 2413	Lab:Elec & Magnetism	1
Item #	Title	Credits
PHY 1102	General Physics II	3
PHY 1103	General Physics II Lab	1

Approved Chemistry Elective

Credits: 3

Choose one Chemistry (CHM) elective of 3 or more credits above the 3000-level and approved by the Program of Biochemistry (consult semesterly list).

Approved Biology Elective

Credits: 3

Choose one Biology (BIO) course of 3 or more credits above the 3000-level and approved by the Program of Biochemistry (consult semesterly list).

Biochemistry Minor

Program Directors: Jennifer Palenchar, PhD.,
Dennis Wykoff, PhD
Office Location: Mendel Science Center Rm. 215
Telephone: (610) 519-4840
[\[Website\]](#)

About

Biochemistry is an interdisciplinary major requiring comprehensive coursework in both Biology and Chemistry. The biological relevance

of chemical concepts is stressed throughout the curriculum. Students are encouraged to pursue one of the many available research experiences.

Type: Minor

MINOR (23 credits)

The Biochemistry minor requires 23 credits not including pre-requisite coursework.

Program Notes:

- The Biochemistry program offers three mechanisms for participation in research by undergraduate majors. Competitive fellowships for 8-10 weeks of summer research are funded by University, government, or industrial sources. Recipients of these fellowships carry out a research program under the direction of a faculty member. Students may also enroll in research mentored by a faculty member for academic credit during the school year, which fulfills the elective requirement in the relevant department (CHM 4801, 4802, 4803, 4851, 4851 or BIO 6509, 6609). Students may also volunteer in research laboratories. In each case, students should discuss participation in research with Program of Biochemistry faculty members.
- Chemistry courses listed below for the minor may have additional pre-requisite not listed on this page.

Required Minor Courses:

Item #	Title	Credits
BIO 2105	General Biology I	4
BIO 3351	Genetics	4
BIO 4505	Molecular Biology	4
CHM 4603	Biochem Tech. and Pract.	1
CHM 4604	Biochem Tech. and Pract II	1
CHM 4621	Biochemistry I: Structure	3
CHM 4622	Biochemistry II:Metabolism	3
CHM 4623	Biochemistry III	3

Biology

Biology, B.S.

Chair: John M. Olson, Ph.D.
Office Location: 147 Mendel Science Center
Telephone: 610-519-4832
[Website](#)

About

Biology is a broad-based program designed for students interested in life sciences. The program fulfills entry requirements for medical and other allied health programs as well as for graduate work in many areas of biology and related fields. The program also provides excellent preparation for careers in health sciences, research, and/or education.

Type: Bachelor of Science

MAJOR (37 credits)

The biology major requires a minimum of 70 credits in biology and cognate courses with at least five biology laboratory courses at the 3000-level and higher.

Program Notes:

- Combined BS/MS in Biology: Five-year double degree program. See departmental website for details regarding admission, requirements, the program of study, etc.
- Research opportunities: Undergraduate majors may opt to work with faculty to complete undergraduate research either informally or more formally in a senior or honors thesis project.

Required Biology Courses:

Item #	Title	Credits
BIO 2105	General Biology I	4
BIO 2106	General Biology II	4
BIO 3351	Genetics	4
BIO 5300	Biology Capstone	3
	Organismal Biology Elective	4
	Ecology/Evolutionary/ Population Biology Elective	4
	Cellular/Molecular Biology Elective	4
	Upper-Level BIO Lab Elective	4
	Upper-Level BIO Lab Elective	4
	Additional BIO Elective	2

Required Cognate Courses:

Item #	Title	Credits
CHM 1151	General Chemistry I	4
CHM 1103	General Chemistry Lab I	1
CHM 1152	General Chemistry II	4
CHM 1104	General Chemistry Lab II	1
CHM 2211	Organic Chemistry I	3
CHM 2201	Organic Chemistry Lab I	1
CHM 2212	Organic Chemistry II	3
CHM 2202	Organic Chemistry Lab II	1
MAT 1312	Biocalculus	4
	Biology Math Elective	3
PHY 1100	General Physics I	3
PHY 1101	General Physics I Lab	1
PHY 1102	General Physics II	3
PHY 1103	General Physics II Lab	1

Category Descriptions

Organismal Biology Elective

Credits: 4

Choose 1 BIO laboratory course above the 3000 level in Organismal Biology.

Choose from the courses listed below:

BIO 6950
BIO 7105
BIO 7151
BIO 7555
BIO 7705
BIO 7755
BIO 7955
BIO 8455

Item #	Title	Credits
BIO 3105	Biostatistics & Exp Design	4
BIO 3255	Evolutionary Ecology	4
BIO 3485	Marine Biology	4
BIO 4305	Evolution	4
BIO 4451	Field Ecol and Evol	2
BIO 4452	Field Ecol and Evol Lab	2
BIO 4955	Lec+Lab in Adv Topics in Bio.	4
GEV 4320	Spec. Topics in Env Lab Sci	4

Ecology/Evolutionary/Population Biology Elective

Credits: 4

Choose 1 BIO laboratory course above the 3000-level in Ecology/Evolutionary/Population Biology.

Cellular/Molecular Biology Elective

Credits: 4

Choose 1 BIO laboratory course above the 3000 level in Cellular/Molecular Biology.

Upper-Level BIO Lab Elective

Credits: 4

Choose 1 additional BIO laboratory course numbered 3000 or above.

Additional BIO Elective

Credits: 2

Two additional credits fulfilled either through a research experience or another approved course. Refer to the University course catalog for specific courses.

Biology Math Elective

Credits: 3

Choose one additional MAT course from the following:

Item #	Title	Credits
MAT 1314	Modeling for the Life Sciences	3
MAT 1505	Calculus II	4

Biology Minor

Chair: John M. Olson, Ph.D.
Office Location: 147 Mendel Science Center
Telephone: 610-519-4832
[Website](#)

About

Biology is a broad-based program designed for students interested in life sciences. The program fulfills entry requirements for medical and other allied health programs as well as for graduate work in many areas of biology and related fields. The program also provides excellent preparation for careers in health sciences, research, and/or education.

Type: Minor

MINOR (23 credits)

A minor is open to all students and requires a minimum of 23 credits in Biology. Minors must complete at least 12 of their Biology credits at Villanova and achieve a minimum GPA of 2.0.

Required Minor Courses:

Item #	Title	Credits
BIO 2105	General Biology I	4
BIO 2106	General Biology II	4
	Upper-Level BIO Lab Elective	4
	Upper-Level BIO Lab Elective	4
	Upper-Level BIO Lab Elective	4
	Upper-Level BIO Elective	3-4

Category Descriptions

Upper-Level BIO Lab Elective

Credits: 4

Choose 1 additional BIO laboratory course numbered 3000 or above.

Upper-Level BIO Elective

Credits: 3-4

Choose 1 additional Biology elective course numbered 3000 or above.

Business

Business Minor Options

Villanova School of Business
Associate Director Business Minor Programs:
Patricia (Trish) Burdo
Office Location: Bartley Hall Rm. 1054 [The Clay Center at VSB]
Telephone: (610) 519-5532
[Website](#)

ABOUT

There are two options for CLAS students to earn a business minor: The Academic Year Business

Minor and the Summer Business Institute. Students considering either of these programs should meet with their primary academic advisor before applying to determine if/how business minor courses may apply to degree or major requirements. Completion of either program may allow students to pursue a discipline-specific business minor or enroll in other VSB courses; VSB approval is required and additional pre-requisite coursework may be necessary.

ACADEMIC YEAR BUSINESS MINOR

The Academic Year Business Minor is designed for full-time undergraduates enrolled in other Villanova colleges. This traditional-year program typically requires four semesters to complete; required courses are part of the VSB core curriculum and are taken alongside VSB students. The admission process for the program is competitive; students must attend an info session prior to applying and are admitted on a yearly basis after spring semester grades are posted. The deadline for applications is May 1; program and application requirements can be found at business.villanova.edu, search Business Minors for Non-Business Students.

SUMMER BUSINESS INSTITUTE (SBI)

The Summer Business Institute (SBI) is a 10 week, full-time, 16-credit program created exclusively for non-business majors. SBI, using a cohort-based model, is an accelerated program designed to be completed in one summer. The admission process for the program is competitive; students are admitted on a rolling basis. The application period is December 1 - April 15. Additional Information, including the application, can be found at business.villanova.edu/sbi

Type: Minor

Center for Irish Studies

Irish Studies Minor

Director: Joseph Lennon, Ph.D.
Office Location: Saint Augustine Center, 105E
Telephone: (610) 519-4647
[\[Website\]](#)

About

Irish Studies explores the history and culture of the Irish people in Ireland and the Irish diaspora from a variety of disciplines—art, economics,

folklore, history, language, literature, music, philosophy political science, and theater. Students can major in Irish Studies through the department of Global Interdisciplinary Studies, culminating in a rigorous multidisciplinary thesis. The minor is open to students from all colleges and can be completed by taking five courses, two required and three electives, either on campus and abroad. For students in the College of Arts and Science, two four-credit courses in the Irish language may be taken to complete the College language requirement.

The Center works with local organizations and hosts a lively series of readings, academic lectures, performances, and receptions, also welcoming cultural, political, and business leaders to campus for networking. Interested students may also study in Ireland in a Semester Abroad program or through the Villanova Summer in Ireland Program or apply for one of several professional internships abroad or in Philadelphia. Details are available through the Center for Irish Studies.

Type: Minor

MINOR (15 credits)

A minor is open to all students. Completion of the required English course and History course is a pre-requisite for beginning the minor.

Required Minor Courses:

Item #	Title	Credits
	ENG 2450 or ENG 2500	3
	HIS 3216 or HIS 2286	3
	IS Elective	3
	IS Elective	3
	IS Elective	3

Major (21 credits)

The Department of Global Interdisciplinary Studies (GIS) offers a major with a specialization in Irish Studies, please see [that page](#) for detailed requirements of the major.

Category Descriptions

ENG 2450 or ENG 2500

Credits: 3

Choose one literature survey

Item #	Title	Credits
ENG 2450	Irish Epics, Visions & Hauntings	3
ENG 2500	Irish Revival	3

HIS 3216 or HIS 2286

Credits: 3

Choose one history survey.

Item #	Title	Credits
HIS 3216	Ireland since 1800	3
HIS 2286	Irish-American Saga	3

IS Elective

Credits: 3

Choose a course with IS attribute.

Chemistry

The Department of Chemistry at Villanova University offers masters and bachelors degrees, including an American Chemical Society accredited degree program for undergraduates. Our faculty actively conduct research in diverse areas such as environmental chemistry, protein biochemistry, fuel cell research, and computational chemistry. We recognize that undergraduate research provides a unique opportunity to work closely alongside a faculty mentor, gaining an experience that extends far beyond typical classroom learning, and we encourage all undergraduates to participate in undergraduate research.

Chemistry, B.S.

Chair: Kevin P.C. Minbiolo, Ph.D.

Office Location: Mendel Science Center Rm. 215A

Telephone: (610) 519-4840

[Website](#)

About

The Department of Chemistry at Villanova University offers masters and bachelors degrees, including an American Chemical Society accredited degree program for undergraduates. Our faculty actively conduct research in diverse

areas such as environmental chemistry, protein biochemistry, fuel cell research, and computational chemistry. We recognize that undergraduate research provides a unique opportunity to work closely alongside a faculty mentor, gaining an experience that extends far beyond typical classroom learning, and we encourage all undergraduates to participate in undergraduate research.

Type: Bachelor of Science

MAJOR (68 credits)

The Chemistry major, certified by the American Chemical Society, provides comprehensive classroom and laboratory training in all areas of chemistry. Students receive extensive training in laboratory techniques using modern chemical instrumentation.

Required Major Courses:

Item #	Title	Credits
CHM 1000	Profesl Development Sem	1
CHM 1000	Profesl Development Sem	1
CHM 1311	Inorganic Chemistry I	3
CHM 1301	Inorganic Chemistry Lab I	2
CHM 1512	Quantitative Analysis	3
CHM 1502	Quant Anal Lab	2
CHM 3211	Organic Chemistry I	3
CHM 3201	Organic Chemistry Lab I	2
CHM 3212	Organic Chemistry II	3
CHM 3202	Organic Chemistry Lab II	2
CHM 3311	Inorganic Chem II	3
CHM 3301	Inorganic Chem Lab II	2
CHM 3413	Molecular Thermodynamics	3
CHM 3405	Physical Chem Lab II	2
CHM 3412	Quantum Chemistry	3
CHM 3404	Physical Chem Lab I	2
CHM 3511	Instrumental Analysis	3
CHM 3501	Instrumental Analysis Lab	2
	CHM 4611 or 4610: Biochemistry	3
MAT 1500	Calculus I	4
MAT 1505	Calculus II	4
PHY 2410	University Phy:Mechanics	3
PHY 2411	Lab: Mechanics	1
PHY 2412	Univ Physics:Elec & Mag	3
PHY 2413	Lab:Elec & Magnetism	1
	CHM Elective	3
	CHM Elective	3
	CHM Lab Elective	1

Category Descriptions

CHM 4611 or 4610: Biochemistry

Credits: 3

Choose 1:

Item #	Title	Credits
CHM 4611	Survey of Biochemistry	3
CHM 4610	Principles of Biochemistry	3

CHM Elective

Credits: 3

Choose 1 Chemistry course level 3000 or above.

CHM Lab Elective

Credits: 1

Choose 1 Chemistry lab elective.

Chemistry with Biochemistry Concentration, B.S.

Chair: Kevin P.C. Minbiole, Ph.D.

Office Location: Mendel Science Center Rm. 215A

Telephone: (610) 519-4840

[Website](#)

About

The Department of Chemistry at Villanova University offers masters and bachelors degrees, including an American Chemical Society accredited degree program for undergraduates. Our faculty actively conduct research in diverse areas such as environmental chemistry, protein biochemistry, fuel cell research, and computational chemistry. We recognize that undergraduate research provides a unique opportunity to work closely alongside a faculty mentor, gaining an experience that extends far beyond typical classroom learning, and we encourage all undergraduates to participate in undergraduate research.

Type: Bachelor of Science

Major (80 credits)

Item #	Title	Credits
CHM 1000	Profesl Development Sem	1
CHM 1000	Profesl Development Sem	1
CHM 1311	Inorganic Chemistry I	3
CHM 1301	Inorganic Chemistry Lab I	2
CHM 3311	Inorganic Chem II	3
CHM 3301	Inorganic Chem Lab II	2
CHM 1512	Quantitative Analysis	3
CHM 1502	Quant Anal Lab	2
CHM 2211	Organic Chemistry I	3
CHM 2201	Organic Chemistry Lab I	1
CHM 3211	Organic Chemistry I	3
CHM 3201	Organic Chemistry Lab I	2
CHM 3412	Quantum Chemistry	3
CHM 3404	Physical Chem Lab I	2
CHM 3413	Molecular Thermodynamics	3
CHM 3405	Physical Chem Lab II	2
CHM 3511	Instrumental Analysis	3
CHM 3501	Instrumental Analysis Lab	2
CHM 4621	Biochemistry I: Structure	3
CHM 4603	Biochem Tech. and Pract.	1
CHM 4622	Biochemistry II:Metabolism	3
CHM 4604	Biochem Tech. and Pract II	1
	Biochemistry Biology Courses	8
PHY 2410	University Phy:Mechanics	3
PHY 2411	Lab: Mechanics	1
PHY 2412	Univ Physics:Elec & Mag	3
PHY 2413	Lab:Elec & Magnetism	1
MAT 1500	Calculus I	4
MAT 1505	Calculus II	4
	Molecular Based Biology Course	4
	Biochemistry Chemistry Elective	3

Category Descriptions

Biochemistry Biology Courses

Credits: 8

Choose two biology courses from the course below.

Item #	Title	Credits
BIO 2105	General Biology I	4
BIO 2106	General Biology II	4
BIO 4205	Cell Biology	4
BIO 4505	Molecular Biology	4

Molecular Based Biology Course

Credits: 4

Item #	Title	Credits
BIO 3351	Genetics	4
BIO 3595	General Microbiology	4

Biochemistry Chemistry Elective

Credits: 3

Choose any 3-credit course with the CHM subject code numbered 3000:9999.

Chemistry Minor

Students must complete a year of general chemistry (or equivalent), a year of organic chemistry, two additional chemistry courses with associated laboratories, and one additional chemistry course (7 courses total). All course prerequisites and co-requisites apply¹. Biochemistry majors need to complete 2 CHM courses at the 3000 level or above that are not otherwise required for the biochemistry degree to fulfill the requirements for the Chemistry minor.

Program notes

- 1. Or with approval of the Chemistry Advisor.

Type: Minor

Required Courses

Item #	Title	Credits
	General Chemistry Requirement	8
	Organic Chemistry Requirement	8
	CHM Elective & Lab	8
	Upper-division Chemistry Course	3

Category Descriptions

General Chemistry Requirement

Credits: 8

1 year of general chemistry (6 credits) & Lab (2 or more credits). Choose one sequence.

Item #	Title	Credits
CHM 1151	General Chemistry I	4
CHM 1103	General Chemistry Lab I	1
CHM 1152	General Chemistry II	4
CHM 1104	General Chemistry Lab II	1

Item #	Title	Credits
CHM 1151	General Chemistry I	4
CHM 1103	General Chemistry Lab I	1
CHM 1156	General Chemistry II for Egr	4

Item #	Title	Credits
CHM 1311	Inorganic Chemistry I	3
CHM 1301	Inorganic Chemistry Lab I	2
CHM 1512	Quantitative Analysis	3
CHM 1502	Quant Anal Lab	2

Organic Chemistry Requirement

Credits: 8

Choose one sequence.

Item #	Title	Credits
CHM 2211	Organic Chemistry I	3
CHM 2201	Organic Chemistry Lab I	1
CHM 2212	Organic Chemistry II	3
CHM 2202	Organic Chemistry Lab II	1

Item #	Title	Credits
CHM 3211	Organic Chemistry I	3
CHM 3201	Organic Chemistry Lab I	2
CHM 3212	Organic Chemistry II	3
CHM 3202	Organic Chemistry Lab II	2

CHM Elective & Lab

Credits: 8

Additional Laboratory Chemistry requirement (choose two of the following lecture/lab combos)

Choice A

Item #	Title	Credits
CHM 3311	Inorganic Chem II	3
CHM 3301	Inorganic Chem Lab II	2

Choice B

Item #	Title	Credits
CHM 3413	Molecular Thermodynamics	3
CHM 3405	Physical Chem Lab II	2

Choice C

Item #	Title	Credits
CHM 4622	Biochemistry II:Metabolism	3
CHM 4604	Biochem Tech. and Pract II	1

Choice D

Only one of these two options can be used:
CHM 3412 and 3404 OR CHM 3416 and 3402.

Item #	Title	Credits
CHM 3412	Quantum Chemistry	3
CHM 3404	Physical Chem Lab I	2
CHM 3416	Physical Chem for Engineers	3
CHM 3402	Physical Chem Lab II	1

Choice E

Only one of these two options can be used:
CHM 3511 and 3501 OR CHM 3514 and 3503.

Item #	Title	Credits
CHM 3511	Instrumental Analysis	3
CHM 3501	Instrumental Analysis Lab	2
CHM 3514	Bioanalytical Chemistry	3
CHM 3503	Bioanalytical Chem Lab	1

Choice F

Only one of these two options can be used:
CHM 4611 and 4601 OR CHM 4621 and 4603.

Item #	Title	Credits
CHM 4611	Survey of Biochemistry	3
CHM 4601	Survey Biochemistry Lab	1
CHM 4621	Biochemistry I: Structure	3
CHM 4603	Biochem Tech. and Pract.	1

Upper-division Chemistry Course

Credits: 3

One additional upper-division chemistry course
(with approval of the Chemistry Advisor)

- One additional course with lab from other requirements.
- CHM 3417: Biophysical Chemistry*
- CHM 5633: Nanomaterials & Surface Science
- Any 4000 level course

- Any 7000 level or higher course (*EXCEPT* 7693 or 8662)

**Cannot be used in combination with other Physical Chemistry courses and laboratories.*

Chinese Language

Chinese Language and Cultural Studies Minor

Coordinator: HaiLin Zhou, Ph.D.
Office Location: Gary Hall Rm. 036
Telephone: (610) 519-6302
[Website](#)

About

The Chinese Language and Cultural Studies program opens the way to the study of various elements of Chinese life. Chinese Language and Cultural Studies includes the rich heritage of novels, short stories, poetry, culinary art, film and the Chinese classics. Chinese Language and Cultural Studies represents a cutting-edge intellectual experience that provides its minors with a real advantage in critiquing, understanding, and navigating the global landscape.

Type: Minor

MINOR (28 credits or 6 courses)

The Chinese Language and Cultural Studies minor is open to all students and requires 6 courses (28 credits), four courses in language and two in electives.

Program Notes:

- Other culture-based courses with ASN attribute found across disciplines also qualify for the cultural studies elective.
- Advanced Chinese (CHI 1131) course and the Translation (CHI 1151) course may count as electives if the student has fulfilled the required language courses.
- Pertinent GIS team-taught courses and contents courses from other departments with ASN (Chinese) attribute also qualify for CHI electives.
- Courses on Chinese/China taken as part of a study abroad will be counted.
- An internship related to Chinese Studies may be counted as an independent study.

Required Minor Courses:

Item #	Title	Credits
	Chinese Language Course	3-6
	Chinese Language Course	3-6
	Chinese Language Course	3-6
	Chinese Language Course	3-6
	Chinese Cultural Studies Elective	3
	Chinese Cultural Studies Elective	3

Category Descriptions

Chinese Language Course

Credits: 3-6

Note: *Advanced Chinese courses and the Translation course may count as electives if student has fulfilled the required four language courses*

Item #	Title	Credits
CHI 1111	Basic Chinese I	6
CHI 1112	Basic Chinese II	6
CHI 1121	Intermediate Chinese I	5
CHI 1122	Intermediate Chinese II	5
CHI 1131	Advanced Chinese I	3
CHI 1132	Advanced Chinese II	3
CHI 1133	Advanced Chinese III	3
CHI 1134	Advanced Chinese IV	3
CHI 1151	Spec. Top. in Chinese Language	3

Chinese Cultural Studies Elective

Credits: 3

Choose from the following list, or another culture-based course with the ASN attribute found across other disciplines.

Item #	Title	Credits
CHI 1131	Advanced Chinese I	3
CHI 1132	Advanced Chinese II	3
CHI 1133	Advanced Chinese III	3
CHI 1134	Advanced Chinese IV	3
CHI 3412	Chinese Special Topics	3
CHI 3413	Chinese Calligraphy	3
GIS 4281	The Tale of Shanghai and Tokyo	3
GIS 4675	East Asian Comparative Lit	3

Classical Studies

Classical Studies, B.A.

Program Director: Valentina DeNardis, Ph.D.
 Office Location: Saint Augustine Center Rm. 304
 Telephone: (610) 519-6165
[Website](#)

About

The Classical Studies Program explores the cultures of ancient Greece and Rome, from the beginnings of Greek civilization to the fall of the Roman empire. Our program is interdisciplinary, embracing the study of classical languages, literatures, history, art and archaeology, philosophy and religion. The program offers

courses which may satisfy requirements for the Core Curriculum of the College of Liberal Arts and Sciences.

Type: Bachelor of Arts

MAJOR (30 credits)

The major requires 10 courses and at least 30 credits.

Required Courses:

- A minimum of one GRK or LAT course, or CLA 2021 (3 cr)
- CLA 6001: Senior Classics Capstone (3 cr)
- Eight additional courses in any combination of courses in the classical languages and/or courses taught in English on classical civilization including any course with the CLA or CLST attribute. (24 cr)

FIVE YEAR B.A./M.A PROGRAM

The five-year B.A./M.A. program allows exceptional students to complete a bachelor's and a master's degree in Classical Studies in five years. In the last year of undergraduate study students take three graduate courses that count towards both their undergraduate and graduate degrees.

Classical Studies Minor

Program Director: Valentina DeNardis, Ph.D.
Office Location: Saint Augustine Center Rm. 304
Telephone: (610) 519-6165
[Website](#)

About

The Classical Studies Program explores the cultures of ancient Greece and Rome, from the beginnings of Greek civilization to the fall of the Roman empire. Our program is interdisciplinary, embracing the study of classical languages, literatures, history, art and archaeology, philosophy and religion. The program offers courses which may satisfy requirements for the Core Curriculum of the College of Liberal Arts and Sciences.

Type: Minor

MINOR (18 credits)

The minor requires a minimum of 18 credits. Language classes are not required.

Required Courses:

- Six courses in any combination of courses in the classical languages and/or courses taught in English on classical civilization. (18 cr) This includes:
 - Courses with the Subject codes GRK, LAT, CLA
 - Courses with the CLA attribute
 - Courses with the CLST attribute

Cognitive Science

Cognitive Science Minor

Program Director: Joseph Toscano, Ph.D.
Office Location: Tolentine Hall Rm M52
Telephone: (610) 519-4755
[Website](#)

About

The Cognitive Science Program offers a course of study in the interdisciplinary field of Cognitive Science, bringing together perspectives from cognitive psychology, computer science, philosophy, and biology to understand how intelligent systems function. An undergraduate concentration and an undergraduate minor are available to all students in undergraduate colleges of the University. The program is particularly well-suited to students majoring in Psychology, Computing Sciences, Philosophy, and Cognitive & Behavioral Neuroscience.

Type: Minor

MINOR (15 credits)

Program Notes:

- The five courses used to fulfill the Minor must span at least three different disciplines.
- Choose two courses from the first three listed items. Select three electives from the list. Five courses in total are required to fulfill the minor requirements.
- Special topics, research, and independent study electives (BIO 6409, BIO 6509, CSC 5900, CSC 5930, CSC 5993, PHI 2990, PHI 4990, PSY 2900, PSY 5900) require approval of the Cognitive Science Program.
- For courses that have prerequisites, Cognitive Science students should apply to have the prerequisites waived. Decisions will be made on a case-by-case basis by the course instructor, or in some cases, the Director of the Cognitive Science Program, after considering the particular student's background. In most cases, it is expected that the prerequisites will be able to be waived.

Required Minor Courses:

Item #	Title	Credits
PHI 4610	Philosophy of Mind	3
PSY 4500	Cognitive Psychology	3
	CSC 4500 or CSC 4510 or MSE 2400	3-4
	Cognitive Science Electives	6

Category Descriptions

CSC 4500 or CSC 4510 or MSE 2400

Credits: 3-4

Choose one:

Item #	Title	Credits
CSC 4500	Artificial Intelligence	3
CSC 4510	Machine Learning	3
MSE 2400	CSC:Evol Lrng Cmp Robtcs Agnts	4

Cognitive Science Electives

Credits: 6

Choose two Cognitive Science approved electives from the list below.

Biology

Item #	Title	Credits
BIO 4605	Neurobiology	4
BIO 6509	Directed Research	2

Cognitive Science

Item #	Title	Credits
CGS 4000	Bilingualism	3
CGS 5900	Cognitive Science Seminar	3
CGS 5910	Psychology of Language	3
CGS 5990	Special Topics	3

Computer Science

Item #	Title	Credits
CSC 1051	Algorithms & Data Struc I	4
CSC 4170	Theory of Computation	3
CSC 4380	Info Visualization	3
CSC 4500	Artificial Intelligence	3
CSC 4510	Machine Learning	3
CSC 4730	Human Computer Interaction	3
CSC 5930	Topics Computer Science	3
CSC 5993	Independent Study	3
MSE 2400	CSC:Evol Lrng Cmp Robtcs Agnts	4

Philosophy

Item #	Title	Credits
PHI 4610	Philosophy of Mind	3
PHI 2020	Symbolic Logic	3
PHI 2990	Topics in Philosophy	3
PHI 2710	Information Knowledge Inquiry	3
PHI 4200	Philosophy of Language	3
PHI 4990	Independent Study & Research	3

Psychological and Brain Sciences

Item #	Title	Credits
MSE 2701	PSY:The Sounds of Human Lang.	4
PSY 2050	Research Methods in Psy.	3
PSY 2800	Human Factors	3
PSY 2900	Special Topics	3
PSY 3300	Perception	3
PSY 4200	Biopsychology	3
PSY 4500	Cognitive Psychology	3
PSY 4600	Animal Learning & Cognition	3
PSY 5900	Independent Research Project	3

Spanish

Item #	Title	Credits
SPA 3214	Intro to Spanish Linguistics	3

Cognitive Science Concentration

Program Director: Joseph Toscano, Ph.D.
Office Location: Tolentine Hall Rm M52
Telephone: (610) 519-4755
[Website](#)

About

The Cognitive Science Program offers a course of study in the interdisciplinary field of Cognitive Science, bringing together perspectives from cognitive psychology, computer science, philosophy, and biology to understand how intelligent systems function. An undergraduate concentration and an undergraduate minor are available to all students in undergraduate colleges of the University. The program is particularly well-suited to students majoring in Psychology, Computing Sciences, Philosophy, and Cognitive & Behavioral Neuroscience.

Type: Concentration

Concentration Required Courses (21 credits)

Program Notes:

- Special topics, research, and independent study electives (BIO 6409, BIO 6509, CSC 5900, CSC 5930, CSC 5993, PHI 2990, PHI 4990, PSY 2900, PSY 5900) require approval of the Cognitive Science Program.
- For courses that have prerequisites, Cognitive Science students should apply to have the prerequisites waived. Decisions will be made on a case-by-case basis by the course instructor, or in some cases, the Director of the Cognitive Science Program, after considering the particular student's background. In most cases, it is expected that the prerequisites will be able to be waived.

Item #	Title	Credits
CSC 1051	Algorithms & Data Struc I	4
	CSC 4500 or CSC 4510 or MSE 2400	3-4
PHI 4610	Philosophy of Mind	3
PSY 4500	Cognitive Psychology	3
CGS 5900	Cognitive Science Seminar	3
	Cognitive Science Electives	6

Category Descriptions

CSC 4500 or CSC 4510 or MSE 2400

Credits: 3-4

Choose one:

Item #	Title	Credits
CSC 4500	Artificial Intelligence	3
CSC 4510	Machine Learning	3
MSE 2400	CSC:Evol Lrng Cmp Robtcs Agnts	4

Cognitive Science Electives

Credits: 6

Choose two Cognitive Science approved electives from the list below.

Biology

Item #	Title	Credits
BIO 4605	Neurobiology	4
BIO 6509	Directed Research	2

Cognitive Science

Item #	Title	Credits
CGS 4000	Bilingualism	3
CGS 5900	Cognitive Science Seminar	3
CGS 5910	Psychology of Language	3
CGS 5990	Special Topics	3

Computer Science

Item #	Title	Credits
CSC 1051	Algorithms & Data Struc I	4
CSC 4170	Theory of Computation	3
CSC 4380	Info Visualization	3
CSC 4500	Artificial Intelligence	3
CSC 4510	Machine Learning	3
CSC 4730	Human Computer Interaction	3
CSC 5930	Topics Computer Science	3
CSC 5993	Independent Study	3
MSE 2400	CSC:Evol Lrng Cmp Robtcs Agnts	4

Philosophy

Item #	Title	Credits
PHI 4610	Philosophy of Mind	3
PHI 2020	Symbolic Logic	3
PHI 2990	Topics in Philosophy	3
PHI 2710	Information Knowledge Inquiry	3
PHI 4200	Philosophy of Language	3
PHI 4990	Independent Study & Research	3

Psychological and Brain Sciences

Item #	Title	Credits
MSE 2701	PSY:The Sounds of Human Lang.	4
PSY 2050	Research Methods in Psy.	3
PSY 2800	Human Factors	3
PSY 2900	Special Topics	3
PSY 3300	Perception	3
PSY 4200	Biopsychology	3
PSY 4500	Cognitive Psychology	3
PSY 4600	Animal Learning & Cognition	3
PSY 5900	Independent Research Project	3

Spanish

Item #	Title	Credits
SPA 3214	Intro to Spanish Linguistics	3

Communication

Communication, B.A.

Chair: Heidi Rose, Ph.D.

Office Location: Garey Hall 028

Telephone: (610) 510-4750

[Website](#)

About

Communication shapes who we are, both individually and socially. We in the Communication Department believe our future depends upon our communication with one another. The study of Communication in the liberal arts tradition focuses on the understanding and use of symbols that create meaning in multiple communicative contexts—global and local, personal and professional, in-person and mediated. The discipline of Communication is grounded in ancient rhetorical traditions and is influenced by contemporary intellectual, artistic and technological developments. Our program integrates theory and practice, so that skills-based courses build upon communication principles, concepts, insights, and research techniques. Our mission, then, is to produce well-rounded communicators who will speak eloquently and listen actively; think critically, creatively, and ethically; and write clearly and strategically. Our graduates are placed in top graduate programs and law schools, as well as prepared to build careers in industries from public relations and marketing to media production and print/broadcast/digital journalism. Whether in corporate or nonprofit careers, serving their communities, or engaged in further academic study, our graduates illustrate that students of Communication are uniquely equipped to make a difference locally and globally, in their lives and in the lives of others.

Type: Bachelor of Arts

MAJOR (36 credits)

To Declare the Major: Enrollment in COM 1000 and COM 1100.

Specializations:

Students may choose either to design their own major specialization or will choose one (or more) of the following specializations: Public Relations & Advertising, Journalism, Organizational Communication, Media Studies, Media Production, Rhetorical Studies, Performance Studies, and Interpersonal & Intercultural Communication. With or without a specialization, students must cover three different areas in their six 3000-level courses. A complete listing of specialization requirements and courses is available on the departmental Web page or in the departmental office. Some specializations require Communication majors to complete internships, which, if completed for credit, will be used to satisfy free electives for the *College of Liberal Arts and Sciences*.

Program Notes:

- Only two courses may be transferred to count towards the COM major.
- Students who plan to study abroad should take COM 1000, 1100, and at least one 2000-level course before going abroad.

Required Major Courses:

Item #	Title	Credits
COM 1000	Surv of Communication Studies	3
COM 1100	Public Speaking	3
	COM 2000-level Theories	6
	COM 3000-level Advanced Topics	18
	COM 4001 or COM 4002	3
	COM Capstone	3

Category Descriptions

COM 2000-level Theories

Credits: 6

Choose two 2000-level COM theories course. (Must be taken before the 3000-level courses.)

Item #	Title	Credits
COM 2200	Theories of Rhetoric	3
COM 2240	Theories of Perform Studies	3
COM 2280	Theories of Persuasion	3
COM 2300	Theories of Mass Communication	3
COM 2340	Theories of Visual Com & Cultu	3
COM 2400	Theories of Interpersonal Com	3
COM 2440	Theories of Organizational Com	3

COM 3000-level Advanced Topics

Credits: 18

Choose six 3000-level advanced topics courses in at least three different areas. (Taken after completing at least one 2000-level, according to interest and/or specialization.)

COM 4001 or COM 4002

Credits: 3

Choose one COM Research Methods course. (Recommended junior year or prior to taking COM 5050.)

Item #	Title	Credits
COM 4001	Qualitative Research in COM	3
COM 4002	Quantitative Research in COM	3

COM Capstone

Credits: 3

Choose one Capstone course. (Taken during senior year.) COM 3464 is for students specializing in PR & Advertising.

Item #	Title	Credits
COM 5050	Senior Project	3
COM 3464	Public Relations Campaigns	3

Communication Minor

Chair: Heidi Rose, Ph.D.
Office Location: Garey Hall 028
Telephone: (610) 510-4750
[Website](#)

About

Communication shapes who we are, both individually and socially. We in the Communication Department believe our future depends upon our communication with one another. The study of Communication in the liberal arts tradition focuses on the understanding and use of symbols that create meaning in multiple communicative contexts—global and local, personal and professional, in-person and mediated. The discipline of Communication is grounded in ancient rhetorical traditions and is influenced by contemporary intellectual, artistic and technological developments. Our program integrates theory and practice, so that skills-based courses build upon communication principles, concepts, insights, and research techniques. Our mission, then, is to produce well-rounded communicators who will speak eloquently and listen actively; think critically, creatively, and ethically; and write clearly and strategically. Our graduates are placed in top graduate programs and law schools, as well as prepared to build careers in industries from public relations and marketing to media production and print/broadcast/digital journalism. Whether in corporate or nonprofit careers, serving their communities, or engaged in further academic study, our graduates illustrate that students of Communication are uniquely equipped to make a difference locally and globally, in their lives and in the lives of others.

Type: Minor

MINOR (15 credits)

Students within the College of Liberal Arts & Sciences or Villanova School of Business can minor in Communication by taking five courses.

Program Notes:

- A 3-credit internship focused on communication could satisfy one of the Additional COM Elective courses.
- Only one course may be transferred to count toward the COM minor.
- Students wishing to minor in Communication from within CLAS or other Villanova colleges/schools are encouraged to contact the Communication Department to learn about ways to build a minor that will complement their major programs of study. For initial information, [visit this website](#).

Required Minor Courses:

Item #	Title	Credits
COM 1000	Surv of Communication Studies	3
	COM 2000-level Elective	3
	COM 3000-level Elective	3
	Additional COM Elective	6

Category Descriptions

COM 2000-level Elective

Credits: 3

Choose one 2000-level course. (Must be taken before taking 3000-level courses.)

COM 3000-level Elective

Credits: 3

Choose one 3000-level course.

Additional COM Elective

Credits: 6

Choose two additional COM courses. A 3-credit internship focused on communication could satisfy one of these courses.

Comprehensive Science

Comprehensive Science, B.S.

Program Director: Robert Styer, PhD
Office Location: Saint Augustine Center Rm. 372
Telephone: (610) 519-4845

[Website](#)

About

The Comprehensive Science program allows students interested in the quantitative and physical and life sciences to get broad based competency to a full spectrum of scientific concerns and practices. Our majors gain both hands-on lab skills and quantitative aptitudes through a broad range of courses in mathematics, physical and life sciences, and computer science. The program equips students with the analytical, interpretive, and explanatory skill sets that enable their understanding of the scientific world. The flexible program allows students to create a tailored interdisciplinary program that can prepare the student for a variety of professions or graduate studies. Our majors go on to medical schools, dental schools, and other health related graduate programs, as well as careers as financial analysts, lab researchers, computing, pharmaceutical, and other careers that require a science/math background.

Program Notes:

- Chemistry majors who transfer to Comprehensive Science (BSC) may count CHM 1311/CHM 1301 in place of the CHM 1151/CHM 1103 requirement listed below.
- Chemistry majors who transfer to Comprehensive Science (BSC) may count CHM 1521/CHM 1502 in place of the CHM 1152/CHM 1104 requirement listed below.

Type: Bachelor of Science

MAJOR (65 credits)

Required Major Courses:

Item #	Title	Credits
BIO 2105	General Biology I	4
BIO 2106	General Biology II	4
CHM 1151	General Chemistry I	4
CHM 1103	General Chemistry Lab I	1
CHM 1152	General Chemistry II	4
CHM 1104	General Chemistry Lab II	1
CSC 1051	Algorithms & Data Struc I	4
MAT 1500	Calculus I	4
MAT 1505	Calculus II	4
	Approved Physics with Labs	8
	Science Major Statistics	3
	Approved Math or Computing Elective	3
	Science Major Capstone	3
	Approved Science Electives	18

Category Descriptions

Approved Physics with Labs

Credits: 8

Two semesters of an approved (science major level) physics with labs.

Item #	Title	Credits
PHY 2410	University Phy:Mechanics	3
PHY 2411	Lab: Mechanics	1
Item #	Title	Credits
PHY 2412	Univ Physics:Elec & Mag	3
PHY 2413	Lab:Elec & Magnetism	1
Item #	Title	Credits
PHY 1100	General Physics I	3
PHY 1101	General Physics I Lab	1
Item #	Title	Credits
PHY 1102	General Physics II	3
PHY 1103	General Physics II Lab	1

Science Major Statistics

Credits: 3

One semester of science major-level statistics.

Item #	Title	Credits
PSY 2000	Intro Statistics	3
CSC 2300	Statistics for Computing	3
STAT 1313	Statistics for Life Sciences	3
STAT 4310	Stat Methods	3

Approved Math or Computing Elective

Credits: 3

One additional approved Mathematics or Computing course.

Item #	Title	Credits
CSC 1052	Algorithms & Data Struc II	4
CSC 1300	Discrete Structures	3
MAT 1314	Modeling for the Life Sciences	3
MAT 2500	Calculus III	4
MAT 2600	Foundation of Math I	3
MAT 2705	Diff Equation with Linear Alg	4
STAT 4315	Applied Statistical Models	3

Science Major Capstone

Credits: 3

One science major-level capstone course or approved equivalent.

Approved Science Electives

Credits: 18

Six approved science electives chosen in consultation with the student's advisor or the program director.

Computing Sciences

Chair: Daniel Joyce, Ph.D.
Office Location: Mendel Science Center Rm. 161
Telephone: (610) 519-7307
[Website](#)

About

The Department of Computing Sciences seeks to provide outstanding education, to advance scholarship, and to engage in activities that benefit society as a whole, in accordance to the University mission. The Department aims to equip students with a solid foundation in computing theory, and to prepare them for lifelong independent learning and innovative thinking in a constantly changing discipline. Its faculty members strive to maintain professional currency, and to involve students and colleagues in their research investigations. These endeavors support

the University mission to transmit, pursue, and discover knowledge in an atmosphere of collegiality in the university community. Supported by a liberal arts education, the Department seeks to develop the total person, sensitive to social and ethical concerns affected by the computing discipline, and committed to addressing the needs of a diverse and interconnected modern society.

Computing Sciences, B.S.

Chair: Daniel Joyce, Ph.D.
Office Location: Mendel Science Center Rm. 161
Telephone: (610) 519-7307
[Website](#)

About

Computer science students explore a broad spectrum of computing technologies and concepts. Our courses provide a thorough foundation in the principles and practices of computing, paving the way for successful careers and ongoing graduate studies. Our students also learn skills in communication and the scientific, mathematical, and engineering principles that support the computing disciplines.

The Department of Computing Sciences seeks to provide outstanding education, to advance scholarship, and to engage in activities that benefit society as a whole, in accordance to the University mission. The Department aims to equip students with a solid foundation in computing theory, and to prepare them for lifelong independent learning and innovative thinking in a constantly changing discipline. Its faculty members strive to maintain professional currency, and to involve students and colleagues in their research investigations. These endeavors support the University mission to transmit, pursue, and discover knowledge in an atmosphere of collegiality in the university community. Supported by a liberal arts education, the Department seeks to develop the total person, sensitive to social and ethical concerns affected by the computing discipline, and committed to addressing the needs of a diverse and interconnected modern society.

Type: Bachelor of Science

MAJOR (54 credits)

The ABET accredited major consists of 54 credits (18 courses) in computer science, plus additional mathematics, science and philosophy (ethics) requirements. Required courses include program design using Java and C, computer systems, analysis of algorithms, theory of computability, database principles, organization of programming languages, software engineering, computing ethics, and a senior project. Students select four computer science electives and have five free electives.

Program Notes:

- Combined BS/MS in Computer Science or Software Engineering: Five-year double degree program. See departmental website for details regarding admission, requirements, the program of study, etc.

Required Major Courses:

Item #	Title	Credits
CSC 1990	Enrichment Sem in Computing	1
CSC 1051	Algorithms & Data Struc I	4
CSC 1052	Algorithms & Data Struc II	4
CSC 1300	Discrete Structures	3
CSC 1700	Analysis of Algorithms	3
CSC 1800	Organ of Prog Languages	3
CSC 2053	Platform Based Computing	3
CSC 2300	Statistics for Computing	3
CSC 2400	Computer Systems I	3
CSC 2405	Computer Systems II	3
CSC 4170	Theory of Computation	3
CSC 4480	Principles of Database Systems	3
CSC 4700	Software Engineering	3
CSC 4790	Senior Projects	3
PHI 2180	Computer Ethics	3
MAT 1500	Calculus I	4
	MAT 1505 or CSC 3300	4
	Natural Science with Lab	8
	CSC Elective	3
	CSC Elective	3
	CSC Elective	3
	CSC Elective	3

Category Descriptions

MAT 1505 or CSC 3300

Credits: 4

Item #	Title	Credits
MAT 1505	Calculus II	4
CSC 3300	Linear Algebra for Computing	4

Natural Science with Lab

Credits: 8

Choose two Natural Science courses with labs from the department's approved list of science courses.

CSC Elective

Credits: 3

Approved CSC elective course.

Computer Science Minor

Chair: Daniel Joyce, Ph.D.

Office Location: Mendel Science Center Rm. 161

Telephone: (610) 519-7307

[Website](#)

About

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Type: Minor

MINOR: Computer Science (26 credits)

The computer science minor consists of 8 courses from the requirements for the computer science major. The minor provides a strong foundation in computer science suitable for application to any other major field of endeavor.

Required Courses:

Item #	Title	Credits
CSC 1051	Algorithms & Data Struc I	4
CSC 1052	Algorithms & Data Struc II	4
CSC 1300	Discrete Structures	3
CSC 1700	Analysis of Algorithms	3
CSC 2400	Computer Systems I	3
CSC 4480	Principles of Database Systems	3
	CSC Elective	3
	CSC Elective	3

Category Descriptions

CSC Elective

Credits: 3

Approved CSC elective course.

Cybersecurity Minor

Chair: Daniel Joyce, Ph.D.
Office Location: Mendel Science Center Rm. 161
Telephone: (610) 519-7307
[Website](#)

About

The Department of Computing Sciences seeks to provide outstanding education, to advance scholarship, and to engage in activities that benefit society as a whole, in accordance to the University mission. The Department aims to equip students with a solid foundation in computing theory, and to prepare them for lifelong independent learning and innovative thinking in a constantly changing discipline. Its faculty members strive to maintain professional currency, and to involve students and colleagues in their research investigations. These endeavors support the University mission to transmit, pursue, and discover knowledge in an atmosphere of

collegiality in the university community. Supported by a liberal arts education, the Department seeks to develop the total person, sensitive to social and ethical concerns affected by the computing discipline, and committed to addressing the needs of a diverse and interconnected modern society.

Type: Minor

MINOR: Cybersecurity (29 credits)

Offered jointly through the Department of Computing Sciences and the Electrical and Computer Engineering Department in the College of Engineering, the Cybersecurity Minor provides students with a solid foundation in the principles of cybersecurity. There are multiple paths to the Minor, but all require at least two courses of computer programming, one course of discrete structures, one course of networks, four courses related to information security, and a capstone project course.

Criminology

Criminology, B.A.

Program Director: Kelly Welch, Ph.D.
Office Location: 274 Saint Augustine Center
Telephone: (610) 519-7048
[Website](#)

About

The Criminology major is an interdisciplinary program designed to provide students with an understanding of the causes, social functions, nature and application of criminal law, and societal reactions to criminal law. Criminologists believe that people's actions are strongly influenced by the conditions and situations in which they live, work, and play. Everybody makes decisions, but we recognize and study how social structures and institutions affect and constrain those decisions. Our goal as researchers is to expose and analyze the impacts of those circumstances on human decisions, societies, and opportunities. Methodologically, we incorporate multiple perspectives and analytical approaches to help create a more holistic understanding of our society. Rather than a technical program which focuses on applied skills, our program emphasizes the justice component. Our mission as teachers is to empower students to think

critically and rigorously about individuals and societies. Through our diverse offerings on local, regional, national and global social processes, we strive to create more complete human beings with a keen sense of humanity, social justice, and appropriate social policy.

Type: Bachelor of Arts

MAJOR (33 credits)

To declare the Major, a student must have completed Introduction to Criminology (CRM 1001), with a “C+” or higher or have a minimum GPA of 3.0. The Major consists of 33 credits. A student must allow three full semesters after the declaration of the Major to complete all requirements. One of the Criminology electives for the Major can be satisfied by an internship for credit with approval from the Program Director, provided that the student has at least 15 credits toward the Major.

Program Notes:

- A student taking an internship in a field setting in the second semester of their junior year or during their senior year should consult with the Program Director.

Required Major Courses:

Item #	Title	Credits
CRM 1001	Introduction to Criminology	3
CRM 5100	Criminological Theory	3
SOC 5300	Data Analysis-Social Scientist	3
SOC 5400	Applied Research in Soc	3
CRM 6500	Senior Seminar	3
	CRM Elective	3
	CRM Elective	3
	CRM Elective	3
	CRM Elective	3
	CRM Elective	3
	SOC Elective	3

Category Descriptions

CRM Elective

Credits: 3

Choose a criminology elective.

SOC Elective

Credits: 3

Choose a sociology elective.

Criminology Minor

Program Director: Kelly Welch, Ph.D.

Office Location: 274 Saint Augustine Center

Telephone: (610) 519-7048

[Website](#)

About

The Criminology major is an interdisciplinary program designed to provide students with an understanding of the causes, social functions, nature and application of criminal law, and societal reactions to criminal law. Criminologists believe that people’s actions are strongly influenced by the conditions and situations in which they live, work, and play. Everybody makes decisions, but we recognize and study how social structures and institutions affect and constrain those decisions. Our goal as researchers is to expose and analyze the impacts of those circumstances on human decisions, societies, and opportunities. Methodologically, we incorporate multiple perspectives and analytical approaches to help create a more holistic understanding of our society. Rather than a technical program which focuses on applied skills, our program emphasizes the justice component. Our mission as teachers is to empower students to think critically and rigorously about individuals and societies. Through our diverse offerings on local, regional, national and global social processes, we strive to create more complete human beings with a keen sense of humanity, social justice, and appropriate social policy.

Type: Minor

MINOR (15 credits)

A Minor is open to all students and requires 5 courses and 15 credits. Courses taken on a satisfactory/unsatisfactory basis cannot be used to satisfy requirements for the Minor. Minors cannot receive Criminology credit for an internship. Students wishing to earn a Minor in Criminology must fill out an application form available in the office.

Program Notes:

- Only one course may be transferred from another university.

Required Minor Courses:

Item #	Title	Credits
CRM 1001	Introduction to Criminology	3
	CRM Elective	3
	CRM Elective	3
	CRM Elective	3
	CRM Elective	3

Category Descriptions

CRM Elective

Credits: 3

Choose a criminology elective.

Economics

Chair: Peter Zaleski, Ph.D.
Office Location: 2014 Bartley Hall
Telephone: 610-519-4370
[Website](#)

About

Economics is the science that studies the behavior of social systems – such as markets, legislatures, corporations, and families – in allocating scarce resources. It is a discipline which brings together the diverse worlds of business, social science, and public policy. The study of economics is an excellent preparation leading to many career options. Economics majors are well positioned to be the future managers and leaders in both the private and public sectors. The study of economics at the

undergraduate level provides a solid basis for graduate study in the social sciences and for professional study in business administration, law, public administration, and in the health sciences.

Economics, B.A.

About

Economics addresses how individuals and firms make decisions in a world of scarcity and uncertainty while also presenting opportunities to learn how to analyze the performance and interaction of national economies. The curriculum is designed to promote the development of quantitative skills as well as written and verbal communication abilities so students are equipped to critically examine the effects of economic factors on market participants in the private and public sectors. Because of the growing complexity of the global economy, there is an increase in the demand for individuals who can provide and communicate quantitative analysis of economic variables and their effects on forecasting sales, managing costs, allocating budgets, and choosing investment options.

Type: Bachelor of Arts

MAJOR (33 credits)

Students majoring in Economics should have good analytical skills along with good writing skills. Economic graduates find employment in banking, finance, retail, government, planning, and forecasting. Also, Economics is a perfect preparation for Law School.

Program Notes:

- A minimum GPA of 2.5 and a minimum grade of B- in ECO 1001 & 1002 are required to declare the economics major. Students not meeting these requirements should discuss with the Chair/Associate Chair of the Economics Department.
- Calculus (which can be used to satisfy the core) is a prerequisite for ECO 2101 and ECO 2102.

Required Major Courses:

Item #	Title	Credits
ECO 1001	Intro to Micro	3
ECO 1002	Intro to Macro	3
	MAT 1430 or MAT 1235	3
ECO 2101	Macro-Econ Theory	3
ECO 2102	Micro-Econ Theory	3
ECO 3137	Intro to Econometrics	3
	ECO Elective 3000 or higher	3
	ECO Elective 3000 or higher	3
	ECO Elective 3000 or higher	3
	ECO Elective 3000 or higher	3
	ECO Elective 4000 or higher	3

Category Descriptions

MAT 1430 or MAT 1235

Credits: 3

ECO Elective 3000 or higher

Credits: 3

Choose an ECO course numbered 3000 or higher.

ECO Elective 4000 or higher

Credits: 3

Choose an ECO course numbered 4000 or higher.

Economics Minor

Chair: Peter Zaleski, Ph.D.

Office Location: 2014 Bartley Hall

Telephone: 610-519-4370

[Website](#)

About

Economics addresses how individuals and firms make decisions in a world of scarcity and uncertainty while also presenting opportunities to learn how to analyze the performance and interaction of national economies. The curriculum is designed to promote the development of quantitative skills as well as written and verbal communication abilities so students are equipped to critically examine the effects of economic factors on market participants in the private and public sectors. Because of the growing complexity of the global economy, there is an increase in the demand for individuals who can provide and communicate quantitative analysis of economic variables and their effects on forecasting sales, managing costs, allocating budgets, and choosing investment options.

Type: Minor

MINOR (18 credits)

A minor is open to all students and requires 6 courses and 18 credits.

Program Notes:

- Calculus (which can be used to satisfy the core) is a prerequisite for ECO 2101 and ECO 2102.

Required Minor Courses:

Item #	Title	Credits
ECO 1001	Intro to Micro	3
ECO 1002	Intro to Macro	3
ECO 2101	Macro-Econ Theory	3
ECO 2102	Micro-Econ Theory	3
	ECO Elective 3000 or higher	3
	ECO Elective 3000 or higher	3

Category Descriptions

ECO Elective 3000 or higher

Credits: 3

Choose an ECO course numbered 3000 or higher.

Education and Counseling

Chair: Christopher Schmidt, Ph.D.
Office Location: 302 Saint Augustine Center
Telephone: 610-519-4620
[Website](#)

About

The Education and Counseling Department undergraduate offerings include a Major in Secondary Education, two different Minor in Education programs, a Minor in Counseling, and a combined [BA/MA in Education](#). The Secondary Education degree has been approved by the Pennsylvania Department of Education (PDE) to recommend candidates for Level I Certification in order to teach in grades 7 through 12 in Pennsylvania's public schools. Faculty in the department are highly engaged in both theoretical and practical research related to education and counseling.

Education, B.A.

Chair: [Teresa G. Wojcik, Ph.D.](#)
Undergraduate Program Director: [Christa S. Bialka, Ed.D.](#)
Office Location: 302 Saint Augustine Center
Telephone: 610-519-8103
[Website](#)

About

The Education and Counseling Department undergraduate offerings include a Major in Secondary Education, two different Minor in Education programs, a Minor in Counseling, and a combined [BA/MA in Education](#). The Secondary Education degree has been approved by the Pennsylvania Department of Education (PDE) to recommend candidates for Level I Certification in order to teach in grades 7 through 12 in Pennsylvania's public schools. Faculty in the

department are highly engaged in both theoretical and practical research related to education and counseling.

Type: Bachelor of Arts

MAJOR (43 credits)

In addition to demonstrating competence within their chosen academic discipline, as well as fulfilling the College of Arts and Sciences' core curriculum requirements, students participate in a wide variety of classroom field experiences. Such experiences are carefully selected and supervised and always appropriate to both the academic and professional competence of the students.

Program Notes:

- To be accepted into the major, students must have a 3.0 GPA, 6 credits in English and 6 credits in math completed prior to the start of their junior year..
- Candidates for the major should apply as soon as possible and no later than sophomore year

Education Major Required Courses:

Item #	Title	Credits
	EDU 2201 or EDU 2202	3
EDU 2300	Research Seminar in Education	3
EDU 3000	Prof. Development in Education	1
EDU 3251	Psych of Teaching & Learning	3
EDU 3263	Diversity and Inclusion	3
EDU 3264	Intro to Disability Studies	3
EDU 4245	Literacy & Eng Lang Learning	3
EDU 4290	Philosophy of Education	3
EDU 4291	Student Teaching	9
EDU 4292	Senior Seminar	3
	EDU Major Methods	3
	MAT or CSC Elective	3
	ENG Advanced Elective	3

Category Descriptions

EDU 2201 or EDU 2202

Credits: 3

Item #	Title	Credits
EDU 2201	Social Foundation Educ I	3
EDU 2202	Social Foundation Edu II	3

EDU Major Methods

Credits: 3

One of the following methods is required depending on concentration:

Item #	Title	Credits
EDU 4281	Meth English Sec School	3
EDU 4282	Meth Fgn Lang Sec School	3
EDU 4283	Meth Math Sec School	3
EDU 4284	Meth Science Sec School	3
EDU 4285	Meth Soc Stud Sec School	3

MAT or CSC Elective

Credits: 3

Choose any 3-credit course with the MAT or CSC subject code.

ENG Advanced Elective

Credits: 3

Choose any 3-credit upper-level course with ENG as the subject code.

Counseling Minor

Chair: Krista Malott, Ph.D.
Office Location: 302 Saint Augustine Center
Telephone: (610) 519-8103
[Website](#)

About

The Education and Counseling Department undergraduate offerings include a Major in Secondary Education, two different Minor in Education programs, a Minor in Counseling, and a combined [BA/MA in Education](#). The Secondary Education degree has been approved by the Pennsylvania Department of Education (PDE) to recommend candidates for Level I Certification in order to teach in grades 7 through 12 in Pennsylvania's public schools. Faculty in the department are highly engaged in both theoretical and practical research related to education and counseling.

Type: Minor

COUNSELING MINOR (15 credits)

The Minor in Counseling exposes students to knowledge of the field of counseling and the counseling process, evidence-based therapeutic practices, and the application of counseling skills. The minor is not intended to replace graduate level professional training, but to prepare students for entry level helping careers, for advanced graduate work, or to complement coursework from a variety of majors.

Program Notes:

Students interested in declaring the counseling minor must have a minimum GPA of 3.0

Counseling Minor Required Courses:

Item #	Title	Credits
COU 2000	Introduction to Counseling	3
	COU 3500 or COU 3700	3
	COU 3100 or 3 COM 5300 Workshops	3
	COU 2500 or COU 3400	3
	COU 3600 or COU 3700	3

Category Descriptions

COU 3500 or COU 3700

Credits: 3

Select one of the following:

Item #	Title	Credits
COU 3500	Devlp Perspective to Diagnosis	3
COU 3700	Family & Couples Counseling	3

COU 3100 or 3 COM 5300 Workshops

Credits: 3

For this option, students may choose to take COU 3100 or three COM 5300 Intergroup Dialogue 1-credit Workshops (10 hours each).

Item #	Title	Credits
COU 3100	Group Counseling	3
COM 5300	Topics in Intergroup Dialogue	1

COU 2500 or COU 3400

Credits: 3

Select one of the following:

Item #	Title	Credits
COU 2500	Counseling for Women	3
COU 3400	Culturally Competent Counseling	3

COU 3600 or COU 3700

Credits: 3

Select one of the following:

Item #	Title	Credits
COU 3600	Motivational Counseling Skills	3
COU 3700	Family & Couples Counseling	3

Education Minor

Program Director: Christa Bialka, PhD

Type: Minor

About

The Education Minor is 15 credits. The minor in Education does not qualify one to teach in Pennsylvania public schools. If a student wishes to continue toward teacher certification after graduation, they will need to complete the coursework and student teaching required to apply for Pennsylvania certification. Students interested in obtaining teacher certification should speak to Education Undergraduate Program Director, [Dr. Christa Bialka](#), to create a plan for moving forward.

Program Notes:

- Electives other than those listed below may be taken with approval of Chairperson. Please contact [Rita Siciliano](#) for more information on electives and registering for graduate level courses.
- All 8000 level courses need approval of Chairperson.

Required Courses:

Item #	Title	Credits
	EDU 2201 or EDU 2202	3
EDU 3251	Psych of Teaching & Learning	3
EDU 3263	Diversity and Inclusion	3
EDU 4290	Philosophy of Education	3
	EDU Minor Elective	3

Category Descriptions

EDU 2201 or EDU 2202

Credits: 3

Item #	Title	Credits
EDU 2201	Social Foundation Educ I	3
EDU 2202	Social Foundation Edu II	3

EDU Minor Elective

Credits: 3

Choose one course from the following list, or others as approved by Chairperson. Please contact [Rita Siciliano](#) for more information on electives and registering for graduate level courses.

List also includes EDU 8400, 8610, 8654, 8656, 8664, 8669, 8679.

Item #	Title	Credits
EDU 2300	Research Seminar in Education	3
EDU 3258	Education & Society in 1960s	3
EDU 3260	World War II Experience in EDU	3
EDU 3262	Edu Pearl Harbor to Sputnik	3
EDU 3264	Intro to Disability Studies	3
EDU 4245	Literacy & Eng Lang Learning	3

Education Policy & Leadership Minor

Chair: Christopher Schmidt, Ph.D.
Office Location: 302 Saint Augustine Center
Telephone: 610-519-4620
[Website](#)

About

The Education and Counseling Department undergraduate offerings include a Major in Secondary Education, two different Minor in Education programs, a Minor in Counseling, and a combined [BA/MA in Education](#). The Secondary Education degree has been approved by the Pennsylvania Department of Education (PDE) to recommend candidates for Level I Certification in order to teach in grades 7 through 12 in Pennsylvania's public schools. Faculty in the department are highly engaged in both theoretical and practical research related to education and counseling.

Type: Minor

EDUCATION POLICY & LEADERSHIP MINOR (15 credits)

A minor in Educational Policy and Leadership is designed to help students develop an awareness of global issues in education in order to learn how educational institutions can transform and be transformed by society through school policy and leadership. A minor in Educational Policy and Leadership requires at least 15 credits. The minor in Educational Policy and Leadership does not lead to Pennsylvania teacher certification or qualify one to teach in Pennsylvania public schools.

Program Notes:

- Electives other than those listed below may be taken with approval of Chairperson. Please contact [Rita Siciliano](#) for more information on electives and registering for graduate level courses.
- All 8000 level courses need approval of Chairperson.

Education Policy & Leadership Minor Required Courses:

Item #	Title	Credits
EDU 3264	Intro to Disability Studies	3
EDU 3277	Urban Education	3
	EDU 3253 or EDU 8654	3
	Education Policy & Leadership Electives	6

Category Descriptions

EDU 3253 or EDU 8654

Credits: 3

Item #	Title	Credits
EDU 3253	Educational Policy Analysis	3

Education Policy & Leadership Electives

Credits: 6

Choose six credits from the following list. Other courses may qualify based on approval of Chairperson. Please contact [Rita Siciliano](#) for more information on electives and registering for graduate level courses.

List also includes EDU 8610, 8656, 8664, 8669 and 8679.

Item #	Title	Credits
EDU 2201	Social Foundation Educ I	3
EDU 2202	Social Foundation Edu II	3
EDU 2300	Research Seminar in Education	3
EDU 3251	Psych of Teaching & Learning	3
EDU 4290	Philosophy of Education	3
EDU 4245	Literacy & Eng Lang Learning	3

Teaching Certification

Chair: [Teresa G. Wojcik, Ph.D.](#), Department of Education and Counseling
Program Coordinator: [Nancy Franz, M.Ed.](#)
Office Location: 302 Saint Augustine Center
Telephone: 610-519-4620
[Website](#)

About

Villanova University's secondary teacher education program is approved by the Pennsylvania Department of Education as satisfying the requirements for teacher certification in 14 subject areas. Students with majors in departments other than Education and Counseling may be admitted to the teacher education program upon the approval of the Undergraduate Committee. Students admitted to the teacher education program must complete the same requirements as Education majors, including courses in ELL, special education, and student teaching.

Student Teaching is normally taken in the second semester of the senior year. Exploratory-Arts students who may be interested in Secondary Teacher Certification should stop by the Office of Education and Counseling, 302 St. Augustine Center for the Liberal Arts, as soon as possible.

Students enrolled in the Teacher Education Program will have their work reviewed each semester by a department committee to determine progress and professional development for certification. Students must achieve a 3.0 overall GPA and successful completion of the PAPA tests (or satisfaction of the *SAT/ ACT exemption) before they are

permitted to do student teaching. Students who do not achieve the required cumulative average by spring semester senior year will not be allowed to continue in the education major.

AREAS OF CERTIFICATION:

Biology, Chemistry, Citizenship, Communication, English, French, General Science, Italian, Latin, Mathematics, Physics, Spanish, and Social Studies.

Upon successful completion of the major required certification courses, the special education workshops, and ELL courses, and the PAPA, and Praxis II exams, the student will be eligible for certification.

*SAT/ACT exemption: Students who receive a score of at least a 1550 on the SAT, with a minimum score of 500 in each of the three testing sections OR a student who receives at least a score of 23 on the ACT test, will be exempt from taking the PAPA basic skills tests.

Type: Certificate

English

Upcoming Courses

- [Fall 2020 Upper-Level Courses](#)
- [Fall 2020 1842 First-Year Courses](#)

English, B.A.

Chair: Heather Hicks, Ph.D.
Office Location: 402 Saint Augustine Center
Telephone: 610-519-4630
[\[Website\]](#)

About

The English department believes that skillful, self-aware reading, writing, and thinking provide a foundation for meaningful living. We seek to develop forms of analysis and expression that are both critical and creative and that help us comprehend the multiple cultural practices and values of the twenty-first century. Villanova English majors acquire a broad understanding of Anglophone literary history as well as familiarity with the major genres of the tradition. A department of accomplished scholars, we focus on undergraduate education and make our

majors the center of pedagogy. While preserving the value of literature as a cultural form, we cultivate in our students the analytical skills necessary for negotiating today's rapidly changing world.

- [View Fall 2020 English Topics Course Offerings](#)
- [View Spring 2021 English Course Offerings](#)

Type: Bachelor of Arts

MAJOR (33 credits)

English majors take a range of courses, from required courses (chosen from a number of possibilities) that provide a sense of the historical range and diversity of literature in English to electives covering contemporary writers, film, creative writing, and many more topics. Students can also form tracks (such as Professional Writing, World Literature, or Race and Ethnicity) within the major. English courses are particularly well-suited to helping students become better readers, writers, and analytical thinkers; because of those skills, and because of the breadth of literature, English courses are valuable in all aspects of our lives.

Program Notes:

- There is no prerequisite to the major, but we strongly recommend that you take English 3001 (Foundational Literature in English I) early, since it will introduce you to writers, texts, and issues that are crucial to most subsequent courses.

Required Major Courses:

Item #	Title	Credits
	British/Irish Lit Pre-1800 Courses	6
	Post-1800 Literature Elective	6
ENG 2250	Ways of Reading:Lit Analysis	3
ENG 5000	Senior Seminar	3
	English Electives 1800 and Above	15

Category Descriptions

British/Irish Lit Pre-1800 Courses

Credits: 6

Choose two courses in British/Irish literature before 1800, in two different areas.

Medieval

Item #	Title	Credits
ENG 3000	Intro to OE Lang & Lit	3
ENG 3150	Chaucer	3
ENG 3160	Fabulous Middle Ages	3
ENG 3181	Irish Epics, Visions&Hauntings	3
ENG 3190/3191	Medieval Brit/Ir Lit. & Cult.	3

Renaissance

Item #	Title	Credits
ENG 3201	English Renaissance	3
ENG 3230	Eliz & Jacobean Drama	3
ENG 3250	Shakespeare	3
ENG 3260	Revenge Tragedy	3
ENG 3290/3291	Renaissance Br/Ir Lit. & Cult.	3
ENG 3300	17th Cent Poetry & Prose	3
ENG 3350	Milton	3

Restoration & 18th Century

Item #	Title	Credits
ENG 3350	Milton	3
ENG 3420	18th Century British Novel	3
ENG 3430	Restor & 18th cent Drama	3
ENG 3440	Harlots, Rakes, & Libertines	3
ENG 3450	Dryden Swift & Pope	3
ENG 3490/3491	18th c. Brit/Ir Lit. & Culture	3

Post-1800 Literature Elective

Credits: 6

One course must be Non-American Anglophone and the other Literature of the Americas. One course must be 19th Century literature and one must be literature after 1900.

Non-American Anglophone 19th Century

Item #	Title	Credits
ENG 3501	Early Romantic Writers	3
ENG 3502	Later Romantic Writers	3
ENG 3504	19th Cent Brit Women Writers	3
ENG 3505	Poetry & Prose 1830-1865	3
ENG 3506	Poetry & Prose 1865-1900	3
ENG 3520	19th Cent British Novel	3
ENG 3525	Dickens	3
ENG 3530	Victorian Doubles	3
ENG 3580	Topics in 19th C Irish Lit&Cul	3
ENG 3590/ 3591	19th c. Brit/Ir Lit. & Culture	3
ENG 3617	Irish Revivalism	3

Non-American Anglophone After 1900

Item #	Title	Credits
ENG 3610	Modern British Poetry	3
ENG 3615	James Joyce	3
ENG 3616	Irish American Drama & Film	3
ENG 3617	Irish Revivalism	3
ENG 3618	Intro to African Lit I	3
ENG 3619	Intro to African Lit II	3
ENG 3620	Modern British Novel	3
ENG 3621	Contemp British Novel	3
ENG 3630	Modern British Drama	3
ENG 3640	Irish Drama	3
ENG 3650	African Drama	3
ENG 3680	Top: 20th-21st C Irish Lit&Cul	3
ENG 3682	Contemporary Irish Literature	3
ENG 3690/ 3691	Br/Ir Lit. & Cult. after 1900	3

Literature of the Americas to 1900

Item #	Title	Credits
ENG 4001	Major Amer Writers I	3
ENG 4003	African-American Lit Trad 1	3
ENG 4040	American Short Story	3
ENG 4500	American Slave Narrative	3
ENG 4501	Amer Transcendentalism	3
ENG 4505	Concord Writers	3
ENG 4510	19th Cent Amer Poetry	3
ENG 4515	American Gothic	3
ENG 4520	American Novel to 1895	3
ENG 4530	The American Renaissance	3
ENG 4540	The American Revolutionary Era	3
ENG 4590/ 4591	Am. Lit. & Cult. before 1900	3

Literature of the Americas after 1900

Item #	Title	Credits
ENG 4040	American Short Story	3
ENG 4500	American Slave Narrative	3
ENG 4515	American Gothic	3
ENG 4602	African American Lit Trad 2	3
ENG 4603	Black Lit. Short Story	3
ENG 4605	Amer Poetry: 1900-1950	3
ENG 4610	Black Literature: Poetry	3
ENG 4615	Amer Poetry since 1950	3
ENG 4618	Harlem Renaissance	3
ENG 4619	The Works of Edith Wharton	3
ENG 4620	American Novel 1895-1950	3
ENG 4621	Amer Novel since 1950	3
ENG 4622	African American Women Writers	3
ENG 4623	Black Literature: Novel	3
ENG 4630	American Drama to 1960	3
ENG 4631	Amer Drama since 1960	3
ENG 4632	Black Literature: Drama	3
ENG 4635	Contemporary American Poetry	3
ENG 4636	Contemp Amer Women's Poetry	3
ENG 4640	Contemp Amer Women's Lit	3
ENG 4645	Post Modern Amer Fiction	3
ENG 4646	Race & Ethnicity: Amer Novel	3
ENG 4647	Gender & Sexuality in US Lit	3
ENG 4648	U.S. Empire & Cont. Am. Lit.	3
ENG 4649	Intro to Asian American Lit	3
ENG 4651	Lives of the Undocumented	3
ENG 4652	Letters, Texts, & Twitter	3
ENG 4690/ 4691/ 4692	Amer. Lit. & Cult. after 1900	3
ENG 4700	Caribbean Literature	3

English Electives 1800 and Above

Credits: 15

Choose five courses numbered 1800 and above, with the exception of 1975, which cannot be counted, and with the partial exception of the Foundational Literature in English and American Literary Tradition courses (3001, 3500, 4000, 4600); a student may count only two of those courses toward the major.

Creative Writing Minor

The Creative Writing Program offers an interdisciplinary Minor in Creative Writing to students across the university. The goal of the program is to support students in their creative writing endeavors. The Creative Writing Program seeks to offer students the opportunity to augment their degree by taking courses that will awaken their imagination, develop their skills as creative writers and thinkers, and foster greater empathy towards the experiences of others.

The Creative Writing Program also seeks to create a "space of creativity" within the university. Through courses and workshops, students will interact with and learn from their peers as well as published novelists, poets, playwrights and screenwriters.

Interested freshmen may wish to take part in our [Creative Writing Community](#).

Type: Minor

MINOR (15 credits)

Program Notes:

- Students must take ENG 2003: Introduction to Creative Writing as a prerequisite to the minor.
- Students may also complete an Independent Study (Completion of a collection of stories or poems, or a novel) upon approval.

Item #	Title	Credits
ENG 2003	Intro to Creative Writing	3
ENG 4690/ 4691/ 4692	Amer. Lit. & Cult. after 1900	3
	Creative Writing Electives 1	9

Category Descriptions

Creative Writing Electives 1

Credits: 9

Choose three courses from the following list:

Item #	Title	Credits
ENG 1842	Perspectives in Literature	3
ENG 2005	Writing of Short Story	3
ENG 2006	The Writing of Poetry	3
ENG 2007	The Writing of Screenplays	3
ENG 2009	Writing the Traditional Novel	3
ENG 2012	Advanced Creative Writing	3
ENG 2013	Writing of Memoir	3
ENG 2045	Sp Top in Writing & Rhetoric	3
ENG 2060	Desktop Publishing	3
COM 3303	Screenwriting	3
HON 5440	Literary Arts:Poetry	1
HUM 2900	Topics	3
THE 3007	Playwriting	3

English Minor

Program Contact: [Joseph Drury, Ph.D.](#), Associate Professor
Office Location: Saint Augustine Center, Room 402

About

The English department believes that skillful, self-aware reading, writing, and thinking provide a foundation for meaningful living. We seek to develop forms of analysis and expression that are both critical and creative and that help us comprehend the multiple cultural practices and values of the twenty-first century. Villanova English majors acquire a broad understanding of Anglophone literary history as well as familiarity with the major genres of the tradition. A department of accomplished scholars, we focus on undergraduate education and make our majors the center of pedagogy. While preserving the value of literature as a cultural form, we cultivate in our students the analytical skills necessary for negotiating today's rapidly changing world.

- [View Fall 2020 English Topics Course Offerings](#)
- [View Spring 2021 English Topics Course Offerings](#)

Type: Minor

ENGLISH MINOR (15 credits)

To complete an English Minor, you take five English courses (15 credits) numbered 1800 or higher, with the exception of 1975, which cannot be counted. To declare an English Minor, students should complete the application for an English Minor located [here](#).

Required Minor Courses:

- At least one course must come from the Non-American Anglophone literature offerings. All 3000-level courses count, as well as ENG 2101 and 2102 [The British Literary Tradition I and II] (3 cr)
- At least one course must come from the Literature of the Americas offerings. All 4000-level courses count, as well as ENG 2103 and 2104 [The American Literary Tradition I and II] (3 cr)
- The other three courses may be courses that focus on literature (ENG 2100-5000, as well as 1842), courses that focus on writing and rhetoric (ENG 2000-2099, as well as 1842), or both (9 cr)

Program Notes:

- At least three of these courses must be taken at Villanova.
- Course numbers from 2000 to 4999 refer only to the subjects that the course cover, and do not reflect the level or difficulty.

Ethics

Ethics Minor

Program Director: [Mark Doorley, Ph.D.](#)
Associate Director: [Brett T. Wilmot, Ph.D.](#)
Office Location: 104 Saint Augustine Center
Telephone: 610-519-4692
[\[Website\]](#)

About

Here at Villanova University, we believe that at the heart of every human endeavor we find assumptions about what it means to live well as human beings in the world and in relationships with others—human, non-human, and divine. The aim of the Ethics Program is to provide students with opportunities to explore these assumptions, to understand their origins in our great

intellectual traditions, and to engage them critically using methods and resources both theological and philosophical.

MINOR (18 credits)

Villanova University prides itself on presenting an educational alternative built around a clear ethical core, in particular, the moral teachings of the Catholic intellectual tradition. The ethics minor allows students to pursue the study of ethics explicitly and in depth as part of their undergraduate education. The minor contributes directly to the mission of the university. A focus on a particular set of questions/issues within ethics not only benefits students' intellectual and moral development and contributes to the public perception of the university but also has tangible benefits for students as they apply for graduate studies, fellowships, and job on completion of their studies.

Program Notes

- Students choose a focus of study and pursue courses listed below, in consultation with their Ethics faculty advisor. To view examples of potential ethics minor foci, [click here](#).
- Each semester the upper-level courses that will count toward the minor will be marked in the Master Schedule, in the Attributes section with "Fulfills ethics minor requirement." These will also be listed on the Ethics Program website. It is important for students to be sure they take the upper level courses that are affiliated with their focus of study.
- The ETH 30xx courses will be planned five semesters in advance so that students will know what will be offered in future semesters, for planning purposes. This information will be available on the Ethics Program website.
- Students are able to do service work in lieu of one of their elective courses in all focus areas. The service must be related to their focus of study, amount to at least 60 hours of service, and not be credit-bearing or paid work. Students will register for ETH 4975 Ethics Independent Study (3 cr) and must complete their service and associated assignments in that same semester. Students must get approval of their service site from the Associate Director of the Ethics Program.

Type: Minor

Required Courses

Item #	Title	Credits
ETH 2050	The Good Life:Eth & Cont Prob	3
	Upper-Level Ethics Elective	3
	Philosophical Ethics Course	3
	Theological Ethics Course	3
	Two Electives in the Student's Chosen Focus	6

Category Descriptions

Upper-Level Ethics Elective

Credits: 3

One Ethics course of 3000 level or higher. Ideally this course should advance the aims of the student's chosen focus.

Philosophical Ethics Course

Credits: 3

A student will take one course in philosophical ethics, offered by ETH, HON, HUM, PHI or PJ, related to the chosen focus,

Theological Ethics Course

Credits: 3

A student will take one course in theological ethics, offered by ETH, HON, HUM, PJ or TH, related to the chosen focus

Two Electives in the Student's Chosen Focus

Credits: 6

Students must take two electives that may or may not be ethics courses, but which are relevant to the chosen theme/focus.

While there are many possible combinations of courses on particular themes than we can identify here, what follows are possible courses of study. The goal for the ethics advisor and the student is to identify a set of courses that have coherence in light of the focus of study.

To view examples of prospective areas of focus, [click here](#).

French and Francophone Studies

French & Francophone Studies, B.A.

Program Director: Étienne Achille, Ph.D.
Office Location: 343 Saint Augustine Center
Telephone: 610-519-5468
[\[Website\]](#)

About

The French and Francophone Studies Program (FFS) of the Department of Romance Languages and Literatures offers a major and a minor. FFS emphasizes language skills and offer interdisciplinary studies in the faculty's area of specialization: French literature and civilization; the evolution of Western thought in France; the cultures and literatures of the Francophone world; and stylistics and translation. The influence of French language and literature crosses centuries as well as geographic boundaries. Francophone studies is a dynamic and rapidly expanding field, focusing on the literatures, politics, history, cultures, language, identities and related studies of French-Speaking countries. Villanova's interdisciplinary FFS have been designed to provide students with a thorough grounding in the history, politics, cultural production, sociolinguistics, post-colonial experiences, and development of Francophone Countries.

Type: Bachelor of Arts

MAJOR (31 credits)

The Major consists of 31 FFS credits above the intermediate level (FFS 1122), including courses in literature, cinema, and cultural studies. Students may obtain up to 6 credits through the Villanova summer program in Lille, France, and up to 9 credits through the semester program.

Program Notes:

- One RLL course taught in English with FFS attribute may be accepted for the major.
- FFS 3971 to be taken in conjunction with any 3000-level course.

Required Major Courses:

Item #	Title	Credits
	FFS 1138 or FFS 1140	3
	FFS 2220 or FFS 2221	3
FFS 3971	Directed Research in FFS	1
	FFS above 1122 (24 credits)	24

Category Descriptions

FFS 1138 or FFS 1140

Credits: 3

Item #	Title	Credits
FFS 1138	Advanced Grammar	3
FFS 1140	Writing & Stylistics in French	3

FFS 2220 or FFS 2221

Credits: 3

Item #	Title	Credits
FFS 2220	Lit and Culture of France	3
FFS 2221	Lit/Cult Francophone World	3

FFS above 1122 (24 credits)

Credits: 24

Choose any FFS courses above the intermediate level (FFS 1122) totaling 24 credits.

French and Francophone Studies Minor

Program Director: Étienne Achille, Ph.D.
Office Location: 343 Saint Augustine Center
Telephone: 610-519-5468
[\[Website\]](#)

About

The French and Francophone Studies Program (FFS) of the Department of Romance Languages and Literatures offers a major and a minor. FFS emphasizes language skills and offer interdisciplinary studies in the faculty's area of specialization: French literature and civilization; the evolution of Western thought in France; the cultures and literatures of the Francophone world; and stylistics and translation. The influence of French language and literature crosses centuries as well as geographic boundaries. Francophone studies is a dynamic and rapidly expanding field, focusing on the literatures, politics, history, cultures, language, identities and related studies of French-Speaking countries. Villanova's interdisciplinary FFS have been designed to provide students with a thorough grounding in the history, politics, cultural production, sociolinguistics, post-colonial experiences, and development of Francophone Countries.

Type: Minor

MINOR (15 credits)

A minor is open to all students and requires 5 courses above intermediate level (FFS 1122).

Program Notes:

- No course in English may count for the minor.

Required Minor Courses:

Item #	Title	Credits
FFS 1131	Conversation and Composition I	3
FFS 1132	Conversation & Composition II	3
	FFS Elective	3
	FFS Elective	3
	FFS Elective	3

Category Descriptions

FFS Elective

Credits: 3

Choose an FFS elective above the Conversation and Composition level.

Gender and Women's Studies

Gender and Women's Studies Minor

Co-Directors: Travis Foster, Ph.D. and Shauna MacDonald, Ph.D.
Office Location: 488 Saint Augustine Center
Telephone: 610-519-450
[\[Website\]](#)

About

Gender and Women's Studies encourages critical analysis of gender and sexuality at local, national, and global levels—now and in the past. Our curriculum brings feminist and queer theory into conversation with fields of study across the University, from history to sociology to global finance, helping students discover new alternatives for thinking about the problems of the world and the contributions of its people. As teachers, we are profoundly influenced by feminist models of collaborative learning and shared authority. We recognize our students and their life experiences as sources of vital expertise, and we help them find a voice, a sense of community, and a purpose as agents of social change.

Type: Minor

MINOR (18 credits)

The minor is open to all students and requires 2 courses and 4 electives for a total of 18 credits. Student may choose their four electives from any GWS-attributed courses that are available in a variety of disciplines.

Required Minor Courses:

Item #	Title	Credits
GWS 2050	Introduction to Gender Studies	3
GIS 5000	Special Topics	1
	GWS Elective	3
	GWS Elective	3
	GWS Elective	3
	GWS Elective	3

Category Descriptions

GWS Elective

Credits: 3

Geography and the Environment

Environmental Studies, B.A.

Chair: Nathaniel Weston, Ph.D.
Program Director: Steven Goldsmith, Ph.D.
Office Location: Suite G67, Mendel Science Center
Telephone: 610-519-3336
[\[Website\]](#)

About

The Department of Geography and the Environment offers B.A. degrees in Geography and Environmental Studies, and a B.S. in Environmental Science. The department also offers minors in Geography and Sustainability Studies. The department's overarching objective is to integrate the disciplines of geography and environmental science to seek an understanding of human and environmental patterns, the processes that produce those spatial patterns, and salient human and environmental problems that face modern society. The department has three teaching and five research labs; and the

department has a full suite of state-of-the-art geospatial software and scientific research equipment.

Type: Bachelor of Arts

MAJOR (57 credits)

The B.A. in Environmental Studies program focuses on the interface between environmental science and relevant social sciences, including public policy, political science, law, economics, sociology, and planning. Towards this end, the program's graduates will have a fundamental understanding of the biological, chemical, and physical principles that underlie the structure and function of the natural and physical environments of the Earth coupled with a foundation in the social sciences that underlie the relationships between humans, as individuals and/or societies, and the natural and physical environments of Earth. The program is founded on the principle that the social sciences - both as a bodies of knowledge and as the bases for structuring human societal norms and behaviors - must be applied to assess and to address the direct and indirect influences of human activities on the integrity of the Earth's systems.

Program Notes:

- Consider course offerings with environmental content when selecting the twelve free electives.
- BIO 3105 or MAT 4310 may fulfill the requirement for GEV 3300.
- GEV 6006 must be taken a total of three times prior to graduation.

Required Major Courses:

Item #	Title	Credits
GEV 2001	Prof Dev in Geo and Env	1
GEV 1050	Environmental Science I	4
GEV 1051	Environmental Science II	4
GEV 1750	Geo-Techniques	4
GEV 2310	Environmental Chemistry	4
GEV 3300	Stats. in Environmental Sci.	3
GEV 4700	Geographic Information Systems	4
GEV 4310	Environmental Issues Seminar	3
CHM 1151	General Chemistry I	4
CHM 1103	General Chemistry Lab I	1
PHI 2121	Environmental Ethics	3
GEV 6005	Senior Research Seminar	1
GEV 6006	Research Colloquium	0
GEV 6006	Research Colloquium	0
GEV 6006	Research Colloquium	0
	GEV Independent Study Requirement	3-6
	GEV Science and Technology Elective	3-4

GEV Science and Technology Elective	3-4
GEV Science and Technology Elective	3-4
GEV Science and Technology Elective	3-4
GEV Policy and Management Elective	3
GEV Policy and Management Elective	3
GEV Humanities Elective	3
GEV Humanities Elective	3

Category Descriptions

GEV Independent Study Requirement

Credits: 3-6

- Choose GEV 6200: Independent Study (3 cr) OR
 - GEV 6210 and 6220: Senior Thesis I & II (6 cr - 3 cr of which count as a free elective)

Item #	Title	Credits
GEV 6200	Independent Study	3
Item #	Title	Credits
GEV 6210	Senior Thesis Research I	3
GEV 6220	Senior Thesis Research II	3

GEV Science and Technology Elective

Credits: 3-4

May include appropriate courses in other departments.

GEV Policy and Management Elective

Credits: 3

GEV Humanities Elective

Credits: 3

Choose an environmentally-related social science or humanities elective. (This fulfills a core curriculum course requirement.)

Geography, B.A.

Chair: Nathaniel Weston, Ph.D.

Program Director: Stephen Strader, Ph.D.

Office Location: Suite G67, Mendel Science Center
 Telephone: 610-519-3336
[\[Website\]](#)

About

The Department of Geography and the Environment offers B.A. degrees in Geography and Environmental Studies, and a B.S. in Environmental Science. The department also offers minors in Geography and Sustainability Studies. The department's overarching objective is to integrate the disciplines of geography and environmental science to seek an understanding of human and environmental patterns, the processes that produce those spatial patterns, and salient human and environmental problems that face modern society. The department has three teaching and five research labs; and the department has a full suite of state-of-the-art geospatial software and equipment.

Type: Bachelor of Arts

MAJOR (37 credits)

The B.A. in Geography provides a well-rounded and useful education and marketable skills to students with interests in the spatial patterns of society and the environment. It focuses on the interactions of humans with the natural and physical environments of Earth from a special perspective. Towards this end, the program's graduates will have a fundamental understanding of the human social dynamics and physical patterns and processes at the Earth's surface, such as globalization, climatic variation and natural disasters within the context of places, landscapes, and regions. Graduates will also be trained in the use of geospatial technologies as tools in addressing many modern concerns. The program is founded on the principle that geographical knowledge of place, space, and scale can provide essential insights into contemporary social and environmental issues and variation in human cultures and behaviors, and promotes the idea that such insight is critical to managing the Earth at local, regional and global scales.

Program Notes:

- A 1000-level topics course may substitute for either GEV 1002 or GEV 1003.

Required Major Courses:

Item #	Title	Credits
GEV 2001	Prof Dev in Geo and Env	1
GEV 1002	Geo. of a Globalizing World	3
GEV 1003	Geo. of Earth's Environments	3
GEV 1750	Geo-Techniques	4
GEV 2500	Global Change in Local Places	3
GEV 4700	Geographic Information Systems	4
GEV 6005	Senior Research Seminar	1
	GEV Independent Study Requirement	3-6
	GEV Regional Perspectives Course	3
	GEV Geospatial Technology Course	3
	Geography Elective (Above 2000)	3
	Geography Elective (Above 2000)	3
	Geography Elective (Above 2000)	3

Category Descriptions

GEV Independent Study Requirement

Credits: 3-6

- Choose GEV 6200: Independent Study (3 cr) OR
 - GEV 6210 and 6220: Senior Thesis I & II (6 cr – 3 cr of which count as a free elective)

Item #	Title	Credits
GEV 6200	Independent Study	3
Item #	Title	Credits
GEV 6210	Senior Thesis Research I	3
GEV 6220	Senior Thesis Research II	3

GEV Regional Perspectives Course

Credits: 3

Choose one Regional Perspectives course from the following:

List also includes GEV 3510, 3520 and 3525.

Item #	Title	Credits
GEV 3500	Geography of North America	3
GEV 3515	Geography of Africa	3

GEV Geospatial Technology Course

Credits: 3

Item #	Title	Credits
GEV 3521	GIS for Urban Sustainability	3
GEV 3750	Remote Sensing	3

Geography Elective (Above 2000)

Credits: 3

Choose a Geography course above 2000.

Environmental Science, B.S.

Chair: Nathaniel Weston, Ph.D.

Program Director: Steven Goldsmith, Ph.D.

Office Location: Suite G67, Mendel Science Center

Telephone: 610-519-3336

[[Website](#)]

About

The Department of Geography and the Environment offers B.A. degrees in Geography and Environmental Studies, and a B.S. in Environmental Science. The department also offers minors in Geography and Sustainability Studies. The department's overarching objective is to integrate the disciplines of geography and environmental science to seek an understanding of human and environmental patterns, the processes that produce those spatial patterns, and salient human and environmental problems that face modern society. The department has three teaching and five research labs; and the department has a full suite of state-of-the-art geospatial software and scientific research equipment.

Type: Bachelor of Science

MAJOR (70 credits)

The B.S. in Environmental Science Program provides the technical background necessary for understanding the biological, chemical, and physical aspects of the environment. It focuses on the application of biological, chemical and physical principals to understanding the natural and physical environments of the Earth. Towards this end, the program's graduates will have an understanding of and appreciation for the processes and interactions that occur both within and between the atmosphere, the biosphere, the lithosphere, and the hydrosphere. The program is founded on the principle that science - both as a body of knowledge and as a process that is grounded in intellectual inquiry and the scientific method - must be applied to assess the direct and indirect influences of human activities on the integrity of the Earth's systems.

Program Notes:

- Consider course offerings with environmental content when selecting the ten free electives.
- BIO 3105 or MAT 4310 may fulfill the GEV 3300 requirement.
- MAT 1310 may fulfill the MAT 1500 requirement.
- GEV 6006 must be taken a total of 3 times prior to graduation.

Required Major Courses:

Item #	Title	Credits
GEV 2001	Prof Dev in Geo and Env	1
GEV 1050	Environmental Science I	4
GEV 1051	Environmental Science II	4
GEV 1750	Geo-Techniques	4
GEV 2310	Environmental Chemistry	4
GEV 3300	Stats. in Environmental Sci.	3
GEV 4700	Geographic Information Systems	4
GEV 4310	Environmental Issues Seminar	3
CHM 1151	General Chemistry I	4
CHM 1103	General Chemistry Lab I	1
PHY 1100	General Physics I	3
PHY 1101	General Physics I Lab	1
MAT 1500	Calculus I	4
GEV 6005	Senior Research Seminar	1
GEV 6006	Research Colloquium	0
GEV 6006	Research Colloquium	0
GEV 6006	Research Colloquium	0
	GEV Independent Study Requirement	3-6

GEV Lab Elective	4
GEV Lab Elective	4
GEV Science and Technology Elective	3-4
GEV Science and Technology Elective	3-4
GEV Science and Technology Elective	3-4
GEV Science and Technology Elective	3-4
GEV Policy and Management Elective	3
GEV Policy and Management Elective	3

Category Descriptions

GEV Independent Study Requirement

Credits: 3-6

- Choose GEV 6200: Independent Study (3 cr) OR
 - GEV 6210 and 6220: Senior Thesis I & II (6 cr - 3 cr of which count as a free elective)

Item #	Title	Credits
GEV 6200	Independent Study	3
Item #	Title	Credits
GEV 6210	Senior Thesis Research I	3
GEV 6220	Senior Thesis Research II	3

GEV Lab Elective

Credits: 4

Choose an Environmental Science lab course from the following list.

BIO or CHM lab courses >2000 may fulfill this requirement.

Item #	Title	Credits
GEV 4320	Spec. Topics in Env Lab Sci	4
GEV 4321	Microbial Processes	4
GEV 4322	Ocean Environments	4
GEV 4323	Watershed Biogeochemistry	4
GEV 4324	Wetland Science and Management	4
GEV 4325	Environmental Ecology	4
GEV 4326	Environmental Geology	4
GEV 4327	Process Geomorphology	4
GEV 4328	Climatology	4
GEV 4329	Global Change Research	4

GEV Science and Technology Elective

Credits: 3-4

May include appropriate courses in other departments.

GEV Policy and Management Elective

Credits: 3

Geography Minor

Chair: Nathaniel Weston, Ph.D.
 Program Director: Stephen Strader, Ph.D.
 Office Location: Suite G67, Mendel Science Center
 Telephone: 610-519-3336
[\[Website\]](#)

About

The Department of Geography and the Environment offers B.A. degrees in Geography and Environmental Studies, and a B.S. in Environmental Science. The department also offers minors in Geography and Sustainability Studies. The department's overarching objective is to integrate the disciplines of geography and environmental science to seek an understanding of human and environmental patterns, the processes that produce those spatial patterns, and salient human and environmental problems that face modern society. The department has three teaching and five research labs; and the department has a full suite of state-of-the-art geospatial software and equipment.

Type: Minor

MINOR (16 credits)

The geography minor is open to all students and requires 5 courses and 16 credits, and it is designed for students who wish to deepen and broaden their knowledge of the world with a distinctive yet flexible program of courses encompassing the relationship between the environment and society. The minor enables students to develop a coherent strategy for understanding and explaining the manner in which people and the Earth interact.

Required Minor Courses:

Item #	Title	Credits
	GEV 1002 or GEV 1003	3
GEV 4700	Geographic Information Systems	4
	GEV Regional Perspectives Course	3
	Geography Elective (Above 2000)	3
	Geography Elective (Above 2000)	3

Category Descriptions

GEV 1002 or GEV 1003

Credits: 3

Item #	Title	Credits
GEV 1002	Geo. of a Globalizing World	3
GEV 1003	Geo. of Earth's Environments	3

GEV Regional Perspectives Course

Credits: 3

Choose one Regional Perspectives course from the following:

List also includes GEV 3510, 3520 and 3525.

Item #	Title	Credits
GEV 3500	Geography of North America	3
GEV 3515	Geography of Africa	3

Geography Elective (Above 2000)

Credits: 3

Choose a Geography course above 2000.

Sustainability Studies Minor

Chair: Nathaniel Weston, Ph.D.
Program Director: Steven Goldsmith, Ph.D.
Office Location: Suite G67, Mendel Science Center
Telephone: 610-519-3336
[\[Website\]](#)

About

The Department of Geography and the Environment offers B.A. degrees in Geography and Environmental Studies, and a B.S. in Environmental Science. The department also offers minors in Geography and Sustainability Studies. The department's overarching objective is to integrate the disciplines of geography and environmental science to seek an understanding of human and environmental patterns, the processes that produce those spatial patterns, and salient human and environmental problems that face modern society. The department has three teaching and five research labs; and the department has a full suite of state-of-the-art geospatial software and scientific research equipment.

Type: Minor

MINOR (18 credits)

The sustainability minor is open to all students and requires 6 courses and ~21 credits (dependent on lab course selections). It is designed for students who wish to deepen and broaden their knowledge of sustainability with a distinctive program of study encompassing the relationship between the environment and society. In addition to taking GEV 3001 (which will replace one course from either the Humanities or Policy Stem), students will select two courses from each of the three stems below: Humanities, Policy, and Science and Technology.

Program Notes:

- Students may count 1 course from their major or a relevant core course (including relevant MSE courses) toward the minor).
- Course list may be supplemented by the program director as new courses become available
- For PJ 3000, PJ 5000, ECO 4200, GEV 3000, GEV 4330, GEV 4340, GEV 4510, PSC 4275, CEE 4612, CHE 4831/32, MSE 20XX: Permission of program director required
- BIO 4451/52, CHE 4831/32, CHM 1311/01, GEV 1050, GEV 1051, GEV 432X, MSE 20XX: Associated Lab Required, see advisor

Required Minor Courses:

Item #	Title	Credits
	Humanities Stem Courses	
	Policy Stem Courses	
	Science and Technology Stem Courses	

Category Descriptions

Humanities Stem Courses

Choose two courses from the Humanities Stem.

Humanities Stem

The list below also includes:

- ENG 4690 (Post-200 American Apocalypse section)
- HIS 4998

Item #	Title	Credits
ENG 1975	Core Lit and Writing Seminar	3
ETH 3010	Topics in Ethics	3
GEV 2525	Population Geography	3
GEV 3001	Intro to Sustainability Study	3
GEV 3004	Geographies Envrnl Justice	3
GIS 5000	Special Topics	1
HIS 1065	Topics Nature, Environ & Tech	3
HIS 2276	American Environmental Hist	3
HIS 4499	Topics in World History	3
PHI 2121	Environmental Ethics	3
PHI 2430	Eco-Feminism	3
PJ 3000	Selected Topics	1
PJ 5000	Selected Topics	3
THL 4330	Christian Environmental Ethics	3
THL 4250	Global Poverty and Justice	3
THL 4490	Themes Christian Ethics	3

Policy Stem Courses

Choose two courses from Policy Stem.

The following courses are included in the list below:

- VIA 3000

Item #	Title	Credits
ECO 3108	Global Political Econ	3
ECO 4200	Advanced Topics in Economics	3
GEV 2500	Global Change in Local Places	3
GEV 2525	Population Geography	3
GEV 3000	Special Topics	3
GEV 3002	Ecosystem Services	3
GEV 3570	Land Use Planning & Mgmt	3
GEV 3580	Natural Res and Conservation	3
GEV 3590	Topical Research Problems	3
GEV 4330	Spec Topics in Environm Policy	3
GEV 4331	Env. Policy & Management	3
GEV 4332	Water Resources Planning	3
GEV 4333	Politics and the Env.	3
GEV 4335	Energy Policy	3
GEV 4340	Spec Topics in Environm Issues	3
GEV 4510	Special Topics in Geography	3
GEV 4517	Sustainable Development	3
MGT 2208	International Topics	3
MGT 2352	Business in Emerging Markets	3
PA 2000	Public Policy	3
PA 3000	Overview of Non-Profit Sector	3
PJ 5000	Selected Topics	3
PSC 4275	Topics in Internat'l Relations	3

Science and Technology Stem Courses

Choose two courses from the Science and Technology Stem.

Science and Technology Stem

Students may also choose:

- MSE 20XX: Mendel Science Experience courses
- GEV 432X: Lab Science Courses
- BIO 3361
- BIO 3845

Engineering students may also choose:

- EGR 7110: Climate Change/Sustainability
- EGR 7111: Life Cycle/Impact Assessment
- EGR 7112: Econ/Social Equity Integ.
- EGR 7113: Sustainable Materials
- CEE 2211: Transportation Engineering
- CEE 4608: Project & Construction Management
- CEE 4612: CEE Undergrad Research*
- CEE 7829: Sustainability Man Indust
- CEE 4607: Special Topics
- CHE 5715: Alternative Energy
- CHE 5001: Industrial Liquid and Solid Waste
- CHE 4831/32: Chem. Eng. Research*^
- ME 5130: Intro to Sustainable Energy
- ME 5140: Design of Gravity Water Ntwrks

Item #	Title	Credits
BIO 3255	Evolutionary Ecology	4
BIO 3385	Global Change Ecology	4
BIO 4451	Field Ecol and Evol	2
BIO 4452	Field Ecol and Evol Lab	2
BIO 4801	Conservation Biology	3
CHM 1311	Inorganic Chemistry I	3
CHM 1301	Inorganic Chemistry Lab I	2
GEV 1050	Environmental Science I	4
GEV 1051	Environmental Science II	4
GEV 1052	Environmental Studies	3
GEV 1053	Environmental Studies II	3
GEV 3301	Fisheries	3
GEV 3302	Agricultural Science	3
GEV 3003	Environmental Geology	3
GEV 3303	Soil Science	3
GEV 3305	Energy Systems	3
GEV 3306	Alternative Engery	3
GEV 3308	Environmental Health	3
GEV 4328	Climatology	4
GEV 4329	Global Change Research	4
GEV 4350	Spec Topics in Environm Sci	3
GEV 4353	Green Science	3
GEV 4355	Tropical Ecology	3
GEV 4512	Medical Geography	3
GEV 4515	Terrestrial Ecosystems	3

Global Interdisciplinary Studies

The Department of Global Interdisciplinary Studies (GIS) provides students with a tripartite of skills, knowledge, and values that foster critical thinking, problem solving, and preparation for responsible global citizenship. Students gain an understanding of global studies, acquiring the know-how in global and digital literacy, cultural diversity and intercultural competences, interdisciplinary research, and a passion for social justice, nurtured in experiential learning.

All students must choose one specialization from the sections listed below.

The Department of Global Interdisciplinary Studies also offers minors in the following programs: Arabic Language and Cultural Studies, Chinese Language and Cultural Studies, Japanese Language and Cultural Studies, Russian Language and Cultural Studies. Visit these individual pages to view requirements.

Africana Studies, B.A. (GIS)

Chairperson: Chiji Akqoma, Ph.D.

Office Location: 36 Garey Hall

Telephone: 610-519-6302

[\[Website\]](#)

About

Villanova's Africana Studies Program connects faculty, students, and community members interested in the academic study of Africa and the African diaspora. With 25 faculty affiliates, about 20 courses offered each semester, a robust calendar of public events, and a major and a minor, the Program has grown significantly since its founding in 1994. Whether the topic is politics in Africa, the literature of the Black diaspora in France, the history of the US civil rights movement, or Black theology, the Africana Studies Program encourages critical thinking, crossing disciplinary boundaries, and connecting academic work with lived reality. The Africana Studies Program pursues knowledge that has often been overlooked or undervalued as we strive to develop deeply inclusive

community. Indeed, as an Augustinian Catholic university, Villanova is oriented to its core by the vision of an African diasporic faith leader.

Type: Bachelor of Arts

MAJOR (31-34 credits)

Required Specialization Courses:

Six courses with the AFR attribute for a minimum of 18 credits, including the courses listed below.

Program Notes:

- Students may also combine three 1-credit IGR courses to count as one of the undesignated Africana courses
- For GIS 5011, Team-taught Topics Student takes two different topics, the first of which counts as the Junior Research Seminar for the Major (6 credits).
- Courses taken as part of a study abroad program may be counted
- A GIS 5011 with AFR attribute (or other course approved by the program director) may be counted among the six courses, as long as the two required GIS 5011 courses for the GIS major have been fulfilled.

Required GIS Courses:

Item #	Title	Credits
GIS 2000	Intro to Global Interd Studies	3
GIS 5011	GIS Select	3
GIS 5011	GIS Select	3
GIS 6500	Capstone I: Research	3
GIS 6600	Capstone 2:Thesis	3
GIS 5000	Special Topics	1
	Study Abroad	
AFR 3000	Constructs of Blackness	3
	GIS Africana Elective	15

Category Descriptions

Study Abroad

One semester of Study Abroad.

GIS Africana Elective

Credits: 15

Choose five courses with the AFR attribute in either Africana History or Literature, or HIS

2293. Below represents select courses eligible. Please consult the course catalog for additional courses with the AFR attribute.

Item #	Title	Credits
HIS 2292	African Amer His since Emancip	3
ENG 2501	African American Lit Trad 1	3
ENG 2502	African American Lit Trad 2	3
ENG 2530	Harlem Renaissance	3
ENG 3690/ 3691	Br/Ir Lit. & Cult. after 1900	3

Arab and Islamic Studies, B.A. (GIS)

Chairperson: Chiji Akqoma, Ph.D.

Office Location: 36 Garey Hall

Telephone: 610-519-6302

[\[Website\]](#)

About

The Department of Global Interdisciplinary Studies (GIS) provides students with a tripartite of skills, knowledge, and values that foster critical thinking, problem solving, and preparation for responsible global citizenship. Students gain an understanding of global studies, acquiring the know-how in global and digital literacy, cultural diversity and intercultural competences, interdisciplinary research, and a passion for social justice, nurtured in experiential learning.

Type: Bachelor of Arts

MAJOR (31-34 credits)

Program Notes:

- Courses taken as part of a study abroad may be counted.
- For GIS 5011, Team-taught Topics Student takes two different topics, the first of which counts as the Junior Research Seminar for the Major (6 credits).

Required Major Courses:

Item #	Title	Credits
GIS 2000	Intro to Global Interd Studies	3
GIS 5011	GIS Select	3
GIS 5011	GIS Select	3
GIS 6500	Capstone I: Research	3
GIS 6600	Capstone 2:Thesis	3
GIS 5000	Special Topics	1
	GAIS Language Requirement	6-10
	GAIS Political Science Course	3
	GAIS History Course	3
	GAIS Theology Course	3
	Study Abroad	

Category Descriptions

GAIS Language Requirement

Credits: 6-10

Two courses of Arabic at the intermediate or above level.

Item #	Title	Credits
ARB 1121	Intermediate Arabic I	5
ARB 1122	Intermediate Arabic II	5
ARB 1131	Intensive Adv Arabic I	3
ARB 1132	Intensive Adv Arabic II	3
ARB 1141	Intro to Colloquial Arabic	3

GAIS Political Science Course

Credits: 3

One Political Science course with an AIS attribute.

GAIS History Course

Credits: 3

One History course with an AIS attribute.

GAIS Theology Course

Credits: 3

One Theology course with an AIS attribute.

Study Abroad

One semester of Study Abroad.

Asian Studies, B.A. (GIS)

Chairperson: Chiji Akçoma, Ph.D.

Office Location: 36 Garey Hall

Telephone: 610-519-6302

[\[Website\]](#)

About

The Department of Global Interdisciplinary Studies (GIS) provides students with a tripartite of skills, knowledge, and values that foster critical thinking, problem solving, and preparation for responsible global citizenship. Students gain an understanding of global studies, acquiring the know-how in global and digital literacy, cultural diversity and intercultural competences, interdisciplinary research, and a passion for social justice, nurtured in experiential learning.

All students must choose one specialization from the sections listed below.

The Department of Global Interdisciplinary Studies also offers minors in the following programs: Arabic Language and Cultural Studies, Chinese Language and Cultural Studies, Japanese Language and Cultural Studies, Russian Language and Cultural Studies. Visit these individual pages to view requirements.

Type: Bachelor of Arts

MAJOR (31 credits)

Program Notes:

- For GIS 5011, Team-taught Topics Student takes two different topics, the first of which counts as the Junior Research Seminar for the Major (6 credits).
- Courses taken as part of a study abroad may be counted.
- One internship course may be counted.
- Coursework must be done on more than one country in Asia and in more than one discipline.

Required Major Courses:

Item #	Title	Credits
GIS 2000	Intro to Global Interd Studies	3
GIS 5011	GIS Select	3
GIS 5011	GIS Select	3
GIS 6500	Capstone I: Research	3
GIS 6600	Capstone 2:Thesis	3
GIS 5000	Special Topics	1
	Study Abroad	
	Asian Studies Language Requirement	9-13
	Asian Studies Major Electives	6

Category Descriptions

Study Abroad

One semester of Study Abroad.

Asian Studies Language Requirement

Credits: 9-13

Three Chinese, Japanese, or other Asian language courses at the intermediate level or above.

Chinese Language Options

Item #	Title	Credits
CHI 1121	Intermediate Chinese I	5
CHI 1122	Intermediate Chinese II	5
CHI 1131	Advanced Chinese I	3
CHI 1132	Advanced Chinese II	3
CHI 1133	Advanced Chinese III	3
CHI 1134	Advanced Chinese IV	3
CHI 1137	Advanced Chinese V	3
CHI 1138	Advanced Chinese VI	3

Japanese Language Options

Item #	Title	Credits
JPN 1121	Intermediate Japanese I	5
JPN 1122	Intermediate Japanese II	5
JPN 1131	Advanced Japanese I	3
JPN 1132	Advanced Japanese II	3
JPN 1133	Advanced Japanese III	3
JPN 1134	Advanced Japanese IV	3

Asian Studies Major Electives

Credits: 6

Two non-language courses with the Asian Studies (ASN) attribute.

Cultural Studies, B.A. (GIS)

Chairperson: Chiji Akoma, Ph.D.

Office Location: 36 Garey Hall

Telephone: 610-519-6302

[\[Website\]](#)

About

The Department of Global Interdisciplinary Studies (GIS) provides students with a tripartite of skills, knowledge, and values that foster critical thinking, problem solving, and preparation for responsible global citizenship. Students gain an understanding of global studies, acquiring the know-how in global and digital literacy, cultural diversity and intercultural competences, interdisciplinary research, and a passion for social justice, nurtured in experiential learning.

Type: Bachelor of Arts

MAJOR (31-34 credits)

Program Notes:

- For GIS 5011, Team-taught Topics Student takes two different topics, the first of which counts as the Junior Research Seminar for the Major (6 credits).
- Courses taken as part of a study abroad may be counted.
- One internship course may be counted.

Required Major Courses:

Six courses with the CST attribute for a minimum of 18 credits.

Item #	Title	Credits
GIS 2000	Intro to Global Interd Studies	3
GIS 5011	GIS Select	3
GIS 5011	GIS Select	3
GIS 6500	Capstone I: Research	3
GIS 6600	Capstone 2:Thesis	3
GIS 5000	Special Topics	1
CST 2100	Intro. to Cultural Studies	3
	GCST Core Courses	9
	Study Abroad	

Category Descriptions

GCST Core Courses

Credits: 9

Choose three core courses, one from each of the following three categories:

Representation

Item #	Title	Credits
CST 4100	Capstone Sem of Cultural Stud	3
PHI 2170	Mass Media Ethics	3
PHI 2760	Philosophy & Literature	3
PHI 4140	Phil of Contemporary Music	3
PHI 4150	Philosophy & Film	3

Gender

Item #	Title	Credits
PHI 2410	Philosophy of Sex & Love	3
PHI 2420	Philosophy of Women	3
PHI 2430	Eco-Feminism	3
PHI 4900	Feminist Theories	3

Race

Item #	Title	Credits
PJ 2800	Race, Class, & Gender	3
PHI 3160	History of Islamic Phil	3
ENG 4646	Race & Ethnicity: Amer Novel	3

Study Abroad

One semester of Study Abroad.

Gender and Women's Studies, B.A. (GIS)

Co-Directors: Travis Foster, Ph.D. and Shauna MacDonald, Ph.D.

Office Location: 488 Saint Augustine Center
Telephone: 610-519-450

[\[Website\]](#)

About

Gender and Women's Studies encourages critical analysis of gender and sexuality at local, national, and global levels—now and in the past. Our curriculum brings feminist and queer theory into conversation with fields of study across the University, from history to sociology to global finance, helping students discover new alternatives for thinking about the problems of the world and the contributions of its people. As teachers, we are profoundly influenced by feminist models of collaborative learning and shared authority. We recognize our students and their life experiences as sources of vital expertise, and we help them find a voice, a sense of community, and a purpose as agents of social change.

Type: Bachelor of Arts

MAJOR (30 credits)

The major in Gender and Women's Studies provides an interdisciplinary and comparative approach to deepen students' understandings of the history, culture, religion, politics, literature, and society. Students sign up for the major and choose their specialization through the Department of Global Interdisciplinary Studies. The GIS chair and GWS Academic Director will work closely with each student to develop their individual interests, abilities, and career goals while fulfilling the requirements for the major.

Required Major Courses:

Item #	Title	Credits
GIS 2000	Intro to Global Interd Studies	3
GWS 2050	Introduction to Gender Studies	3
	GWS 3000 or PHI 2420	3
GWS 5000	Integrating Seminar	3
	GWS Elective	3
	GWS Elective	3
	GWS Elective	3
	GWS Elective	3
	GWS Elective	3
	GWS Elective	3

Category Descriptions

GWS 3000 or PHI 2420

Credits: 3

Item #	Title	Credits
GWS 3000	Independent Study	3
PHI 2420	Philosophy of Women	3

GWS Elective

Credits: 3

Global Interdisciplinary Studies, B.A.

Chairperson: Chiji Akoma, Ph.D.
Office Location: 36 Garey Hall
Telephone: 610-519-6302
[\[Website\]](#)

About

The Department of Global Interdisciplinary Studies (GIS) provides students with a tripartite

of skills, knowledge, and values that foster critical thinking, problem solving, and preparation for responsible global citizenship. Students gain an understanding of global studies, acquiring the know-how in global and digital literacy, cultural diversity and intercultural competences, interdisciplinary research, and a passion for social justice, nurtured in experiential learning.

All students must choose one specialization from the sections listed below.

The Department of Global Interdisciplinary Studies also offers minors in the following programs: Arabic Language and Cultural Studies, Chinese Language and Cultural Studies, Japanese Language and Cultural Studies, Russian Language and Cultural Studies. Visit these individual pages to view requirements.

Type: Bachelor of Arts

MAJOR (31-34 credits)

The central dynamic of the GIS major is the emphasis on the interdisciplinary and the global through a specialization in one of the following areas and thematic studies, namely: Africana Studies, Arab & Islamic Studies, Asian Studies, Cultural Studies, Irish Studies, Latin American Studies, and Russian Area Studies. A student may also consider an Individually Designed Specialization after meeting some requirements, including meeting with the Chair of the department. Each specialization emphasizes the core tenets of the major: Interdisciplinary research, global impact through the local, and the application of knowledge to world affairs.

• Seven Area Specializations:

- GIS offers seven specializations in interdisciplinary areas of study – Africana Studies, Arab and Islamic Studies, Asian Studies, Cultural Studies, Irish Studies, Latin American Studies, and Russian Area Studies. The additional requirements of each specialization are listed below. Students must indicate their specialization at the time of declaring the GIS major.

• Individually Designed Specialization:

- A student may opt to design a 15-credit specialization of their choosing. This specialization must be proposed at the declaration of the major, with a clear rationalization for all selected courses. The proposal must be approved by a faculty mentor and the Department Chair and include at least three courses regularly offered at Villanova University.

Program Notes:

- For GIS 5011, Team-taught Topics Student takes two different topics, the first of which counts as the Junior Research Seminar for the Major (6 credits).

Required Major Courses:

Item #	Title	Credits
GIS 2000	Intro to Global Interd Studies	3

GIS 5011	GIS Select	3
GIS 5011	GIS Select	3
GIS 6500	Capstone I: Research	3
GIS 6600	Capstone 2:Thesis	3
GIS 5000	Special Topics	1
	Study Abroad	

GIS: Africana Studies (18 credits) (GAFR)

Required Specialization Courses:

Six courses with the AFR attribute for a minimum of 18 credits, including the courses listed below.

Program Notes:

- Students may also combine three 1-credit IGR courses to count as one of the undesignated Africana courses
- Courses taken as part of a study abroad program may be counted
- A GIS 5011 with AFR attribute may be counted among the six courses, as long as the two required GIS 5011 courses for the GIS major have been fulfilled.

Item #	Title	Credits
AFR 3000	Constructs of Blackness	3
	GIS Africana Elective	15

GIS: Arab and Islamic Studies (15 credits) (GAIS)

Five courses with the AIS attribute for a minimum of 15 credits, of which the following must be included:

Required Specialization Courses:

- Two courses of Arabic at the intermediate or above level (6-10 cr)
- One Political Science course with an AIS attribute (3 cr)
- One History course with an AIS attribute (3 cr)
- One Theology course with an AIS attribute (3 cr)

Program Notes:

- Courses taken as part of a study abroad may be counted.

GIS: Asian Studies (15 credits) (GAS)

Five courses with the ASN attribute for a minimum of 15 credits, of which the following must be included:

Required Specialization Courses:

- Three Chinese, Japanese, or other Asian language courses at the intermediate level or above (9 cr)
- Two non-language courses with the ASN attribute (6 cr)

Program Notes:

- Courses taken as part of a study abroad may be counted.
- One internship course may be counted.
- Coursework must be done on more than one country in Asia and in more than one discipline.

GIS: Cultural Studies (18 credits) (GCST)

Six courses with the CST attribute for a minimum of 18 credits, of which the following must be included:

Required Specialization Courses:

- CST 2100: Introduction to Cultural Studies (3 cr)
- Three Core Courses, one from each of the following three categories (9 cr):

Program Notes:

- Courses taken as part of a study abroad may be counted.
- One internship course may be counted.

Item #	Title	Credits
CST 2100	Intro. to Cultural Studies	3
	GCST Core Courses	9

GIS: Irish Studies (15 credits) (GIST)

Required Specialization Courses:

Five courses with the IS attribute for a minimum of 15 credits, of which the following must be included:

Program Notes:

- Courses taken as part of a study abroad may be counted.
- One internship course may be counted.

Item #	Title	Credits
	IS 1121 or IS 2222	3
	ENG 2450 or ENG 2500	3
	HIS 3216 or HIS 2286	3
	IS Elective	3
	IS Elective	3

GIS: Russian Area Studies (18 credits) (GRAS)

Six courses for a minimum of 18 credits, of which the following must be included:

Required Specialization Courses:

- Two Russian language courses at the intermediate (6 cr)
- Four Courses with the RAS attribute for a minimum of 12 credits (12 cr)

Program Notes:

- Up to two courses taken as part of a study abroad program may be counted.

GIS: Latin American Studies (18 credits) (GLAS)

Six courses with a minimum of 18 credits, of which the following must be included:

Required Specialization Courses:

- Four courses with the LAS attribute (12 cr minimum)
- Two advanced Spanish courses above 1122 (6 cr)

Program Notes:

- Courses taken as part of a study abroad may be counted.
- One internship course may be counted.

Category Descriptions

Study Abroad

One semester of Study Abroad.

GIS Africana Elective

Credits: 15

Choose five courses with the AFR attribute in either Africana History or Literature, or HIS 2293. Below represents select courses eligible. Please consult the course catalog for additional courses with the AFR attribute.

Item #	Title	Credits
HIS 2292	African Amer His since Emancip	3
ENG 2501	African American Lit Trad 1	3
ENG 2502	African American Lit Trad 2	3
ENG 2530	Harlem Renaissance	3
ENG 3690/3691	Br/Ir Lit. & Cult. after 1900	3

GCST Core Courses

Credits: 9

Choose three core courses, one from each of the following three categories:

Representation

Item #	Title	Credits
CST 4100	Capstone Sem of Cultural Stud	3
PHI 2170	Mass Media Ethics	3
PHI 2760	Philosophy & Literature	3
PHI 4140	Phil of Contemporary Music	3
PHI 4150	Philosophy & Film	3

Gender

Item #	Title	Credits
PHI 2410	Philosophy of Sex & Love	3
PHI 2420	Philosophy of Women	3
PHI 2430	Eco-Feminism	3
PHI 4900	Feminist Theories	3

Race

Item #	Title	Credits
PJ 2800	Race, Class, & Gender	3
PHI 3160	History of Islamic Phil	3
ENG 4646	Race & Ethnicity: Amer Novel	3

IS 1121 or IS 2222

Credits: 3

Choose one course of Irish language at the intermediate level or above.

Item #	Title	Credits
IS 1121	Intermediate Irish Language I	3
IS 2222	Topics: Irish Language	3

ENG 2450 or ENG 2500

Credits: 3

Choose one literature survey

Item #	Title	Credits
ENG 2450	Irish Epics, Visions & Hauntings	3
ENG 2500	Irish Revival	3

HIS 3216 or HIS 2286

Credits: 3

Choose one history survey.

Item #	Title	Credits
HIS 3216	Ireland since 1800	3
HIS 2286	Irish-American Saga	3

IS Elective

Credits: 3

Choose a course with IS attribute.

Irish Studies, B.A. (GIS)

Chairperson: Chiji Akçoma, Ph.D.
Office Location: 36 Garey Hall
Telephone: 610-519-6302
[\[Website\]](#)

About

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diversity and intercultural competences, interdisciplinary research, and a passion for social justice, nurtured in experiential learning.

Type: Bachelor of Arts

MAJOR (31-34 credits)

Program Notes:

- Courses taken as part of a study abroad may be counted.
- One internship course may be counted.
- For GIS 5011, Team-taught Topics Student takes two different topics, the first of which counts as the Junior Research Seminar for the Major (6 credits).

Required Major Courses:

Item #	Title	Credits
GIS 2000	Intro to Global Interd Studies	3
GIS 5011	GIS Select	3
GIS 5011	GIS Select	3
GIS 6500	Capstone I: Research	3
GIS 6600	Capstone 2:Thesis	3
GIS 5000	Special Topics	1
	Study Abroad	
	IS 1121 or IS 2222	3
	ENG 2450 or ENG 2500	3
	HIS 3216 or HIS 2286	3
	IS Elective	3
	IS Elective	3

Category Descriptions

Study Abroad

One semester of Study Abroad.

IS 1121 or IS 2222

Credits: 3

Choose one course of Irish language at the intermediate level or above.

Item #	Title	Credits
IS 1121	Intermediate Irish Language I	3
IS 2222	Topics: Irish Language	3

ENG 2450 or ENG 2500

Credits: 3

Choose one literature survey

Item #	Title	Credits
ENG 2450	Irish Epics, Visions & Hauntings	3
ENG 2500	Irish Revival	3

HIS 3216 or HIS 2286

Credits: 3

Choose one history survey.

Item #	Title	Credits
HIS 3216	Ireland since 1800	3
HIS 2286	Irish-American Saga	3

IS Elective

Credits: 3

Choose a course with IS attribute.

Latin American Studies, B.A. (GIS)

Chairperson: Chiji Akqoma, Ph.D.

Office Location: 36 Garey Hall

Telephone: 610-519-6302

[[Website](#)]

About

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Type: Bachelor of Arts

MAJOR (31-34 credits)

Program Notes:

- Courses taken as part of a study abroad may be counted.
- One internship course may be counted.
- For GIS 5011, Team-taught Topics Student takes two different topics, the first of which counts as the Junior Research Seminar for the Major (6 credits).

Required Major Courses:

Item #	Title	Credits
GIS 2000	Intro to Global Interd Studies	3
GIS 5011	GIS Select	3
GIS 5011	GIS Select	3
GIS 6500	Capstone I: Research	3
GIS 6600	Capstone 2:Thesis	3
GIS 5000	Special Topics	1
	LAS Language Requirement	6
	LAS Electives	12
	Study Abroad	

Category Descriptions

LAS Language Requirement

Credits: 6

Two advanced Spanish courses above the intermediate level.

Item #	Title	Credits
SPA 1131	Conversation & Composition I	3
SPA 1132	Conversation & Composition II	3

LAS Electives

Credits: 12

Four courses with the LAS attribute.

Study Abroad

One semester of Study Abroad.

Peace and Justice, B.A. (GIS)

Chair: Kathryn Getek Soltis, S.T.L., Ph.D.

Office Location: 106 Corr Hall

Telephone: 610-519-6849

[\[Website\]](#)

About

The interdisciplinary curriculum of the Center for Peace and Justice Education is rooted in Villanova's Augustinian tradition of education in the service of peace and social justice, with particular emphasis on the poor and marginalized in society. Students are prepared to understand the essential elements of a moral and just society, reflect on models for socially responsible resolution of injustice and conflict, and learn the necessary skills to be advocates for a just and peaceful world.

Type: Bachelor of Arts

MAJOR (30 credits)

The major in Peace and Justice Studies is offered in collaboration with the Department of Global Interdisciplinary Studies. To complete the major, students take five required courses and five elective courses in Peace and Justice, courses with a Peace and Justice attribute, or courses otherwise earning Peace and Justice credit.

Program Notes:

- Electives should be determined in consultation with the program director and tailored to the student's field(s) of interest.
- Up to 3 credits in courses fewer than 3 credits with the PJ attribute can be bundled to count as one elective.

Required Major Courses:

Item #	Title	Credits
GIS 2000	Intro to Global Interd Studies	3
PJ 2800	Race, Class, & Gender	3
PJ 2993	Internship	3
GIS 6500	Capstone I: Research	3
GIS 6600	Capstone 2:Thesis	3
	PJ Elective	3
	PJ Elective	3
	PJ Elective	3
	PJ Elective	3
	PJ Elective	3

Category Descriptions

PJ Elective

Credits: 3

Choose an elective with the Peace and Justice attribute.

Russian Area Studies, B.A. (GIS)

Chairperson: Chiji Akçoma, Ph.D.

Office Location: 36 Garey Hall

Telephone: 610-519-6302

[\[Website\]](#)

About

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Type: Bachelor of Arts

MAJOR (31-34 credits)

Program Notes:

- Up to two courses taken as part of a study abroad program may be counted.
- For GIS 5011, Team-taught Topics Student takes two different topics, the first of which counts as the Junior Research Seminar for the Major (6 credits).

Required Major Courses:

Item #	Title	Credits
GIS 2000	Intro to Global Interd Studies	3
GIS 5011	GIS Select	3
GIS 5011	GIS Select	3
GIS 6500	Capstone I: Research	3
GIS 6600	Capstone 2:Thesis	3
GIS 5000	Special Topics	1
	Study Abroad	
	RAS Language Requirement	6
	RAS Electives	12

Category Descriptions

Study Abroad

One semester of Study Abroad.

RAS Language Requirement

Credits: 6

Two Russian language courses at the intermediate level or higher.

Item #	Title	Credits
RUS 1123	Intermediate Russian I	3
RUS 1124	Intermediate Russian II	3
RUS 1131	Conversation Composition	3
RUS 1132	Advanced Convers & Comp	3

RAS Electives

Credits: 12

Four Courses with the RAS attribute for a minimum of 12 credits.

Russian Language & Cultural Studies Minor

Coordinator: Boris Briker, Ph.D.

Office Location: 36 Garey Hall

Telephone: 610-519-6302

[\[Website\]](#)

About

The Russian Studies Program offers courses that cover from language study to all aspects of Russia – the history, literature, culture, folklore, music, film, news media, and women's studies. This allows students to become familiar with Russian culture and society and the life experiences of Russians. Students also become familiar with Russia through courses on Russian history and politics offered by other departments on campus.

Type: Minor

MINOR (24 credits)

The Russian Language and Cultural Studies minor represents a cutting-edge intellectual experience that provides students with a real advantage in critiquing, understanding, and navigating the global landscape.

Program Notes:

- Other culture-based courses with RAS attribute found across disciplines also qualify

Required Minor Courses:

Item #	Title	Credits
RUS 1111	Introductory Russian I	6
RUS 1112	Introductory Russian II	6
RUS 1123	Intermediate Russian I	3
RUS 1124	Intermediate Russian II	3
	RUS Elective	3
	RUS Elective	3

Category Descriptions

RUS Elective

Credits: 3

Choose a 3-credit course with the RUS attribute.

History

History, B.A.

Chair: Marc Gallicchio, Ph.D.
Office Location: 403 Saint Augustine Center
Telephone: 610-519-4662
[\[Website\]](#)

About

The History Department at Villanova offers students a dynamic liberal arts education with courses that span from antiquity to the modern world and traverse every region of the globe. The undergraduate History program focuses on the attainment of deep historical knowledge and a critical understanding of the enduring influence of the past on contemporary societies. The Faculty members of the History Department work closely with our students and prioritize individual development. Our rigorous courses

provide the essential transferable skills that make our students competitive on the job market after graduation, and stimulate the intellectual curiosity our students need to become engaged citizens of the world.

History seeks to understand and to explain the story of human experience, since the past provides the only laboratory of human experience actually lived. Historical study compliments and builds on the foundational courses in the core through its appreciation of the complexity of humankind, recognizing in the men and women who make history the intellectual, the material, social, and spiritual diversity of the human condition. History further advances the goals of the core curriculum through an interdisciplinary methodology that seeks to reconstruct our collective past. It is the story of individuals, and the story of the political, religious, economic, and social ideologies and institutions they create in their search for identity, purpose, and value. History recognizes both the commonality of the human experience and the reality of cultural, class, racial, and gender distinctions that enrich that experience.

Type: Bachelor of Arts

MAJOR (33 credits)

Program Notes:

- The major is 33 credits and consists of 10 courses in history and one in art history.
- Majors must complete at least 18 credits/6 courses at Villanova.
- The art history course does not fulfill the core Fine Arts requirement.

Required Major Courses:

Item #	Title	Credits
	Core History Course	3
	HIS 2000 or HIS 2001	3
	HIS 5501 or HIS 5515	3
HIS 5001	Junior Research Seminar	3
	History: Art History Elective	3
	HIS Elective	3
	HIS Elective	3
	HIS Elective	3
	HIS Elective	3
	HIS Elective	3
	HIS Elective	3

Category Descriptions

Core History Course

Credits: 3

Choose one of the specially designated core history courses (HIS 1060 through HIS 1250.)

HIS 2000 or HIS 2001

Credits: 3

Item #	Title	Credits
HIS 2000	Investigating U.S. History I	3
HIS 2001	Investigating US History II	3

HIS 5501 or HIS 5515

Credits: 3

Item #	Title	Credits
HIS 5501	Sem in Historical Methodology	3
HIS 5515	Independent Research	3

History: Art History Elective

Credits: 3

Choose one art history course in an area that compliments one of the 10 history courses.

* This course does not fulfill the Fine Arts requirement.

HIS Elective

Credits: 3

Choose an additional history course.

History Minor

Chair: Marc Gallicchio, Ph.D.
Office Location: 403 Saint Augustine Center
Telephone: 610-519-4662
[\[Website\]](#)

About

The History Department at Villanova offers students a dynamic liberal arts education with courses that span from antiquity to the modern world and traverse every region of the globe. The undergraduate History program focuses on the attainment of deep historical knowledge and a critical understanding of the enduring influence

of the past on contemporary societies. The Faculty members of the History Department work closely with our students and prioritize individual development. Our rigorous courses provide the essential transferable skills that make our students competitive on the job market after graduation, and stimulate the intellectual curiosity our students need to become engaged citizens of the world.

Type: Minor

MINOR (18 credits)

A minor is open to all students and requires 6 history courses for 18 credits, these 18 credit hours must include one specially designated core course.

One of the following courses may also be taken for credit towards the History Minor.

Program Notes:

- History Minors must earn at least half (9 credits/3 courses) at Villanova
- See History Department Undergraduate Programs website for details on AP Credit Policy as it related to Major/Minor.

One of the following courses may also be taken for credit towards the History Minor:

Item #	Title	Credits
AAH 1101	His West Art: Ancient-Med	3
AAH 1102	His West Art: Renaiss - Cont	3

Honors

Honors

Director: Dr. Anna Moreland, Ph.D.
Office Location: 111 Garey Hall
Telephone: 610-519-4650
[\[Website\]](#)

About

Admission to the University Honors Program is by invitation or by application to the Director. Members of the Program are expected to take Honors courses at least every third semester, and to maintain high academic standards (at least a 3.33 overall GPA). Individual Honors courses are open to all Villanova students who have at least a

3.0 overall GPA or will bring a special expertise to the course, contingent upon class size limitations.

DEGREE (30 credits)

Type: Program

The Honors Degree, Thesis Track (10 Honors courses)

Requirements:

At least 3 upper level Honors courses, which will include a six-credit HON 6000 and HON 6002 senior thesis; minimum 3.33 GPA.

Required Courses:

Item #	Title	Credits
	Three Upper-Level Honors Courses	9
	Seven additional Honors courses	21

The Honors Degree, Oral Examination Track (10 Honors courses)

Requirements:

An Oral Comprehensive Examination in the senior year integrates three upper-level Honors courses in a primary major or area of academic interest; minimum 3.33 GPA.

Item #	Title	Credits
	Three Upper-Level Honors Courses	9
	Seven Honors Courses	21
HON 6003	Oral Exam Capstone	1

Honors Minor (5 Honors courses) Requirements:

Five courses in Honors, at least two of which must be upper level; minimum 3.33 GPA. The Honors Program also offers upper-level seminars which fulfill degree requirements in specific academic disciplines. All courses are small seminars and have in common active class participation, and intensive writing requirements.

Item #	Title	Credits
	Two Upper-Level Honors Courses	6
	Three Additional Honors Courses	9

Honors Politics, Philosophy, & Economics Minor (18 credits)

An interdisciplinary minor offered through the Honors Program focusing on the intersection of the disciplines of politics, philosophy and economics. Students may only contract one non-Honors course to complete the minor requirements. Excluding the 3 Honors Cohort classes, which must be taken at Villanova, students may fulfill two of any other requirements by taking the equivalent course in an Honors-approved student abroad experience. Students pursuing a PPE minor in Honors may contract only 1 course in total to fulfill the requirements. Students only receive 1 Minor from Honors. If students are pursuing the Honors Degree, the PPE Minor would be considered a "track" within their Honors Degree.

Requirements:

To achieve the Honors PPE minor, students must take 6 courses from among the following requirements (minimum 3.33 GPA and active status in Honors required).

Item #	Title	Credits
	3 Honors Cohort Classes	9
	Honors Ethics Elective	3
	Honors Economics	3
	Honors Upper-Level Elective	3

Honors Medical Humanities Minor (15 credits)

An interdisciplinary minor offered through the University Honors Program focusing on the intersection of the humanities, medical care, medical ethics, and an holistic approach to medicine. Students pursuing this minor may contract only one course to fulfill the requirements. Students pursuing a Medical Humanities minor in Honors may contract only 1 course in total to fulfill the requirements. Students only receive 1 Minor from Honors. If students are pursuing the Honors Degree, the Medical Humanities Minor would be considered a “track” within their Honors Degree.

Requirements:

To achieve the Honors Medical Humanities Minors students must take 5 courses from among the following requirements (minimum 3.33 GPA and active status in Honors required).

Item #	Title	Credits
	Honors Liberal Arts Elective	6
	Honors Ethics Elective	3
	PHI 2117 or SOC 3400	3
	Honors Senior Capstone	3

Category Descriptions

Three Upper-Level Honors Courses

Credits: 9

- HON 6000: Thesis Capstone I
- HON 6002: Thesis Capstone 2
- One three-credit course in HON 2000-20049 or one course with the HON attribute between 2051-5999 level.

Seven additional Honors courses

Credits: 21

Seven additional courses carrying the HON attribute worth 3 credits each.

Seven Honors Courses

Credits: 21

- Seven courses selected from HON courses between the 1000 and 5999 level or which carry the HON attribute.

Two Upper-Level Honors Courses

Credits: 6

- One 2000-2049 level course with the HON attribute.
- One 2051-5999 level course with the HON attribute.

Three Additional Honors Courses

Credits: 9

- Three courses with the HON attribute between 1000-5999 level worth 3 credits each.

3 Honors Cohort Classes

Credits: 9

Honors ACS 1: (PPE Cohort)

Honors ACS II: (PPE Cohort)

HON 5700

Item #	Title	Credits
HON 5700	Colloquia	3

Honors Ethics Elective

Credits: 3

Item #	Title	Credits
ETH 2050	The Good Life:Eth & Cont Prob	3

Honors Economics

Credits: 3

Macro, Micro, International, e.g.

Students may also count an economics course during their study abroad semester in Cambridge with permission from the Honors Director.

Honors Upper-Level Elective

Credits: 3

- ECO 3115 Comparative Economic Systems may also be used to satisfy this requirement.
- Students may also count an upper-level elective course taken during their study abroad semester in Cambridge with permission from the Honors Director.

Item #	Title	Credits
PHI 2300	Philosophy of Law	3
PHI 2450	Catholic Social Thought	3
PSC 2220	International Law	3
PSC 2240	Internat'l Political Economy	3
ECO 3108	Global Political Econ	3
ECO 3126	Amer Econ Development	3
HUM 2100	HIS:The Goods & the Good Life	3
HUM 5950	Citizenship & Globalization	3

Honors Liberal Arts Elective

Credits: 6

Choose two of the following, or:

- Any course within the Honors Interdisciplinary Cohort.
- HUM 3450

Item #	Title	Credits
ACS 1000	Ancients	3
ACS 1001	Moderns	3
ENG 1975	Core Lit and Writing Seminar	3
THL 1500	Spirituality & Healing Arts	3
THL 3450	Pastoral Care of the Sick	3

PHI 2117 or SOC 3400

Credits: 3

Item #	Title	Credits
PHI 2117	The Good Doctor	3
SOC 3400	Health, Medicine & Society	3

Honors Senior Capstone

Credits: 3

Item #	Title	Credits
HON 6000	Senior Thesis I	3
HON 5500	Ind Study & Research	3
HON 5506	Ind Study & Res Science	3

Humanities

Humanities, B.A.

Chair: Michael Tomko, Ph.D.

Office Location: 304 Saint Augustine Center

Telephone: 610-519-6165

[\[Website\]](#)

About

The Department of Humanities offers a coordinated series of seminars and courses designed to inquire into the human condition from an interdisciplinary perspective. Drawing on wisdom ancient and new, the curriculum encourages critical thinking about what is needed for human flourishing. Humanities faculty are specialists in complementary disciplines, including theology, philosophy, literature, political science, history, economics, and architectural history. Humanities courses fulfill certain requirements for the Core Curriculum of the College of Liberal Arts and Sciences.

Type: Bachelor of Arts

MAJOR (30 credits)

The Humanities major requires the completion of ten courses. All majors are required to take the four Gateway courses. In their final semester students also take the Senior Symposium. Students also take five free electives, three of which must be taken within the Department of Humanities.

Required Major Courses:

Item #	Title	Credits
HUM 2001	THL:God	3
HUM 2002	Human Person	3
HUM 2003	PHI:World	3
HUM 2004	PSC:Society	3
HUM 6500	Senior Seminar	3
	Humanities Elective	3
	Humanities Elective	3
	Humanities Elective	3
	Humanities Elective	3
	Humanities Elective	3

Category Descriptions

Humanities Elective

Credits: 3

Take any HUM course numbered 2100-6950, HUM 1975, or with a course with the HUM attribute.

Humanities Minor

Chair: Michael Tomko, Ph.D.
Office Location: 304 Saint Augustine Center
Telephone: 610-519-6165
[\[Website\]](#)

About

The Department of Humanities offers a coordinated series of seminars and courses designed to inquire into the human condition from an interdisciplinary perspective. Drawing on wisdom ancient and new, the curriculum encourages critical thinking about what is needed for human flourishing. Humanities faculty are specialists in complementary disciplines, including theology, philosophy, literature, political science, history, economics, and architectural history. Humanities courses fulfill certain requirements for the Core Curriculum of the College of Liberal Arts and Sciences.

Type: Minor

MINOR (15 credits)

Students take two of the four Gateway courses, plus 3 electives, 2 of which must be taken in the Department of Humanities.

Required Minor Courses:

Item #	Title	Credits
	HUM 2001, 2002, 2003 or 2004	6
	Humanities Elective	3
	Humanities Elective	3
	Humanities Elective	3

Category Descriptions

HUM 2001, 2002, 2003 or 2004

Credits: 6

Choose two of the following:

Item #	Title	Credits
HUM 2001	THL:God	3
HUM 2002	Human Person	3
HUM 2003	PHI:World	3
HUM 2004	PSC:Society	3

Humanities Elective

Credits: 3

Take any HUM course numbered 2100-6950, HUM 1975, or with a course with the HUM attribute.

Italian

Italian, B.A.

Program Coordinator: Luca Cottini, Ph.D.
Office Location: 339 Saint Augustine Center
Telephone: 610-519-3763
[\[Website\]](#)

About

Knowledge of Italian provides access to a rich cultural background, and, at the same time, to a singular perspective on contemporary world. While exploring the master of Western thought (Dante, Petrarca, Boccaccio, Machiavelli, Michelangelo, Bernini, Galileo, and Vico to name a few), the encounter with Italian culture provides also a singular reflection on current events, by embodying a unique business model (in fashion, design, and the culinary industry) and a peculiar political perspective on Europe and America.

Type: Bachelor of Arts

MAJOR (31 credits)

The Italian Studies Program, within the Department of Romance Languages and Literatures, is designed to make students fluent in Italian, to expose them to Italian culture in all its aspects (literature, visual arts, design, history, cinema), to broaden their intellectual horizon, and to introduce them to the professional world. Italian offers a flexible major or minor, which can be easily combined with majors in psychology, communications, humanities, economics, business, nursing, law and politics.

Program Notes:

- Majors and minors can earn some of their credits by studying in Italy through the affiliated summer programs in Perugia, Rome, and Milan.

Required Major Courses:

Item #	Title	Credits
	ITA 1138 or ITA 1140	3
	ITA 2220 or ITA 2221	3
	Italian Electives	21
	RLL 3413 or RLL 3412	3
ITA 3971	Directed Research in Italian	1

Category Descriptions

ITA 1138 or ITA 1140

Credits: 3

Item #	Title	Credits
ITA 1138	Advanced Grammar	3
ITA 1140	Writing & Stylistics in Ita.	3

ITA 2220 or ITA 2221

Credits: 3

Item #	Title	Credits
ITA 2220	Italian Lit and Culture I	3
ITA 2221	Italian Lit. and Culture II	3

Italian Electives

Credits: 21

Seven courses above the intermediate level taught in Italian.

RLL 3413 or RLL 3412

Credits: 3

Item #	Title	Credits
RLL 3413	Topics on Italy and Beauty	3
RLL 3412	Topics	3

Italian Minor

Program Coordinator: Luca Cottini, Ph.D.
Office Location: 339 Saint Augustine Center
Telephone: 610-519-3763
[\[Website\]](#)

About

Knowledge of Italian provides access to a rich cultural background, and, at the same time, to a singular perspective on contemporary world. While exploring the master of Western thought (Dante, Petrarca, Boccaccio, Machiavelli, Michelangelo, Bernini, Galileo, and Vico to name a few), the encounter with Italian culture provides also a singular reflection on current events, by embodying a unique business model (in fashion, design, and the culinary industry) and a peculiar political perspective on Europe and America.

Type: Minor

MINOR (15 credits)

A minor is open to all students and requires 5 Italian courses.

Program Notes:

- Once a sequence of courses has begun, a student may not revert to a lower-level course.

Required Minor Courses:

Item #	Title	Credits
ITA 1131	Conversation & Composition I	3
RLL 3413	Topics on Italy and Beauty	3
	Upper-Level Italian Elective	3
	Upper-Level Italian Elective	3
	Upper-Level Italian Elective	3

Category Descriptions

Upper-Level Italian Elective

Credits: 3

Choose an upper-level course taught in Italian.

Japanese Language

Japanese Language and Cultural Studies Minor

Acting Coordinator: Kayo Shintaku, Ph.D.
Office Location: Garey Hall 38C
Telephone: 610-519-5076
kayo.shintaku@villanova.edu

About

The Japanese Language and Cultural Studies program offers a variety of courses, including language, traditional and popular culture, society, history, and literature. The program represents a cutting-edge intellectual experience that provides its minors with a real advantage in critiquing, understanding, and navigating the global landscape.

Type: Minor

MINOR (28 credits)

A minor is open to all students and requires six courses with a maximum of 28 credits.

Program Notes:

- GIS team-taught courses and contents courses from other departments with ASN attribute also qualify for JPN electives.
- Courses taken as part of a study abroad will be counted.
- Internship related to Japanese studies may be counted as an independent study.

Required Minor Courses:

Item #	Title	Credits
	Japanese Language Requirement	16-22
	JPN Elective	3
	JPN Elective	3

Category Descriptions

Japanese Language Requirement

Credits: 16-22

Choose four courses from Japanese language. Language courses may count toward elective requirements if the four language requirements are met.

Item #	Title	Credits
JPN 1111	Introductory Japanese I	6
JPN 1112	Introductory Japanese II	6
JPN 1121	Intermediate Japanese I	5
JPN 1122	Intermediate Japanese II	5
JPN 1131	Advanced Japanese I	3
JPN 1132	Advanced Japanese II	3

JPN Elective

Credits: 3

Language courses may count toward elective requirements if the four language requirements course requirement is met.

The JPN 3412 topics course has the following eligible courses.

- JPN 3412 TOP: Culture and Society in Modern Japanese Literature (3 cr)
- JPN 3412-001 TOP: Japanese Popular Culture (3 cr)
- JPN 3412-001 TOP: Japanese Videogames and Gaming (3 cr)

Item #	Title	Credits
JPN 2102	Japanese Film	3
JPN 3412	Special Topics	3
JPN 5900	JPN:Independent Study	3

Latin American Studies

Latin American Studies Minor

Program Director: Raúl Diego Rivera Hernández, Ph.D.

Office Location: 341 Saint Augustine Center
Telephone: (610) 519-3018

[\[Website\]](#)

About

The Villanova Latin American Studies Program, established in 1988, offers students in all of the

university's four undergraduate colleges the opportunity to acquire a broad multi-disciplinary understanding and appreciation of Latin America. Students may pursue either a minor or the more comprehensive major (GLAS). Both are designed to complement a variety of majors; many concentration and minor courses can also be used to satisfy core curriculum requirements.

Since language is essential to understanding any culture, a degree of language proficiency is an integral part of both the major and the minor. And, since living in Latin America offers invaluable experience in language, culture, and contemporary life issues, students in the program are strongly encouraged to spend a summer or semester in the region.

Type: Minor

MINOR (18 credits)

A minor is open to all students and requires 6 courses for 18 credits.

Required Minor Courses:

Item #	Title	Credits
	LAS Elective	3
	LAS Elective	3
	LAS Elective	3
	LAS Elective	3
	Spanish Elective	3
	Spanish Elective	3

Major (34 credits)

The Department of Global Interdisciplinary Studies (GIS) offers a major with a specialization in Latin American Studies. Please see [that page](#) for detailed requirements of the major.

Category Descriptions

LAS Elective

Credits: 3

Choose a Latin America elective course with the LAS attribute

Spanish Elective

Credits: 3

Choose a Spanish course above 1122.

Liberal Arts

Liberal Arts Major

Chair: Susan Jacobs, M.A.
Office Location: 107 Saint Augustine Center
Telephone: 610-519-3900
[\[Website\]](#)

MAJOR (30 credits)

The Liberal Arts Major is a rigorous academic major, which requires students to complete an intensive course of study that includes 40 courses and at least 122 credits. The Liberal Arts Major requires a plan of study outlined with a faculty advisor as part of the application process and is granted by special permission from the Assistant Dean for Undergraduate Students. Please visit the office for more details.

Type: Bachelor of Arts

Mathematics and Statistics

Mathematics, B.S.

Chair: Jesse Frey, Ph.D.
Office Location: 305 Saint Augustine Center
Telephone: 610-519-4850
[\[Website\]](#)

About

The Department of Mathematics & Statistics offers a standard course of study for a mathematics major to provide the student with an introduction to the major branches of mathematics as an academic discipline within the context of a comprehensive education in the liberal arts and sciences. Students who complete the Mathematics program will be prepared for a broad range of opportunities in business, government, and service industries, as well as being prepared to undertake graduate study in mathematics and related disciplines.

Type: Bachelor of Science

MAJOR (58 credits)

The program leading to the degree of Bachelor of Science in Mathematics is designed to introduce students to the major aspects of contemporary mathematics.

By selecting appropriate electives students may become well prepared either for positions in industry or for graduate study in mathematics and related disciplines. The mathematics major can prepare one for a career in actuarial science, operations research, computer science, statistics, biostatistics, mathematical physics, or any of many other areas which use mathematics.

Program Notes:

- A student pursuing a double major in mathematics and some other field may petition to have an approved upper-division course from their other major count as one of the four math electives. The course must have substantial mathematical content and may not significantly overlap with any of the other courses that the student is counting towards the major. A student pursuing a double major in mathematics and a closely related field such as computer science or engineering may petition to have two approved upper-division courses from their other major count as math electives.

Required Major Courses:

Item #	Title	Credits
MAT 1000	Mathematical Communities	1
MAT 1500	Calculus I	4
MAT 1505	Calculus II	4
MAT 2500	Calculus III	4
MAT 2600	Foundation of Math I	3
MAT 2705	Diff Equation with Linear Alg	4
MAT 3300	Advanced Calculus	3
MAT 3400	Linear Algebra	3
MAT 3500	Modern Algebra I	3
MAT 5900	Seminar in Mathematics	3
	MAT Analysis Elective	3
	Upper-Level MAT Elective	3
	Upper-Level MAT Elective	3
	Upper-Level MAT Elective	3
	Upper-Level MAT Elective	3
	MAT Natural Science Elective	8
	Math Science Elective	4

Category Descriptions

MAT Analysis Elective

Credits: 3

Choose an approved upper-level analysis course (e.g. MAT 4270 or MAT 5400).

Item #	Title	Credits
MAT 3305	Topics in Analysis	3
MAT 4270	Numerical Analysis	3
MAT 5400	Complex Analysis	3
MAT 5600	Differential Geometry	3
MAT 7605	Topics in Analysis	3
STAT 5700	Math Statistics I	3
STAT 8400	Statistical Theory I	

Upper-Level MAT Elective

Credits: 3

Choose a MAT or STAT course numbered 3000 or above.

MAT Natural Science Elective

Credits: 8

Choose a two-semester sequence of natural science courses with lab at the science-major level.

Astronomy Sequence

Item #	Title	Credits
AST 2122	Understanding Our Universe	3
MSE 2151	AST:Astronomy Lab - Stars	1
AST 2121	Solar System Astronomy	3
MSE 2150	AST:Astronomy Lab - Planets	1

Biology Sequence

Item #	Title	Credits
BIO 2105	General Biology I	4
BIO 2106	General Biology II	4

Chemistry Sequence

Item #	Title	Credits
CHM 1151	General Chemistry I	4
CHM 1103	General Chemistry Lab I	1
CHM 1152	General Chemistry II	4
CHM 1104	General Chemistry Lab II	1

Environmental Science Sequence

Item #	Title	Credits
GEV 1050	Environmental Science I	4
GEV 1051	Environmental Science II	4

Physics Sequence, Option 1

Item #	Title	Credits
PHY 1100	General Physics I	3
PHY 1101	General Physics I Lab	1
PHY 1102	General Physics II	3
PHY 1103	General Physics II Lab	1

Physics Sequence, Option 2

Item #	Title	Credits
PHY 2410	University Phy:Mechanics	3
PHY 2411	Lab: Mechanics	1
PHY 2412	Univ Physics:Elec & Mag	3
PHY 2413	Lab:Elec & Magnetism	1

Math Science Elective

Credits: 4

Choose one additional science course at the science-major level with lab if appropriate.

Statistics, B.S.

A major in Statistics provides students with the statistical expertise needed to secure employment in statistics and related fields, such as data science and biostatistics.

Type: Bachelor of Science

Major (54 credits)

Students who are interested in the Major in Statistics should state this intention in their initial application to Villanova. Alternatively, after starting as a student at Villanova, students can switch to a Statistics Major or, if they are initially undeclared, declare a Statistics Major.

Item #	Title	Credits
MAT 1500	Calculus I	4
MAT 1505	Calculus II	4
MAT 2500	Calculus III	4
	Linear Algebra Course	3
STAT 4310	Stat Methods	3
STAT 4315	Applied Statistical Models	3
STAT 4380	Data Science	3
STAT 5700	Math Statistics I	3
STAT 5705	Math Statistics II	3
CSC 1051	Algorithms & Data Struc I	4
	Statistics Major Electives	9
	Statistics Natural Science Elective	8
STAT 5905	Seminar in Statistics	3

Category Descriptions

Linear Algebra Course

Credits: 3

Select one linear algebra course from below.

Item #	Title	Credits
MAT 2705	Diff Equation with Linear Alg	4
MAT 3100	Applied Linear Algebra	3

Statistics Major Electives

Credits: 9

Any three courses with the subject code STAT numbered 3000:9000 or from the list below.

Item #	Title	Credits
MAT 4600	Deterministic Oper Res	3

Statistics Natural Science Elective

Credits: 8

Choose a two-semester sequence of natural science courses with lab at the science-major level.

Astronomy Sequence

Item #	Title	Credits
AST 2122	Understanding Our Universe	3
MSE 2151	AST:Astronomy Lab - Stars	1
AST 2121	Solar System Astronomy	3
MSE 2150	AST:Astronomy Lab - Planets	1

Biology Sequence

Item #	Title	Credits
BIO 2105	General Biology I	4
BIO 2106	General Biology II	4

Chemistry Sequence

Item #	Title	Credits
CHM 1151	General Chemistry I	4
CHM 1152	General Chemistry II	4
CHM 1103	General Chemistry Lab I	1
CHM 1104	General Chemistry Lab II	1

Environmental Science Sequence

Item #	Title	Credits
GEV 1050	Environmental Science I	4
GEV 1051	Environmental Science II	4

Physics Sequence, Option 1

Item #	Title	Credits
PHY 1100	General Physics I	3
PHY 1101	General Physics I Lab	1
PHY 1102	General Physics II	3
PHY 1103	General Physics II Lab	1

Physics Sequence, Option 2

Item #	Title	Credits
PHY 2410	University Phy:Mechanics	3
PHY 2411	Lab: Mechanics	1
PHY 2412	Univ Physics:Elec & Mag	3
PHY 2413	Lab:Elec & Magnetism	1

Mathematics Minor

Chair: Jesse Frey, Ph.D.
Office Location: 305 Saint Augustine Center
Telephone: 610-519-4850
[\[Website\]](#)

About

Pursuing a minor in mathematics is a way for students who are not mathematics majors to demonstrate expertise in mathematics.

Type: Minor

MINOR (27 credits)

To receive a math minor certificate, the student must see Dr. Paul Pasles in person prior to the course registration for their final semester. Students may consult Dr. Pasles at any time for information and advice. If all requirements are satisfied, the certificate will be issued about two weeks after graduation and it will also appear on the student's transcript.

Program Notes:

- A student may petition to substitute no more than one of the five math minor electives with an upper division course in their own major. The proposed substitutions must contain substantial mathematical content and not overlap with any math minor elective courses.

Mathematics Minor Required Courses:

Item #	Title	Credits
MAT 1500	Calculus I	4
MAT 1505	Calculus II	4
MAT 2500	Calculus III	4
	Upper-Level MAT Elective	3
	Upper-Level MAT Elective	3
	Upper-Level MAT Elective	3
	Upper-Level MAT Elective	3
	Upper-Level MAT Elective	3

Category Descriptions

Upper-Level MAT Elective

Credits: 3

Choose a MAT or STAT course numbered 3000 or above.

Statistics Minor

Chair: Jesse Frey, Ph.D.
Office Location: 305 Saint Augustine Center
Telephone: 610-519-4850
[\[Website\]](#)

About

Pursuing a minor in statistics is a way for students who are not statistics majors to demonstrate expertise in statistics.

Type: Minor

MINOR: STATISTICS (27 credits)

To receive a statistics minor certificate, the student must see Dr. Yimin Zhang in person prior to course registration for their final semester. Students may consult Dr. Zhang at any time for information and advice. If all requirements for the minor are satisfied, then the certificate will be issued about two weeks after graduation. The minor will also appear on the student's transcript.

Program Notes:

- A student who is not a mathematics major may petition to have an upper-division course from their major count as one of the two statistics electives. The course must have substantial statistical content and must not substantially overlap with any of the other courses that the student is counting towards the minor.
- To receive a statistics minor certificate, the student must see Dr. Yimin Zhang in person prior to course registration for their final semester.
- For mathematics majors, four courses may be counted towards both the mathematics major and the statistics minor: MAT1500, 1505, 2500 and either STAT 4310 or STAT 5700. No other courses count towards both. Thus, obtaining the statistics minor requires taking four additional courses beyond those required for the mathematics major.

Statistics Minor Required Courses:

Item #	Title	Credits
MAT 1500	Calculus I	4
MAT 1505	Calculus II	4
MAT 2500	Calculus III	4
STAT 4310	Stat Methods	3
STAT 4315	Applied Statistical Models	3
STAT 5700	Math Statistics I	3
	Statistics Elective Minor	3
	Statistics Elective Minor	3

Category Descriptions

Statistics Elective Minor

Credits: 3

Choose a course with the subject code STAT numbered 3000:9000 or any of the courses below.

Item #	Title	Credits
ECE 3720	Eng Probability & Statistics	3
STAT 5705	Math Statistics II	3
MGT 3170	Data Mining	3
PSY 2050	Research Methods in Psy.	3

Military Science (Army ROTC)

Military Sciences (Army ROTC)

Director: Major Michael J. Repasky, U.S. Army
Telephone: 610-519-5953

About

Villanova students are eligible to participate in the Army Reserve Officers Training Corps (ROTC) Program through a partnership agreement with the Widener University Department of Military Science. Army ROTC offers students the opportunity to graduate with a college degree and a commission in the United States Army, Army National Guard, or United States Army Reserve. All Army ROTC classes are conducted on the Villanova University campus.

Detailed information may be obtained from the Professor of Military Science, Widener University, Chester, PA 19013, (610) 499-4098. Go to www.armyrotc.villanova.edu for further details.

Type: Program

Required Courses

- MS 101: Army Critical Thinking Introduction
- MS 102: Adaptive Leadership and Professional Competence
- MS 201: Foundations of Leadership
- MS 202: Foundations of Tactical Leadership
- MSL 301: Training Management and the Warfighting Functions
- MSL 302: Applied Leadership In Small Unit Operations
- MS 401: Mission Command and the Army Profession
- MS 402: Mission Command and the Company Grade Officer

Naval Science (Navy ROTC)

Naval Science Program and Minor (Navy ROTC)

About

Villanova University, in a long-standing relationship with the United States Navy, maintains one of approximately 60 Naval Reserve Officers Training Corps units in the United States. The objective of the Unit is to educate prospective officers for the Navy and Marine Corps. Reserve commissions as Ensign or 2nd Lieutenant are awarded upon successful completion of prescribed naval science courses and graduation from the University. These commissioned officers will serve on active duty for a period of four to nine years, depending upon choice of warfare specialty.

All Scholarship and College Program students may select any major at the University. Midshipmen at Villanova study in a wide variety of majors in engineering, arts, sciences, business, and nursing. Detailed NROTC information may be obtained from the Naval Science Office, Room 103, John Barry Hall.

Type: Program

Peace and Justice

Corr Hall, Rm. 106

Peace and Justice Minor

Chair: Kathryn Getek Soltis, S.T.L., Ph.D.

Office Location: 106 Corr Hall

Telephone: 610-519-6849

[\[Website\]](#)

About

The interdisciplinary curriculum of the Center for Peace and Justice Education is rooted in Villanova's Augustinian tradition of education in the service of peace and social justice, with particular emphasis on the poor and marginalized in society. Students are prepared to understand the essential elements of a moral and just society, reflect on models for socially responsible

resolution of injustice and conflict, and learn the necessary skills to be advocates for a just and peaceful world.

Type: Minor

MINOR (18 credits)

To complete a minor in Peace and Justice, students must take six courses, including one of the foundational courses and five other courses in Peace and Justice, courses with a Peace and Justice attribute, or courses otherwise earning Peace and Justice credit.

Program Notes:

- PJ ePortfolio (three pieces of work and a short reflection)
- No more than three foundational courses may receive credit for the minor.
- Up to 3 credits in courses fewer than 3 credits with the PJ attribute can be bundled to count as one elective.

Required Minor Courses:

Item #	Title	Credits
	PJ Foundational Elective	3
	PJ Elective	3
	PJ Elective	3
	PJ Elective	3
	PJ Elective	3
	PJ Elective	3

Category Descriptions

PJ Foundational Elective

Credits: 3

Choose one Peace and Justice foundational course:

Item #	Title	Credits
PJ 2250	Violence & Justice in the Wrlld	3
PHI 2450	Catholic Social Thought	3
PJ 2700	Peacemakers & Peacemaking	3
PJ 2800	Race, Class, & Gender	3
PJ 2900	Ethical Issues in P & J	3

PJ Elective

Credits: 3

Choose an elective with the Peace and Justice attribute.

Philosophy

Philosophy, B.A.

Chair: Sally Scholz, Ph.D.

Office Location: 108 Saint Augustine Center

Telephone: 610-519-4690

[Website](#)

About

The Philosophy department offers interesting courses that help students better understand the world and their place in it. Philosophy courses teach students to analyze difficult texts, to write clearly and precisely, to defend their views with cogent arguments and to take pleasure in the struggle with complex ideas and questions.

Type: Bachelor of Arts

MAJOR (10 courses, 30 credits)

The philosophy major consists of 10 courses and 30 credits.

Double Majors

Because of the interdisciplinary nature of philosophy, the department welcomes and encourages double majors. With the permission of the chair, philosophy majors may count up to two related courses from the second major toward fulfillment of the philosophy major requirements.

Item #	Title	Credits
PHI 1000	Knowledge, Reality, Self	3
	Ancient Philosophy Elective	3
	Medieval Philosophy Elective	3
	Modern Philosophy Elective	3
	PHI Research Requirement	3
	Advanced Seminar for Philosophy majors (Capstone)	3
	PHI Elective	3
	PHI Elective	3
	PHI Elective	3
	PHI Elective	3

Category Descriptions

Ancient Philosophy Elective

Credits: 3

Choose one of the following Ancient Philosophy courses or an approved Topics course.

Item #	Title	Credits
PHI 3020	History of Ancient Philosophy	3
PHI 4100	Plato & Aristotle	3

Medieval Philosophy Elective

Credits: 3

Choose one of the following medieval philosophy courses, or an approved Topics course.

Item #	Title	Credits
PHI 3030	History of Medieval Philosophy	3
PHI 3100	Augustine & Antiquity	3
PHI 3120	Augustine & Modernity	3
PHI 3160	History of Islamic Phil	3
PHI 3410	Thomas Aquinas	3

Modern Philosophy Elective

Credits: 3

Choose one of the following Modern Philosophy courses or an approved Topics course.

Item #	Title	Credits
PHI 3040	Hist of Early Mod Philosophy	3
PHI 3050	Kant & 19th Cent Philosophy	3
PHI 3720	Marx & Marxism	3

PHI Research Requirement

Credits: 3

Item #	Title	Credits
PHI 4125	Bioethics	3
PHI 4140	Phil of Contemporary Music	3
PHI 4600	Psychoanalysis & Philosophy	3
PHI 4610	Philosophy of Mind	3
PHI 5000	Adv Sem for Phil Majors	3
PHI 6000	Research Seminar	3

Advanced Seminar for Philosophy majors (Capstone)

Credits: 3

Item #	Title	Credits
PHI 5000	Adv Sem for Phil Majors	3
PHI 6000	Research Seminar	3

PHI Elective

Credits: 3

Choose any PHI course.

Philosophy Minor

Chair: Sally Scholz, Ph.D.

Office Location: 108 Saint Augustine Center

Telephone: 610-519-4690

[Website](#)

About

The Philosophy department offers interesting courses that help students better understand the world and their place in it. Philosophy courses teach students to analyze difficult texts, to write clearly and precisely, to defend their views with cogent arguments and to take pleasure in the struggle with complex ideas and questions.

Type: Minor

MINOR (5 courses)

Philosophy minors take any five courses in the philosophy department.

Required Minor Courses:

Item #	Title	Credits
	PHI Elective	3
	PHI Elective	3
	PHI Elective	3
	PHI Elective	3
	PHI Elective	3

Category Descriptions

PHI Elective

Credits: 3

Choose any PHI course.

Physics

Physics, B.A.

Chair: Michael Hones, Ph.D.
Office Location: 347 Mendel Science Center
Telephone: 610-519-4885
[\[Website\]](#)

About

Physics is an experimental science in which its practitioners investigate nature at the most fundamental level on scales ranging from subatomic distances to the size of the universe. It is a quest to understand the origin and behavior of all forces: forces that account for the observed stability and in some cases instability of the atomic nucleus; forces that account for the stability of the atom; and forces that account for the stability of matter and the large-scale structures of the universe.

In this sense, it is the most fundamental of all physical sciences, and the successful physics student will be adept at solving problems using techniques that probe the fundamental building blocks of nature. Being trained to analyze phenomena at the most fundamental level makes the physics major versatile. Therefore, the student who successfully completes the degree in physics will not only be well prepared for graduate studies in physics, but also for employment in research-oriented industries or study in professional fields.

Type: Bachelor of Arts

MAJOR (B.A.) (79 credits)

The BA in Physics is for the student who wants to minor in another science or in engineering or who is planning employment in graduate studies outside of the sciences in fields such as medicine, law, business, journalism, secondary school teaching, or other fields. Instead of the normal advanced courses in physics, the candidate uses these slots for a minor in another area. There is a senior research option.

Program Notes:

- 3-credit PHY elective OR technical elective. Approval of the Physics chairperson required.

Major (B.A.) Required Courses:

Item #	Title	Credits
PHY 2410	University Phy:Mechanics	3
PHY 2411	Lab: Mechanics	1
PHY 2412	Univ Physics:Elec & Mag	3
PHY 2413	Lab:Elec & Magnetism	1
PHY 2601	Computational Phy Lab I	1
PHY 2603	Computational Phy Lab II	1
MAT 1500	Calculus I	4
MAT 1505	Calculus II	4
PHY 2414	Univ Physics: Thermo	3
PHY 2415	Lab: Thermodynamics	1
PHY 2416	Modern Physics	3
PHY 2417	Lab:Modern Physics	1
PHY 3310	Electronics	3
PHY 3311	Electronics Lab	1
PHY 4200	Mathematical Physics I	3
MAT 2500	Calculus III	4
MAT 2705	Diff Equation with Linear Alg	4
CHM 1103	General Chemistry Lab I	1
CHM 1151	General Chemistry I	4
CHM 1152	General Chemistry II	4
PHY 4100	Mechanics I	3
PHY 4301	Experimental Methods I	2
PHY 4303	Experimental Methods II	2
PHY 4000	Elec & Magnetism I	3
PHY 4001	Elec & Magnetism I Lab	1
PHY 5100	Quantum Mechanics	3
	PHY Elective	3
	Minor/Concentration	12

Category Descriptions

PHY Elective

Credits: 3

Choose a PHY course.

Minor/Concentration

Credits: 12

Or technical elective. Approval of the Physics chairperson required.

Physics, B.S.

Chair: Michael Hones, Ph.D.
Office Location: 347 Mendel Science Center
Telephone: 610-519-4885
[\[Website\]](#)

About

Physics is an experimental science in which its practitioners investigate nature at the most fundamental level on scales ranging from subatomic distances to the size of the universe. It is a quest to understand the origin and behavior of all forces: forces that account for the observed stability and in some cases instability of the atomic nucleus; forces that account for the stability of the atom; and forces that account for the stability of matter and the large-scale structures of the universe.

In this sense, it is the most fundamental of all physical sciences, and the successful physics student will be adept at solving problems using techniques that probe the fundamental building blocks of nature. Being trained to analyze phenomena at the most fundamental level makes the physics major versatile. Therefore, the student who successfully completes the degree in physics will not only be well prepared for graduate studies in physics, but also for employment in research-oriented industries or study in professional fields.

Type: Bachelor of Science

MAJOR (B.S.) (88 credits)

The BS in Physics is for the student who wants to be a professional physicist or go on to graduate school in physics.

Required Courses:

Item #	Title	Credits
PHY 2410	University Phy:Mechanics	3
PHY 2411	Lab: Mechanics	1
PHY 2412	Univ Physics:Elec & Mag	3
PHY 2413	Lab:Elec & Magnetism	1
PHY 2601	Computational Phy Lab I	1
PHY 2603	Computational Phy Lab II	1
MAT 1500	Calculus I	4
MAT 1505	Calculus II	4
PHY 2414	Univ Physics: Thermo	3
PHY 2415	Lab: Thermodynamics	1
PHY 2416	Modern Physics	3
PHY 2417	Lab:Modern Physics	1
PHY 3310	Electronics	3
PHY 3311	Electronics Lab	1
PHY 4200	Mathematical Physics I	3
MAT 2500	Calculus III	4
MAT 2705	Diff Equation with Linear Alg	4
CHM 1151	General Chemistry I	4
CHM 1103	General Chemistry Lab I	1
CHM 1152	General Chemistry II	4
PHY 4100	Mechanics I	3
PHY 4102	Mechanics II	3
PHY 4301	Experimental Methods I	2
PHY 4000	Elec & Magnetism I	3
PHY 4001	Elec & Magnetism I Lab	1
PHY 4002	Elec & Magnetism II	3
PHY 4003	Elec & Magnetism II Lab	1
PHY 4202	Mathematical Physics II	3
PHY 5100	Quantum Mechanics	3
PHY 5200	Thermo/Statistical Mech	3
PHY 5300	Subatomic Physics	3
	PHY Elective	3
	Science Elective	3-4

Category Descriptions

PHY Elective

Credits: 3

Choose a PHY course.

Science Elective

Credits: 3-4

Physics Minor

Chair: Michael Hones, Ph.D.
Office Location: 347 Mendel Science Center
Telephone: 610-519-4885
[\[Website\]](#)

About

Physics is an experimental science in which its practitioners investigate nature at the most fundamental level on scales ranging from subatomic distances to the size of the universe. It is a quest to understand the origin and behavior of all forces: forces that account for the observed stability and in some cases instability of the atomic nucleus; forces that account for the stability of the atom; and forces that account for the stability of matter and the large-scale structures of the universe.

In this sense, it is the most fundamental of all physical sciences, and the successful physics student will be adept at solving problems using techniques that probe the fundamental building blocks of nature. Being trained to analyze phenomena at the most fundamental level makes the physics major versatile. Therefore, the student who successfully completes the degree in physics will not only be well prepared for graduate studies in physics, but also for employment in research-oriented industries or study in professional fields.

Type: Minor

MINOR (31 credits)

The Physics Department offers a minor in physics to qualified students whose major area of study lies outside of physics. In general, a student in any area of study, other than physics, may obtain a minor in physics.

Program Notes:

- The Minor in Applied Physics for Math Majors requires all of the Math courses required for the Math degree, plus MAT 4310, PHY 2410/2411, through PHY 2416/2417, PHY 3310/3311, and PHY 4301/4303

Required Minor Courses:

Item #	Title	Credits
PHY 2410	University Phy:Mechanics	3
PHY 2411	Lab: Mechanics	1
PHY 2412	Univ Physics:Elec & Mag	3
PHY 2413	Lab:Elec & Magnetism	1
PHY 2414	Univ Physics: Thermo	3
PHY 2415	Lab: Thermodynamics	1
PHY 2416	Modern Physics	3
PHY 2417	Lab:Modern Physics	1
	Upper-Level Physics Elective	3
	Upper-Level Physics Elective	3
	Upper-Level Physics Elective	3
	Upper-Level Physics Elective	3
	Upper-Level Physics Elective	3

Category Descriptions

Upper-Level Physics Elective

Credits: 3

Choose a Physics (PHY) course numbered above 3000.

Political Science

Political Science, B.A.

Chair: Markus Kreuzer, Ph.D.
Office Location: 202 Saint Augustine Center
Telephone: 610-519-4710
[\[Website\]](#)

About

Today, no less than in the past, it is essential for citizens in a democracy to be educated about the political system in which they live and to know how that system relates to other governments and international issues. The study of political science will educate you about timely and important political issues on a national and global scale while helping you develop a set of analytical, reasoning and research skills to last a lifetime. As a political science major, you will learn about American politics, comparative politics, international relations and political theory; become familiar with the methodology of social science inquiry and learn how to conduct research; build competence in oral and written expression; develop reasoning and analytical skills; become a politically engaged citizen-leader; prepare for any number of politically-oriented careers or for [graduate or professional training](#). As a political science major, you will learn how political leaders operate; governments make decisions; politics shapes public policy; governments respond to internal and international conflicts; people develop political attitudes and preferences; groups attempt to influence government; and governments can best serve their people.

Type: Bachelor of Arts

MAJOR (33 credits)

In the context of the liberal arts tradition, the Department of Political Science seeks to encourage in its students a commitment to intellectual curiosity, academic excellence, and responsible civic engagement. The Department is committed to helping students improve their skills of observation, critical reading, rigorous thought, careful evidence-based argumentation, and effective communication, and to develop values of good citizenship.

Program Notes:

- Foundational courses should be taken immediately upon declaring the major. They serve as prerequisites for many of the upper division courses and the senior seminar.
- With the exception of internships (up to 3 credits), courses taken on a satisfactory/unsatisfactory basis cannot be used to satisfy requirements for the major.
- Any senior with a GPA of 3.0 or above may request to take a graduate PSC course.

Required Major Courses:

Item #	Title	Credits
PSC 1100	American Government	3
PSC 1200	International Relations	3
PSC 1300	Comparative Politics	3
PSC 1400	Political Theory	3
PSC 1900	Research Seminar	3
PSC 6900	Political Sci Seminar	3
	PSC Electives	3
	PSC Electives	3
	PSC Electives	3
	PSC Electives	3
	PSC Electives	3

Category Descriptions

PSC Electives

Credits: 3

Choose CSC courses from the 2000-3000 level from the four major subfields (American Government, International Relations, Comparative Politics, Political Theory) in any combination.

Political Science Minor

Chair: Markus Kreuzer, Ph.D.
Office Location: 202 Saint Augustine Center
Telephone: 610-519-4710
[\[Website\]](#)

About

Today, no less than in the past, it is essential for citizens in a democracy to be educated about the political system in which they live and to know how that system relates to other governments and international issues. The study of political science will educate you about timely and important political issues on a national and global scale while helping you develop a set of analytical, reasoning and research skills to last a lifetime. As a political science major, you will learn about American politics, comparative politics, international relations and political theory; become familiar with the methodology of social science inquiry and learn how to conduct research; build competence in oral and written expression; develop reasoning and analytical skills; become a politically engaged citizen-leader; prepare for any number of politically-oriented careers or for [graduate or professional training](#). As a political science major, you will learn how political leaders operate; governments make decisions; politics shapes public policy; governments respond to internal and international conflicts; people develop political attitudes and preferences; groups attempt to influence government; and governments can best serve their people.

Type: Minor

MINOR (18 credits)

A minor is open to all students and requires 6 courses and 18 credits.

Program Notes:

- Students completing the minor are encouraged to focus on one or two subfields, although they are not required to do so.
- Internship credit will not be applied to the Political Science minor.

Required Minor Courses:

Item #	Title	Credits
	PSC Foundational Elective	6
	PSC Electives	3
	PSC Electives	3
	PSC Electives	3
	PSC Electives	3

Category Descriptions

PSC Foundational Elective

Credits: 6

Choose at least two of the following foundational courses.

Item #	Title	Credits
PSC 1100	American Government	3
PSC 1200	International Relations	3
PSC 1300	Comparative Politics	3
PSC 1400	Political Theory	3

PSC Electives

Credits: 3

Choose CSC courses from the 2000-3000 level from the four major subfields (American Government, International Relations, Comparative Politics, Political Theory) in any combination.

Psychological and Brain Sciences

Psychology, B.A.

Chair: Michael Brown, Ph.D.
 Office Location: 334 Tolentine Hall
 Telephone: 610-519-4722
[\[Website\]](#)

About

Psychology is the basic and applied science of mind and behavior. Psychologists use the methods of both natural and social science to advance our knowledge and understanding of thought, emotion, and behavior in humans and other organisms. Psychologists also apply this knowledge to improve the conditions of individuals and society. The Department of Psychological and Brain Sciences offers two majors in psychology, a Bachelor of Science (B.S.) and a Bachelor of Arts (B.A.). To declare either major students must have completed PSY 1000 or PSY 1001, or have AP credit for PSY 1000. In addition, they must have a C+ or higher in PSY 1000 or PSY 1001, or have an overall minimum GPA of 3.00.

Type: Bachelor of Arts

MAJOR (B.A.) (31 credits)

Program Notes:

- Courses taken on a satisfactory/unsatisfactory basis cannot be used to satisfy requirements for the major, except for PSY 2100: Seminar in Professional Development.

Required Major Courses for B.A.:

Item #	Title	Credits
	PSY 1000 or PSY 1001	3
PSY 2000	Intro Statistics	3
PSY 2050	Research Methods in Psy.	3
PSY 2100	Sem Professional Development	1
	PSY 3000-level Elective	3
	PSY 3000-level Elective	3
	PSY 3000-level Elective	3
	PSY 4200 or PSY 4500	3
	PSY Elective	3
	PSY Elective	3
	PSY 5150 or PSY 5250	3

Category Descriptions

PSY 1000 or PSY 1001

Credits: 3

- PSY 1001 is recommended by the department.

Item #	Title	Credits
PSY 1000	General Psychology	3
PSY 1001	Intro to Brain and Behavior	3

PSY 3000-level Elective

Credits: 3

PSY 4200 or PSY 4500

Credits: 3

Item #	Title	Credits
PSY 4200	Biopsychology	3
PSY 4500	Cognitive Psychology	3

PSY Elective

Credits: 3

PSY 5150 or PSY 5250

Credits: 3

Item #	Title	Credits
PSY 5150	Foundations of Modern Psych	3
PSY 5250	Contemp Research Issues in Psy	3

Cognitive and Behavioral Neuroscience, B.S.

The major in Cognitive and Behavioral Neuroscience (CBN) provides an intensive course of study focused on brain-behavior relationships, ranging from genetic to whole brain contributions to behavior and mental processes. The program is excellent preparation for a variety of careers focusing on research and/or practice in neuroscience, medicine, allied health fields, and psychology, as well as for more general careers in areas such as public policy and education.

Students are accepted into Villanova University as declared CBN majors. Therefore, prospective students who are interested in the major should select the CBN program when applying to the University. Students who have already entered

Villanova may appeal directly to the Department of Psychological and Brain Sciences for special permission into the major.

Type: Bachelor of Science

MAJOR (65-70 credits)

Item #	Title	Credits
CHM 1151	General Chemistry I	4
CHM 1103	General Chemistry Lab I	1
CHM 1152	General Chemistry II	4
CHM 1104	General Chemistry Lab II	1
BIO 2105	General Biology I	4
BIO 2106	General Biology II	4
BIO 3351	Genetics	4
	MAT 1312 or MAT 1500	4
	MAT 1314 or MAT 1505	3-4
	PSY 1000 or PSY 1001	3
PSY 2000	Intro Statistics	3
PSY 2050	Research Methods in Psy.	3
PSY 4200	Biopsychology	3
PSY 4500	Cognitive Psychology	3
CBN 4000	Cell & Behavioral Neuroscience	3
CBN 4100	Cognitive Neuroscience	3
	CBN 5000 or CBN 6002	3
	CBN Approved Elective	3
	CBN Approved Elective	3
	CBN Approved Elective	3
	CBN Approved Elective	3

Category Descriptions

MAT 1312 or MAT 1500

Credits: 4

- MAT 1312 and MAT 1314 must be taken as a sequence.
- MAT 1500 and MAT 1505 must be taken as a sequence.

Item #	Title	Credits
MAT 1312	Biocalculus	4
MAT 1500	Calculus I	4

MAT 1314 or MAT 1505

Credits: 3-4

- MAT 1312 and MAT 1314 must be taken as a sequence.
- MAT 1500 and MAT 1505 must be taken as a sequence.

Item #	Title	Credits
MAT 1314	Modeling for the Life Sciences	3
MAT 1505	Calculus II	4

PSY 1000 or PSY 1001

Credits: 3

- PSY 1001 is recommended by the department.

Item #	Title	Credits
PSY 1000	General Psychology	3
PSY 1001	Intro to Brain and Behavior	3

CBN 5000 or CBN 6002

Credits: 3

Item #	Title	Credits
CBN 5000	Advanced Lab in Neuroscience	3
CBN 6002	Thesis Research II	3

CBN Approved Elective

Credits: 3

CBN students are required to take four elective courses. Although the electives are organized into four categories, there is no requirement to use this organization when selecting electives. Students can choose to concentrate in a particular area by taking electives from one category or they can sample broadly across any or all categories.

Notes:

- Students should consult individual courses via the courses tool to determine pre-requisites.
- The 1-credit lab is optional when taking BIO 4251 and CHM 4611.
- BIO 4950 courses offered are available in the Master Schedule accessible through MyNova but must be approved by the CBN program.
 - Already pre-approved as CBN elective: "Sex, Brains & Behavior"
- CHM 4621 is recommended for Chemistry and Biochemistry majors)

- PSY 2900 courses offered are available in the Master Schedule accessible through MyNova but must be approved by the CBN program.

Category 1 - Behavioral/ Psychological Science

Item #	Title	Credits
PSY 3200	Human Development	3
PSY 3300	Perception	3
PSY 3500	Psych of Personality	3
PSY 3600	Social Psychology	3
PSY 3700	Abnormal Psychology	3
PSY 3800	Clinical Psychology	3
PSY 2900	Special Topics	3
PSY 4600	Animal Learning & Cognition	3

Category 2 - Biological/Life Science

Item #	Title	Credits
BIO 3015	Animal Behavior	4
BIO 3055	Animal Physiology	4
BIO 4205	Cell Biology	4
BIO 4251	Endocrine Physiol/ Pharmacology	3
BIO 4285	Developmental Biology	4
BIO 4305	Evolution	4
BIO 4505	Molecular Biology	4
BIO 4605	Neurobiology	4
BIO 4950	Advanced Topics in Biology	3
CHM 4611	Survey of Biochemistry	3
CHM 4621	Biochemistry I: Structure	3

Category 3 - Cognitive Science

Item #	Title	Credits
CSC 4500	Artificial Intelligence	3
CSC 4510	Machine Learning	3
PHI 4610	Philosophy of Mind	3
CGS 5900	Cognitive Science Seminar	3
CGS 5910	Psychology of Language	3

Category 4 - Special Topics & Research

- CBN 6002 generally counts as the required capstone course and NOT as an elective. It may count as an elective only if CBN 5000 is taken as the required capstone option.

Item #	Title	Credits
CBN 2900	Topics in Cog & Behav Neuro	3
CBN 5900	Undergraduate Research in CBN	3
HON 6000	Senior Thesis I	3
HON 6002	Senior Thesis II	3
CBN 6001	Thesis Research I	3
CBN 6002	Thesis Research II	3

Psychology, B.S.

Chair: Michael Brown, Ph.D.
Office Location: 334 Tolentine Hall
Telephone: 610-519-4722
[\[Website\]](#)

About

Psychology is the basic and applied science of mind and behavior. Psychologists use the methods of both natural and social science to advance our knowledge and understanding of thought, emotion, and behavior in humans and other organisms. Psychologists also apply this knowledge to improve the conditions of individuals and society. The Department of Psychological and Brain Sciences offers two majors in psychology, a Bachelor of Science (B.S.) and a Bachelor of Arts (B.A.). To declare either major students must have completed PSY 1000 or PSY 1001, or have AP credit for PSY 1000. In addition, they must have a C+ or higher in PSY 1000 or PSY 1001, or have an overall minimum GPA of 3.00.

Type: Bachelor of Science

MAJOR (B.S.) (54 credits)

Program Notes:

- Courses taken on a satisfactory/unsatisfactory basis cannot be used to satisfy requirements for the major, except for PSY 2100: Seminar in Professional Development.

Required Major Courses for B.S.:

Item #	Title	Credits
	PSY 1000 or PSY 1001	3
PSY 2000	Intro Statistics	3
PSY 2050	Research Methods in Psy.	3
PSY 2100	Sem Professional Development	1
PSY 4200	Biopsychology	3
PSY 4500	Cognitive Psychology	3
	PSY 3000-level Elective	3
	PSY 3000-level Elective	3
	PSY 3000-level Elective	3
	PSY Elective	3
	PSY Elective	3
BIO 2105	General Biology I	4
BIO 2106	General Biology II	4
CSC 1051	Algorithms & Data Struc I	4
	MAT 1500/1505 or MAT 1312/1314	7-8
	PSY 5150 or PSY 5250	3

Category Descriptions

PSY 1000 or PSY 1001

Credits: 3

- PSY 1001 is recommended by the department.

Item #	Title	Credits
PSY 1000	General Psychology	3
PSY 1001	Intro to Brain and Behavior	3

PSY 3000-level Elective

Credits: 3

PSY Elective

Credits: 3

MAT 1500/1505 or MAT 1312/1314

Credits: 7-8

Choose one of the following sequential pairs:

Item #	Title	Credits
MAT 1500	Calculus I	4
MAT 1505	Calculus II	4
Item #	Title	Credits
MAT 1312	Biocalculus	4
MAT 1314	Modeling for the Life Sciences	3

PSY 5150 or PSY 5250

Credits: 3

Item #	Title	Credits
PSY 5150	Foundations of Modern Psych	3
PSY 5250	Contemp Research Issues in Psy	3

Psychology Minor

Chair: Michael Brown, Ph.D.

Office Location: 334 Tolentine Hall

Telephone: 610-519-4722

[\[Website\]](#)

About

Psychology is the basic and applied science of mind and behavior. Psychologists use the methods of both natural and social science to advance our knowledge and understanding of thought, emotion, and behavior in humans and other organisms. Psychologists also apply this knowledge to improve the conditions of individuals and society. The Department of Psychological and Brain Sciences offer two majors in psychology, a Bachelor of Science (B.S.) and a Bachelor of Arts (B.A.).

Type: Minor

MINOR (15 credits)

A minor is open to all students and requires 5 courses and 15 credits.

Program Notes:

- Courses taken on a satisfactory/unsatisfactory basis cannot be used to satisfy requirements for the minor.
- No more than two prior approved psychology courses may be taken at another institution (AP courses, transfer courses, courses taken abroad, etc.) and be counted toward the minor.
- Students wishing to be awarded the minor must also submit a declaration form to the Department of Psychological and Brain Sciences.

Required Minor Courses:

Item #	Title	Credits
PSY 1000	General Psychology	3
	PSY Elective	3
	PSY Elective	3
	PSY Elective	3
	PSY Elective	3

Category Descriptions

PSY Elective

Credits: 3

Public Administration

Public Administration Minor

Chair: Catherine E. Wilson, Ph.D.
Office Location: 205 Saint Augustine Center
Telephone: 610-519-3934
[\[Website\]](#)

About

The Department of Public Administration offers a Minor in Public Service and Administration for undergraduate students. The minor is an interdisciplinary course of study, open to students from all Colleges, that prepares students to be responsibly engaged citizens, government managers, and community leaders working in the “new public sector.” The “new public sector”

refers to the complex relationships that exist between government at all levels, nonprofit organizations, higher education, and the private sector. Now more than ever before, these groups have been called upon to cooperate in order to address society’s most pressing and challenging problems.

Type: Minor

MINOR (18 credits)

In the Public Service and Administration Minor, you will be introduced to ethical, philosophical, theological, historical, social, and political perspectives that influence the leadership and management of government and nonprofit organizations. The specific goals of this minor are to help prepare you to understand and pursue the common good; assist in the creation, implementation, and analysis of public programs; strengthen communities through innovative leadership and engaged citizenship; reflect on how the citizen as public servant discovers meaning and purpose in one’s life by forging and developing the bonds of community.

Program Notes:

- At least four of the courses (12 credits) must be within the Department of Public Administration and up to two pre-approved elective courses (6 credits) may be taken outside of the Department’s course offerings.
- Additional approved electives outside the Department of Public Administration may be found on the Public Administration [website](#).
- All service learning courses can be approved as electives towards the Minor.

Required Minor Courses:

Item #	Title	Credits
PA 1050	Public Administration	3
	PA 2000 or PA 6000	3
	PA Electives	3
	PA Electives	3
	PA Electives	3
	PA Electives	3

Category Descriptions

PA 2000 or PA 6000

Credits: 3

Item #	Title	Credits
PA 2000	Public Policy	3
PA 6000	Vocation of Public Service	3

PA Electives

Credits: 3

Choose from the following:

Item #	Title	Credits
PA 2000	Public Policy	3
PA 2100	City and Suburb	3
PA 3000	Overview of Non-Profit Sector	3
PA 5000	Special Topics	3
PA 5100	Independent Study	3
PA 6000	Vocation of Public Service	3
PA 6100	PSA Internship	3
VIA 3020	Creating Social Impact	3

Russian Studies

Russian Area Studies Concentration (RASCON)

Chair: Joseph Loya, O.S.A.
Office Location: 233 Saint Augustine Center
Telephone: 610-519-7243
[\[Website\]](#)

About

The Concentration in Russian Area Studies promotes the study of the Russian language, culture and society. With a rigorous and intellectually challenging program, students in the Russian Area Studies Concentration will become proficient in the language by taking at least two semesters of Russian language at the intermediate level and will gain well-rounded knowledge of the culture by taking four electives chosen from designated courses in History, Literature, Political Science, Economics, Theology and Religious Studies, and Art and Art History.

Type: Concentration

CONCENTRATION (18 credits)

The Russian Area Studies Concentration is open to all students enrolled in the University. The purpose of the concentration is to provide students with a multi-disciplinary comprehension of Russia through the study of this complex country's language, culture, literature, history, politics, religions and art.

Program Notes:

- Other appropriate special topics courses in Economics and History may count towards electives as approved by the director.

Required Concentration Courses:

Item #	Title	Credits
	Russian Language Elective	6
	Russian Studies Electives	12

Category Descriptions

Russian Language Elective

Credits: 6

Two semesters of Russian at the intermediate level OR demonstrated proficiency at an equivalent level.

Russian Studies Electives

Credits: 12

Choose four courses from the following list. Other appropriate special topics and independent study courses in Economics, History, plus Russian culture and language may count towards electives as approved by the director.

Item #	Title	Credits
HIS 1070	Topics Empire and Imperialism	3
HIS 1165	Topics Global Perspectives	3
HIS 3242	Russia from Stalin to Putin	3
HIS 3995	Topics in European History	3
HUM 6000	Great Thought Seminar	3
PSC 3320	Russian Politics	3
RUS 1131	Conversation Composition	3
RUS 1132	Advanced Convers & Comp	3
RUS 3412	Russian Culture in Context	3
RUS 4110	Russian Film	3
RUS 4120	The Russian Short Story	3
SAR 4007	Painting of Icons	3
THL 5200	Religion in Russia	3

Sociology

Sociology, B.A.

Chair: Tom Arvanites, Ph.D.
 Office Location: 204 Saint Augustine Center
 Telephone: 610-519-4742
[Website](#)

About

Sociology is the systematic study of social life. Sociologists believe that people's actions are strongly influenced by the conditions and situations in which they live, work, and play. Everybody makes decisions, but we recognize and study how social structures and institutions affect and constrain those decisions. Our goal as researchers is to expose and analyze the impacts of those circumstances on human decisions, societies, and opportunities. Methodologically, we incorporate multiple perspectives and analytical approaches to help create a more holistic understanding of our society. Our mission as teachers is to empower students to think critically and rigorously about individuals and societies. Through our diverse offerings on local, regional, national and global social processes, we strive to create more complete human beings with a keen sense of humanity, social justice, and appropriate social policy.

Type: Bachelor of Arts

MAJOR (33 credits)

To declare the Major, a student must have completed Introduction to Sociology (SOC 1000), with a "C+" or higher or have a minimum GPA of 3.0. The Major consists of 33 credits. A student must allow three full semesters after the declaration of the Major to complete all requirements. One of the Sociology electives for the Major can be satisfied by an internship for credit with approval from the department Chair, provided that the student has at least 15 credits toward the Major.

Program Notes:

- A student taking an internship in a field setting in the second semester of their junior year or during their senior year should consult with the department Chair.
- Students must have at least three full semesters remaining at Villanova University to declare a Sociology major.
- Students with a GPA lower than 3.0 must receive a C+ or better in "Introduction to Sociology," in order to declare a sociology major.

Required Major Courses:

Item #	Title	Credits
SOC 1000	Intro to Sociology	3
SOC 5300	Data Analysis-Social Scientist	3
SOC 5400	Applied Research in Soc	3
SOC 6500	Seminar	3
	SOC Theory Elective	3
	SOC Elective	3
	SOC Elective	3
	SOC Elective	3
	SOC Elective	3
	SOC Elective	3
	CRM Elective	3

Category Descriptions

SOC Theory Elective

Credits: 3

Choose one of the following Theory courses (prerequisite: SOC 1000):

This list also includes SOC 5000.

Item #	Title	Credits
SOC 5050	Soc Theory & Public Policy	3
SOC 5100	Contemp Thry & Research	3

SOC Elective

Credits: 3

Choose a sociology elective.

CRM Elective

Credits: 3

Choose a criminology elective.

Sociology Minor

Chair: Tom Arvanites, Ph.D.
Office Location: 204 Saint Augustine Center
Telephone: 610-519-4742
[Website](#)

About

Sociology is the systematic study of social life. Sociologists believe that people's actions are strongly influenced by the conditions and situations in which they live, work, and play. Everybody makes decisions, but we recognize and study how social structures and institutions affect and constrain those decisions. Our goal as researchers is to expose and analyze the impacts of those circumstances on human decisions, societies, and opportunities. Methodologically, we incorporate multiple perspectives and analytical approaches to help create a more holistic understanding of our society. Our mission as teachers is to empower students to think critically and rigorously about individuals and societies. Through our diverse offerings on local, regional, national and global social processes, we strive to create more complete human beings with a keen sense of humanity, social justice, and appropriate social policy.

Type: Minor

MINOR (15 credits)

A Minor is open to all students and requires 5 courses and 15 credits. Courses taken on a satisfactory/unsatisfactory basis cannot be used to satisfy requirements for the Minor. Minors cannot receive Sociology credit for an internship. Students wishing to earn a Minor in Sociology must fill out an application form available in the office.

Program Notes:

- Only one course may be transferred from another university.
- No course for the minor may be taken S/U, and no more than one course transferred from another university will be accepted.
- Minors cannot receive Sociology credit for an internship.

Required Minor Courses:

Item #	Title	Credits
SOC 1000	Intro to Sociology	3
	SOC Minor Elective	
	SOC Minor Elective	
	SOC Minor Elective	
	SOC Minor Elective	

Category Descriptions

SOC Minor Elective

Choose any course with the SOC subject code numbered 2000 to 4999.

Spanish Studies

Spanish Studies, B.A.

Chairperson: Mercedes Julia, Ph.D.
Office Location: 303 Saint Augustine Center
Telephone: (610) 519-7794
[\[Website\]](#)

About

Spanish is the language that the majority of students in the United States (and in Villanova) chooses to study at the present time for very good reasons: It is the second major language spoken in the world (after

Mandarin) and it is the second language spoken in the United States. Therefore it will be very useful and advantageous to know Spanish in any career path that students may choose. Approximately 800 students take Spanish undergraduate courses every semester at Villanova. Students are encouraged to spend summers and semesters abroad in Spain and Central and South America, to obtain a greater proficiency in the language.

Type: Bachelor of Arts

MAJOR (30 credits)

The influence of Spanish crosses centuries as well as geographic boundaries. It is a dynamic and exciting language used in diverse parts of the world, such as: Central, South, North America, the Caribbean and Spain. Spanish and its different cultures are taught at Villanova in interdisciplinary courses, in the Liberal Arts Program, Cultural Studies program, and in courses that were designed in response to these developments. The classes provide students with a thorough grounding in the history, politics, cultural production (literatures, film, theater), linguistics, post-colonial experiences, and development of the Hispanic world.

Program Notes:

- Of the 10 Major courses at least 3 must be at the 3000 level (including SPA 3970), two of which must be taken at Villanova.
- One RLL course taught in English with SPA attribute may be accepted for the major.
- Students may obtain up to 6 credits through the Villanova summer program in Cádiz (Spain) or Valparaiso (Chile), and up to 9 credits through an authorized semester program. Contact the ISO for details.

Required Major Courses:

Item #	Title	Credits
	SPA 1138 or SPA 1140	3
	SPA 2220 or SPA 2221	3
SPA 3970	Research Seminar	3
	Intermediate Spanish Elective	3
	Intermediate Spanish Elective	3
	Intermediate Spanish Elective	3
	Intermediate Spanish Elective	3
	Intermediate Spanish Elective	3
	Intermediate Spanish Elective	3
	Intermediate Spanish Elective	3

Category Descriptions

SPA 1138 or SPA 1140

Credits: 3

Item #	Title	Credits
SPA 1138	Advanced Grammar	3
SPA 1140	Writing & Stylistics in Span.	3

SPA 2220 or SPA 2221

Credits: 3

Item #	Title	Credits
SPA 2220	Literature & Culture of Spain	3
SPA 2221	Lit. & Cult. of Latin America	3

Intermediate Spanish Elective

Credits: 3

Choose a SPA course above Intermediate (1122) level.

Spanish Studies Minor

Chairperson: Mercedes Julia, Ph.D.
Office Location: 303 Saint Augustine Center
Telephone: (610) 519-7794
[\[Website\]](#)

About

Spanish is the language that the majority of students in the United States (and in Villanova) chooses to study at the present time for very good reasons: It is the second major language spoken in the world (after Mandarin) and it is the second language spoken in the United States. Therefore it will be very useful and advantageous to know Spanish in any career path that students may choose. Approximately 800 students take Spanish undergraduate courses every semester at Villanova. Students are encouraged to spend summers and semesters abroad in Spain and Central and South America, to obtain a greater proficiency in the language.

Type: Minor

MINOR (12 credits)

The department encourages students to obtain a minor in Spanish if their schedule does not permit them to complete a major. In order to do so, students may come to the Department main office, located in SAC 303 and fill out a form. At the time of graduation and upon completion of the minor requirements, students will be issued a Minor certificate and the minor will appear on their transcript.

Required Minor Courses:

- Four courses above the Intermediate (1122) level

Program Notes:

- Of the four required courses, one must be at the 3000 level and taken at Villanova, or at a Villanova study abroad program (Cádiz or Valparaiso).
- Courses in English do not count for the minor.

Required Minor Courses:

Item #	Title	Credits
	Intermediate Spanish Elective	3
	Intermediate Spanish Elective	3
	Intermediate Spanish Elective	3
	Intermediate Spanish Elective	3

Category Descriptions

Intermediate Spanish Elective

Credits: 3

Choose a SPA course above Intermediate (1122) level.

Theatre

Music Minor

Villanova has a vibrant musical culture, and students interested in Music can declare a minor in Music or take courses in Music taught by

faculty from across the University. Develop your skills and learn how to get the most out of your experience as a performer and listener with a broad range of courses as a Music Minor.

Type: Minor

Minor (16 credits)

Music Minors must complete five Music courses.

Item #	Title	Credits
SAR 2100	Music Theory I	4
	SAR 2110 or SAR 2111	3
	Music Minor Elective	3
	Music Minor Elective	3
	Music Minor Elective	3

Category Descriptions

SAR 2110 or SAR 2111

Credits: 3

Item #	Title	Credits
SAR 2110	Western Music to 1750	3
SAR 2111	Western Music:1750-Present	3

Music Minor Elective

Credits: 3

Item #	Title	Credits
SAR 2114	Words & Music: The Art of Song	3
SAR 2119	Jazz:America's Music	3
THE 2034	Musical Theatre	3
CSC 1043	Laptop Instrument	3
PHI 4140	Phil of Contemporary Music	3
COM 3354	Media Criticism	3

Studio Art Minor

Students interested in Art can declare a minor in Studio Art, or take courses taught by our inspiring faculty to develop a deeper appreciation and build skills in the arts.

Type: Minor

Item #	Title	Credits
	Studio Art Core	12
	Studio Art Elective	3

Category Descriptions

Studio Art Core

Credits: 12

Students must choose four courses from the below list.

Item #	Title	Credits
SAR 2010	Intro to Calligraphy	3
SAR 2020	Basic Watercolor Techniques	3
SAR 2021	Basic Drawing Techniques	3
SAR 2022	Basic Oil Painting	3
SAR 3031	Special Topics in Studio Art	3
SAR 4007	Painting of Icons	3
SAR 5004	Basic Printmaking	3

Studio Art Elective

Credits: 3

One elective from the list in Studio Art Core or from the following:

Item #	Title	Credits
AAH 1101	His West Art: Ancient-Med	3
AAH 1102	His West Art: Renaiss - Cont	3
AAH 1103	Visual Arts in US 1607-1876	3
AAH 1104	Visual Arts in US 1877-Present	3
AAH 2000	Ancient Art	3
AAH 2001	Medieval Art	3
AAH 2002	Early Renaissance Art in Italy	3
AAH 2003	Age of Rembrandt & Bernini	3
AAH 2004	Modern Art	3
AAH 2009	Contemporary Art	3
AAH 2012	High Renaissance Art in Italy	3
AAH 3001	Women in Art	3
AAH 3002	Art of Philadelphia	3
AAH 3003	Romantic to Post-Impress	3
AAH 3005	Gender Sexuality Visl Culture	3
AAH 3007	The Art of Ireland	3
AAH 4010	Interpreting Art	3
CHI 3413	Chinese Calligraphy	3
ITA 3075	Visual History of Italy	3
ITA 3413	Topics on Italy and Beauty	3
JPN 2143	Japanese Animation	3

Theatre Minor

Chairperson: Valerie M. Joyce, Ph.D.
Office Location: 205 Saint Augustine Center
Telephone: 610-519-4760
[\[Website\]](#)

About

The Villanova University Theatre Department aims to inform and inspire theatre artists, administrators, and scholars who will impact the future of this dynamic art form. Our culture of creativity engages in rigorous study and the practical application of theatrical theories and techniques. We believe art has the power to transform hearts and minds by challenging both individuals and communities.

Type: Minor

MINOR (15 credits and practicum)

Undergraduate students may fulfill a Theatre minor by completing five theatre courses (two required/three elective) and a theatre practicum.

Program Notes:

- To fulfill the theatre practicum, contact program coordinator [Kevin Esmond](#).

Required Minor Courses:

Item #	Title	Credits
THE 2029	Fund Princ of Acting	3
THE 2040	Theatre Practicum	0
	Required Theatre Specialized Course	3
	THE Elective	3
	THE Elective	3
	THE Elective	3

Category Descriptions

Required Theatre Specialized Course

Credits: 3

Item #	Title	Credits
THE 2019	The Theatrical Expernce	3
THE 2051	Creativity	3
THE 3030	Spec Topics in Theatre	3

THE Elective

Credits: 3

Choose from the following:

This list also includes THE 3006 (3 cr).

Item #	Title	Credits
THE 2019	The Theatrical Expernce	3
THE 2030	Advan Princ of Acting	3
THE 2032	Elements of Dance	3
THE 2033	Advanced Elements of Dance	3
THE 2034	Musical Theatre	3
THE 2051	Creativity	3
THE 3007	Playwriting	3
THE 4011	Directing the Play	3

Theology and Religious Studies

Theology and Religious Studies, B.A.

Chairperson: Peter Spitaler, Ph.D.
Program Director: Mark Graham, Ph.D.
Office Location: 203 Saint Augustine Center
Telephone: 610-519-4730
[\[Website\]](#)

About

Theological and religious studies as conceived, studied, and advanced at Villanova are interdisciplinary and integrative. Students pursue their objectives from diverse theological and religious perspectives, places them in dialogue with each other, and integrate religious and theological knowledge with experience and other forms of knowing.

Our programs explore the intersections of Catholic theology, religion, and cultures(s) and prepare students for graduate studies and for careers in humanitarian, philanthropic or other non-profit, charitable organizations; and in religious organizations as campus, youth or parish minister, educator, catechist, retreat worker, administrator, counselor, spiritual director or in one of the many other positions such organizations offer.

Type: Bachelor of Arts

PRIMARY MAJOR (30 credits)

The primary major emphasizes a broad understanding of Christian and non-Christian theological and religious traditions. It is a stand-alone program, and students may take it in conjunction with another major (i.e., the traditional “double” major).

Program Notes:

- For the THL Electives: 9 credits may be taken from among the approved extra-departmental courses listed below the Primary Major Required Course list. The TRS Director of Undergraduate Programs may approve additional courses (for example, a course taken overseas or particular themes or topic courses not listed explicitly in the University Catalog). Because such courses do not carry the Core Theology (CTHL) attribute, they will count toward the Major degree only with prior approval from the Director.
- Total number of elective courses from outside the TRS Department (including courses taken overseas) must not exceed nine credit hours.
- Theology majors are required to select a concentration that will give shape and focus to the major.

Primary Major Required Courses:

Item #	Title	Credits
THL 1000	Faith, Reason, and Culture	3
THL 6300	Research Seminar	3
THL 6500	Advanced Seminar	3
	THL Elective	3
	THL Elective	3
	THL Elective	3
	THL Elective	3
	THL Elective	3
	THL Elective	3
	THL Elective	3
	THL Elective	3
	List of Approved Extra-Departmental Courses	

SECONDARY MAJOR (24 credits)

The secondary major highlights the interdisciplinary and multidisciplinary nature of theological inquiry and of the study of religion. It must be taken in conjunction with another major and completed concurrently with it.

Program Notes:

- For the THL Electives: 6 credits may be taken from among the approved extra-departmental courses listed below the Primary Major Required Course list. The TRS Director of Undergraduate Programs may approve additional courses (for example, a course taken overseas or particular themes or topic courses not listed explicitly in the University Catalog). Because such courses do not carry the Core Theology (CTHL) attribute, they will count toward the Major degree only with prior approval from the Director.
- Total number of elective courses from outside the TRS Department (including courses taken overseas) must not exceed six credit hours.
- Theology majors are required to select a concentration that will give shape and focus to the major.

Secondary Major Required Courses:

Item #	Title	Credits
THL 1000	Faith, Reason, and Culture	3
THL 6300	Research Seminar	3
THL 6500	Advanced Seminar	3
	THL Elective	3
	THL Elective	3
	THL Elective	3
	THL Elective	3
	THL Elective	3

Category Descriptions

THL Elective

Credits: 3

Choose a course in theological and religious studies.

List of Approved Extra-Departmental Courses

Item #	Title	Credits
GIS 4275	Global Religions & the State	3
HIS 1060	Topics in Religion & Society	3
HIS 2280	Catholic Church in America	3
HIS 3018	Pagans, Jews, and Christians	3
HIS 4031	Islamic Civilization to 1800	3
HIS 4076	Jewish History	3
HUM 4000	Jews, Christians, Muslims: Dialog	3
PHI 2450	Catholic Social Thought	3
PHI 2900	Philosophy of Religion	3
PHI 2910	Mysticism & Philosophy	3
PHI 3100	Augustine & Antiquity	3
PHI 3120	Augustine & Modernity	3
PHI 3410	Thomas Aquinas	3
PJ 2600	Catholic Social Teaching	3
PJ 2900	Ethical Issues in P & J	3
PJ 3400	War and Morality	3
PJ 4600	Global Poverty & Justice	3
PJ 5400	Ethics, Justice and the Family	3
PSC 3440	Politics and Religion	3
SOC 2600	Sociology of Religion	3
THE 3010	Mindfulness in Action	3

Theology and Religious Studies Minor

Chairperson: Peter Spitaler, Ph.D.
 Program Director: Mark Graham, Ph.D.
 Office Location: 203 Saint Augustine Center
 Telephone: 610-519-4730
[\[Website\]](#)

About

Theological and religious studies as conceived, studied, and advanced at Villanova are interdisciplinary and integrative. Students pursue their objectives from diverse theological and religious perspectives, places them in dialogue with each other, and integrate religious and theological knowledge with experience and other forms of knowing.

Our programs explore the intersections of Catholic theology, religion, and cultures(s) and prepare students for graduate studies and for careers in humanitarian, philanthropic or other non-profit, charitable organizations; and in religious organizations as campus, youth or parish minister, educator, catechist, retreat

worker, administrator, counselor, spiritual director or in one of the many other positions such organizations offer.

Type: Minor

MINOR (15 credits)

The minor is open to all students. Students can take the minor in conjunction with any other program in any Villanova College. Once the required coursework is completed, Villanova recognizes the minor at the time of graduation on the official transcript.

Program Notes:

- For the THL Elective: 3 credits may be taken from among the approved extra-departmental courses listed below the Required Minor Courses list. The TRS Director of Undergraduate Programs may approve additional courses (for example, a course taken overseas or particular themes or topic courses not listed explicitly in the University Catalog). Because such courses do not carry the Core Theology (CTHL) attribute, they will count toward the Major degree only with prior approval from the Director.
- Total number of elective courses from outside the TRS Department (including courses taken overseas) must not exceed three credit hours.

Required Minor Courses:

Item #	Title	Credits
THL 1000	Faith, Reason, and Culture	3
	THL Elective	3
	THL Elective	3
	THL Elective	3
	THL Elective	3
List of Approved Extra-Departmental Courses		

Category Descriptions

THL Elective

Credits: 3

Choose a course in theological and religious studies.

List of Approved Extra-Departmental Courses

Item #	Title	Credits
GIS 4275	Global Religions & the State	3
HIS 1060	Topics in Religion & Society	3
HIS 2280	Catholic Church in America	3
HIS 3018	Pagans, Jews, and Christians	3
HIS 4031	Islamic Civilization to 1800	3
HIS 4076	Jewish History	3
HUM 4000	Jews, Christians, Muslims: Dialog	3
PHI 2450	Catholic Social Thought	3
PHI 2900	Philosophy of Religion	3
PHI 2910	Mysticism & Philosophy	3
PHI 3100	Augustine & Antiquity	3
PHI 3120	Augustine & Modernity	3
PHI 3410	Thomas Aquinas	3
PJ 2600	Catholic Social Teaching	3
PJ 2900	Ethical Issues in P & J	3
PJ 3400	War and Morality	3
PJ 4600	Global Poverty & Justice	3
PJ 5400	Ethics, Justice and the Family	3
PSC 3440	Politics and Religion	3
SOC 2600	Sociology of Religion	3
THE 3010	Mindfulness in Action	3

Writing and Rhetoric

Writing and Rhetoric Minor

Program Director: Ellen Bonds, Ph.D.
Office Location: 453 Saint Augustine Center
Telephone: 610-519-4657
[\[Website\]](#)

About

As an interdisciplinary program with courses from the Departments of English and Communication, the Program in Writing and Rhetoric offers students opportunities to gain significant knowledge of the rhetorical framework constituting professional, aesthetic and everyday writing. The program will allow students who want to pursue study in writing and communication to do so in a focused and comprehensive way with examination of the theoretical, historical, and philosophical aspects of these disciplines.

Type: Minor

MINOR (18 credits)

Students must complete 18 credit hours, comprising 6 advanced courses numbered 2000 and above.

Program Notes:

- Also required: A Grammar, Style and Punctuation Exam by the end of their first semester of work towards the minor, students will have studied for and passed a self-administered WebCT exam covering principles of Standard Edited English, a style sheet as that of the Associated Press, and other rules of grammar, punctuation, and mechanics.

Required Minor Courses:

Item #	Title	Credits
	Writing Practice Elective	9
	Composition/Rhetorical/ Critical Theory Elective	6
	Upper-Level English Lit	3

Category Descriptions

Writing Practice Elective

Credits: 9

Choose 3 courses primarily in writing practice at the intermediate or advanced level:

- ENG 2045 Special Topics, when these courses are focused on critical theory.

Item #	Title	Credits
ENG 1842	Perspectives in Literature	3
ENG 2000	Adv Expository Writing	3
ENG 2003	Intro to Creative Writing	3
ENG 2005	Writing of Short Story	3
ENG 2006	The Writing of Poetry	3
ENG 2007	The Writing of Screenplays	3
ENG 2009	Writing the Traditional Novel	3
ENG 2011	Writing the Experimental Novel	3
ENG 2012	Advanced Creative Writing	3
ENG 2013	Writing of Memoir	3
ENG 2017	Writing Detective Fiction	3
ENG 2018	Nature Writing Workshop	3
ENG 2020	Journalism	3
ENG 2041	Travel Writing	3
ENG 2045	Sp Top in Writing & Rhetoric	3
ENG 2050	Writing for Magazines	3
ENG 2060	Desktop Publishing	3
COM 3303	Screenwriting	3
COM 3341	Gender and Film	3
COM 3341	Gender and Film	3
COM 3352	Media & Technology	3
COM 3353	Media & Politics	3
COM 3354	Media Criticism	3
COM 3360	Introduction to Journalism	3
COM 3361	Journalism Practices	3
COM 3363	Broadcast Journalism	3
COM 3365	Sports Journalism	3
COM 3366	Multimedia Journalism	3
COM 3367	Journalism Topics	3
COM 3390	Spec Top in Media & Film	3
COM 3403	Intercultural Communication	3
COM 3406	Gender & Communication	3
COM 3462	Public Relations Writing	3
COM 3464	Public Relations Campaigns	3
COM 4001	Qualitative Research in COM	3

Composition/Rhetorical/Critical Theory Elective

Credits: 6

Choose two courses in composition theory, rhetorical theory, critical theory or history of language/cultural texts:

- ENG 2045 Special Topics, when these courses are focused on critical theory.

Item #	Title	Credits
ENG 2043	Writing About US Pop Culture	3
ENG 2045	Sp Top in Writing & Rhetoric	3
ENG 2250	Ways of Reading:Lit Analysis	3
ENG 2800	Teaching Practicum	3
COM 2200	Theories of Rhetoric	3
COM 2280	Theories of Persuasion	3
COM 2300	Theories of Mass Communication	3
COM 2340	Theories of Visual Com & Cultu	3
COM 2440	Theories of Organizational Com	3
COM 3201	Rhetoric & Social Justice	3
COM 3202	Rhetoric, Identity & Conflict	3
COM 3203	Communication Law & Policy	3
COM 3204	Rhetoric and Democracy	3
COM 3207	African American Rhetoric	3
COM 3208	Rhetoric and Myth	3
COM 3290	Spec Top in Rhetoric & Perf	3
CST 2100	Intro. to Cultural Studies	3
PHI 2010	Logic & Critical Thinking	3
PHI 2170	Mass Media Ethics	3
PHI 2180	Computer Ethics	3
PHI 2710	Information Knowledge Inquiry	3
PHI 2760	Philosophy & Literature	3
PHI 3020	History of Ancient Philosophy	3
PHI 4140	Phil of Contemporary Music	3
PHI 4150	Philosophy & Film	3
PHI 4200	Philosophy of Language	3

Upper-Level English Lit

Credits: 3

Choose an upper level English literature course.

Writing and Rhetoric Concentration

Program Director: Ellen Bonds, Ph.D.

Office Location: 453 Saint Augustine Center

Telephone: 610-519-4657

[\[Website\]](#)

About

As an interdisciplinary program with courses from the Departments of English and Communication, the Program in Writing and Rhetoric offers students opportunities to gain significant knowledge of the rhetorical framework constituting professional, aesthetic and everyday writing. The program will allow students who want to pursue study in writing and communication to do so in a focused and comprehensive way with examination of the theoretical, historical, and philosophical aspects of these disciplines.

Type: Concentration

CONCENTRATION (24 credits)

In keeping with the English Department's focus on literary texts, the notion of rhetoric informing the Concentration includes textual analysis as well as the more traditional uses of the term, thus bringing the wisdom and imagination of literary discourse into the Concentration. Such a focus on literary texts also underscores the well-known correlation between reading well and writing well. Furthering the Communication Department's focus on orality and persuasion, the Concentration will allow students to develop rhetorically complex understandings of audiences and master of the skills necessary to adapt the written and oral messages for identified audiences.

Program Notes:

- Non-Credit bearing internships may also possibly fulfil the One Practicum Course requirement if they involve a substantial amount of writing. The internship must be approved by the Director of the Writing and Rhetoric Program.
- Students must have a 3.0 average or better to enroll in the Concentration. To successfully complete the Concentration, students must achieve a 3.0 average in their Concentration courses.

Required Concentration Courses:

Item #	Title	Credits
	Writing Practice Elective	9
	Composition/Rhetorical/ Critical Theory Elective	6
	Writing Practicum Elective	3
	Upper-Level English Lit	3
	Upper-Level English Lit	3

Category Descriptions

Writing Practice Elective

Credits: 9

Choose 3 courses primarily in writing practice at the intermediate or advanced level:

- ENG 2045 Special Topics, when these courses are focused on critical theory.

Item #	Title	Credits
ENG 1842	Perspectives in Literature	3
ENG 2000	Adv Expository Writing	3
ENG 2003	Intro to Creative Writing	3
ENG 2005	Writing of Short Story	3
ENG 2006	The Writing of Poetry	3
ENG 2007	The Writing of Screenplays	3
ENG 2009	Writing the Traditional Novel	3
ENG 2011	Writing the Experimental Novel	3
ENG 2012	Advanced Creative Writing	3
ENG 2013	Writing of Memoir	3
ENG 2017	Writing Detective Fiction	3
ENG 2018	Nature Writing Workshop	3
ENG 2020	Journalism	3
ENG 2041	Travel Writing	3
ENG 2045	Sp Top in Writing & Rhetoric	3
ENG 2050	Writing for Magazines	3
ENG 2060	Desktop Publishing	3
COM 3303	Screenwriting	3
COM 3341	Gender and Film	3
COM 3341	Gender and Film	3
COM 3352	Media & Technology	3
COM 3353	Media & Politics	3
COM 3354	Media Criticism	3
COM 3360	Introduction to Journalism	3
COM 3361	Journalism Practices	3
COM 3363	Broadcast Journalism	3
COM 3365	Sports Journalism	3
COM 3366	Multimedia Journalism	3
COM 3367	Journalism Topics	3
COM 3390	Spec Top in Media & Film	3
COM 3403	Intercultural Communication	3
COM 3406	Gender & Communication	3
COM 3462	Public Relations Writing	3
COM 3464	Public Relations Campaigns	3
COM 4001	Qualitative Research in COM	3

Composition/Rhetorical/Critical Theory Elective

Credits: 6

Choose two courses in composition theory, rhetorical theory, critical theory or history of language/cultural texts:

- ENG 2045 Special Topics, when these courses are focused on critical theory.

Item #	Title	Credits
ENG 2043	Writing About US Pop Culture	3
ENG 2045	Sp Top in Writing & Rhetoric	3
ENG 2250	Ways of Reading:Lit Analysis	3
ENG 2800	Teaching Practicum	3
COM 2200	Theories of Rhetoric	3
COM 2280	Theories of Persuasion	3
COM 2300	Theories of Mass Communication	3
COM 2340	Theories of Visual Com & Cultu	3
COM 2440	Theories of Organizational Com	3
COM 3201	Rhetoric & Social Justice	3
COM 3202	Rhetoric, Identity & Conflict	3
COM 3203	Communication Law & Policy	3
COM 3204	Rhetoric and Democracy	3
COM 3207	African American Rhetoric	3
COM 3208	Rhetoric and Myth	3
COM 3290	Spec Top in Rhetoric & Perf	3
CST 2100	Intro. to Cultural Studies	3
PHI 2010	Logic & Critical Thinking	3
PHI 2170	Mass Media Ethics	3
PHI 2180	Computer Ethics	3
PHI 2710	Information Knowledge Inquiry	3
PHI 2760	Philosophy & Literature	3
PHI 3020	History of Ancient Philosophy	3
PHI 4140	Phil of Contemporary Music	3
PHI 4150	Philosophy & Film	3
PHI 4200	Philosophy of Language	3

Writing Practicum Elective

Credits: 3

- PJ 4650: Service Learning Practicum, when the practicum involves a good deal of writing.

Item #	Title	Credits
ENG 2030	Tutoring Writers	3
ENG 2060	Desktop Publishing	3
ENG 2993	Internship	3
ENG 2996	Internship	6
COM 2993	Communication Internship	3
COM 2996	Communication Internship	6
PJ 4650	Service Learning Practicum	1

Upper-Level English Lit

Credits: 3

Choose an upper level English literature course.

Course Descriptions Accounting

ACC 1101: Prin of Financial Accounting

Understanding business by being able to understand the financial statements. Accounting concepts, transaction analysis, analytical procedures, valuation and allocation, revenue recognition and expense matching, and cash flow analysis - operating, investing, and financing. Includes appropriate use of technology.

Credits: 3

ACC 2020: Special Topics

Special accounting topics offered in lecture/seminar format. Permission of Department Chair.

Credits: 1

ACC 2310: Intermediate Accounting I

Intensive study and application of GAAP for asset valuation, income measurement, and financial statement presentation for business organizations, and the processes through which these principles evolve. Each topic under GAAP compared to IFRS counterpart. Coverage of topics essential to preparing, reading, understanding, interpreting and using financial statements. Extensive reliance on case method.

Credits: 3

Prerequisites:

VSB 2020 :Y and (VSB 2009 :Y or VSB 2010 or VSB 2030 and VSB 2040)

ACC 2320: Intermediate Accounting II

Continues the intensive study and application of GAAP for asset valuation, income measurement, and financial statement presentation begun in ACC 2310. Selected accounting and consulting issues. Correction of financial statements, income taxes, pensions, segment reporting, cash-flow disclosures, debt issuance and amortization, leases, and investments. As with ACC 2310, each topic under GAAP compared to IFRS counterpart.

Credits: 3

Prerequisites:

ACC 2310

ACC 2340: Accounting Information Systems

This course offers both a conceptual overview and hands-on experience with a variety of AIS related material. Topics covered include: Semantic modeling and event driven accounting information systems (AIS); development, documentation, control and audit of AIS, with particular reference to the COBIT framework; an overview of XBRL and its role in financial reporting; the use of database management software and accounting software in developing modern AIS.

Credits: 3

Prerequisites:

ACC 2310

ACC 2360: Federal Income Tax

An introduction to federal income taxation with primary emphasis on the tax implications of business transactions. Objectives of the course are to explore tax-policy issues and to develop a basic understanding of federal income tax laws, income tax planning, and the impact of taxes on business decisions. Restricted to Accounting majors and minors with Junior and Senior standing.

Credits: 3

Prerequisites:

ACC 2310 :Y and (VSB 2009 or VSB 2010 or VSB 2030 and VSB 2040)

ACC 2410: Accounting for Real Estate

Accounting for both private and public real estate entities, acquisitions, development, operations, dispositions, impairments and fair value implications of real estate transactions and ownership.

Credits: 3

Prerequisites:

ACC 2310

ACC 2420: International Accounting

Examines a variety of international accounting issues, including international financial accounting standards; consolidation of international operations; auditing standards and procedures; managerial accounting systems for planning, control, and performance measurement; political, legal, and cultural influences on accounting and transfer pricing. This course can be applied toward the international course requirement and in VSB's Master of Accountancy Program.

Credits: 3

Prerequisites:

ACC 2310

ACC 2430: Auditing

Auditing standards employed in verification of and reporting on financial statements, evaluation of controls, statistical sampling, substantive testing, legal liability and professional responsibilities, and professional standards of ethics. Includes written and oral group case assignments and application of computer technology. Restricted to Accounting majors and minors.

Credits: 3

Prerequisites:

ACC 2310 and ACC 2320 :Y

ACC 2435: Advanced Auditing

Increased regulatory requirements, globalization, and advances in data analytics are driving substantial changes in the complexity and challenges facing today's auditors. Auditors must understand and respond to such changes in order to fulfill their responsibilities as stewards of public trust. This course is designed to immerse students in emerging practice issues, with a focus on the exploration of data analytics tools, current regulatory themes, relevant audit research, and practitioner insights in the public company audit context.

Credits: 3

Prerequisites:

ACC 2430

ACC 2450: Advanced Accounting

Theories and techniques used for specialized accounting problems, with emphasis on business combinations, consolidations, multinational corporations, not-for-profit entities partnerships, and issues related to solvency and liquidation and financial fraud. Restricted to Accounting majors and minors.

Credits: 3

Prerequisites:

ACC 2310 and ACC 2320 :Y

ACC 2470: Cost Accounting

Introduction to modern cost accounting systems and the accounting information needs of managers, including: costing approaches (job-order process, standard, and absorption); cost behavior analysis; differential costs for decision-making; activity-based costing (ABC) and activity-based management (ABM); performance evaluation; and, issues related to quality. Group work and case analysis (both oral and written) required. Restricted to Accounting majors and minors with Senior standing.

Credits: 3

Prerequisites:

ACC 2310 and VSB 3006

ACC 2480: Advanced Taxes

Advanced federal income tax topics and issues pertaining to individuals, partnerships, corporations, and estates and trusts. Emphasis on tax planning and tax research.

Credits: 3

Prerequisites:

ACC 2310 and ACC 2360

ACC 3350: Fraud Examination

The focus of the course is on the pervasiveness and causes of fraud, methods for investigating fraud within organizations, and what organizations can do to prevent and detect fraud. The successful completion of the course provides a basic understanding of various types of fraud, the fraud triangle, fraud prevention and internal control, fraud detection and investigation techniques, financial statement fraud, fraud against organizations, bankruptcy and divorce fraud, fraud in e-commerce, and the legal elements and resolution of fraud.

Credits: 3

Prerequisites:

ACC 2430 :Y

ACC 3430: Accounting Internship

Employment with approved accounting firms and business organizations; varied work experience with appropriate training, instruction, and supervision. Paper required. Restricted to Accounting majors and minors with junior or senior standing, a minimum GPA of 2.5, and approval of the Accounting Internship Director. Satisfactory/Unsatisfactory only.

Credits: 3

ACC 3460: Accounting Internship-Spring

Full-time employment with approved accounting firm or other business organizations; varied work experience with appropriate training, instruction, and supervision. Does not fulfill major requirement; satisfies one free elective only. Permission of Accounting Department.

Credits: 6

ACC 3470: Accounting Co-Op

Full-time employment with an approved firm in the area of Accounting where experience is gained through appropriate training, instruction, and supervision. Course does not fulfill the requirements of the major. Prerequisite: Accounting major with junior status; minimum GPA requirements will vary. Approval of Accounting Department Chair required.

Credits: 6**Prerequisites:**

Accounting major with junior status; minimum GPA requirements will vary. Approval of Accounting Department Chair required.

ACC 3500: Ind Study:Accounting**Credits: 3**

Aerospace Studies (Air Force ROTC)

AER 1011: Foundation of US Air Force I

The military as a profession, including: civilian control of U.S. Armed Forces, functions and organization of the U.S. Air Force, organization and operations of U.S. strategic offensive forces.

Credits: 1**AER 1012: Leadership Lab****Credits: 0****AER 1021: Foundation of US Air Force II**

The U.S. general purpose and defensive forces including: Mission and organization of the major U.S. Air Force Commands and separate operating agencies, major functions and conduct of joint service military operations. Air defense, detection systems, close air support, and air superiority.

Credits: 1**AER 1022: Leadership Lab****Credits: 0****AER 1031: Evol of USAF Air Space Power I**

Aerospace power from balloons and dirigibles through the employment of U.S. air power in World War II. The military theory of aerospace power employment.

Credits: 1**AER 1041: Evol of USAF Air Space Power II**

Employment of U.S. air power in the Korean Conflict, relief missions and civic action programs in the later 1960s, and the war in Southeast Asia. The military theory of aerospace force employment.

Credits: 1**AER 2011: Air Force Leadership Studies I**

Managerial theory, concepts and techniques of decision-making, and the basic functions of management with particular emphasis on applications for Air Force officers.

Credits: 3**AER 2021: Air Force Leadership Studies II**

An interdisciplinary approach to leadership which includes study of human behavior and relationships, and motivation.

Credits: 3**AER 2031: National Security Affairs I**

The Armed forces as an integral and inseparable element of society. Emphasis on the overall national security process and the factors which comprise it. The impact of a nation's military, economic, psychological, and technical components on national security policy. Major geopolitical hotspots and the origin of arms races.

Credits: 3**AER 2041: National Security Affairs II**

Civilian control of the military, conflict control, military professionalism, and military justice. Emphasis on the reciprocal responsibilities of civilians and the military in a democratic society.

Credits: 3

Africana Studies

AFR 3000: Constructs of Blackness

Interdisciplinary examination of ideas of black identity, culture, and politics. Course covers African and African Diaspora experience in society, history, literature, health, and others in global and national contexts. Team taught

Credits: 3**AFR 3100/3101/3102: Special Topics**

Specific topics vary each semester.

Credits: 3**AFR 3101: Special Topics****Credits: 3****AFR 3102: Special Topics****Credits: 3****AFR 4000: Capstone Seminar****Credits: 3**

AFR 5000: Ind. Study Africana Studies

Permission of Program Director. Individual students with specific interest work on a tutorial basis with an appropriate professor.

Credits: 3

Prerequisites:

Permission of Program Director.

American Sign Language

ASL 1111: Intro to Amer Sign Language I

Functional use of American Sign Language for students with no prior knowledge of ASL and Deaf Culture.

Credits: 3

ASL 1112: Intro to American Sign Lang II

Continuation of ASL I with increase understanding and knowledge of the ASL through description, classified and facial. Each unit has student/instructor interaction and information on grammar, comprehension and Deaf Culture.

Credits: 3

Prerequisites:

ASL 1111

Arab and Islamic Studies

AIS 1111: Basic Arabic

Credits: 3

AIS 1112: Basic Arabic II

Credits: 3

AIS 3000: Special Topics

Credits: 3

AIS 4100: AIS Seminar

Credits: 3

Arabic Language

ARB 1111: Basic Arabic I

Functional use of Modern Standard Arabic for students with no prior knowledge of Arabic. Recitations, readings and oral drills.

Credits: 6

ARB 1112: Basic Arabic II

Functional use of Modern Standard Arabic for students with no prior knowledge of Arabic. Recitations, readings and oral drills, supplementary language laboratory work.

Prerequisites: ARB 1111 or equivalent or permission of instructor.

Credits: 6

Prerequisites:

ARB 1111 or equivalent or permission of instructor.

ARB 1121: Intermediate Arabic I

Review of grammar and vocabulary. Recitations, readings and oral drills. Supplementary language laboratory work. Prerequisites: ARB 1111 and 1112 or equivalent or permission of instructor.

Credits: 5

Prerequisites:

ARB 1111 and 1112 or equivalent or permission of instructor.

ARB 1122: Intermediate Arabic II

Review of grammar and vocabulary. Recitations, readings and oral drills. Supplementary language laboratory work. Prerequisites: ARB 1111 and 1112 and 1121 or equivalent or permission of instructor.

Credits: 5

Prerequisites:

ARB 1111 and 1112 and 1121 or equivalent or permission of instructor.

ARB 1123: Intermediate Arabic I

Credits: 3

ARB 1124: Intermediate Arabic II

Credits: 3

ARB 1125: Intermediate Arabic III

Credits: 3

ARB 1131: Intensive Adv Arabic I

Advanced communication skills including reading and discussing topics on current events. Supplementary language laboratory work. ARB 1125 or equivalent or permission of instructor.

Credits: 3

ARB 1132: Intensive Adv Arabic II

Advanced communication skills including reading and discussing topics on current events. Supplementary language laboratory work. ARB 1131 or equivalent or permission of instructor.

Credits: 3

ARB 1133: Conversational Arabic I

Intensive practice in conversation with emphasis on developing advance language skills in Arabic. ARB 1132 or equivalent or permission of instructor.

Credits: 3

ARB 1134: Conversational Arabic II

Intensive practice in conversation with emphasis on developing advance language skills in Arabic. ARB 1133 or equivalent or permission of instructor.

Credits: 3

ARB 1141: Intro to Colloquial Arabic

Training in the use of colloquial Egyptian Arabic, focusing on listening and speaking skills. Supplementary laboratory work and drills.

Credits: 3

ARB 2100: Arabic Lit in English Trans**Credits:** 3**ARB 2142: Arab Culture Thru Film & Text**

Arab culture and civilization with emphasis on the Arab people's contribution to the arts and sciences.

Credits: 3**ARB 2143: Arab Culinary Culture**

Examines the development and fundamental characteristics of Arab culinary culture.

Presenting Arab cuisine elements absorbed from the cultures with which the early Arabs mixed when they migrated from the Arabian Peninsula and settled into the surrounding countries.

Credits: 3**ARB 3412: Special Topics**

Advanced study of topics of special interest in Arabic literary and/or cultural studies. May be repeated for credit if topic changes. Fulfills core requirements for Arabic minor.

Credits: 3**ARB 5900: ARB: Independent Study**

Supervised study, activity or research. May be taken more than once. Prior approval of chair and instructor.

Credits: 3

Art History

AAH 1101: His West Art: Ancient-Med

Art & architecture in Europe, the Mediterranean (esp. Greece & Rome,) & the Middle East in prehistoric, ancient, & medieval periods, with introduction to issues & themes of art history.

Credits: 3**AAH 1102: His West Art: Renaiss - Cont**

The history of the visual arts in the West from the Early Renaissance to the present.

Credits: 3**AAH 1103: Visual Arts in US 1607-1876**

A survey of painting, sculpture, and architecture created in the present-day United States, from the founding of Jamestown to the great Philadelphia Centennial Exhibition.

Credits: 3**AAH 1104: Visual Arts in US 1877-Present**

A study of painting, sculpture, and architecture done in the United States since the Philadelphia Centennial exhibition from Thomas Eakins and Gross to great contemporary artists such as Andrew Wyeth, Frank Gehry, and Jeff Koons.

Credits: 3**AAH 1903: Internship Elective**

An internship in an elective area of concentration.

Credits: 3**AAH 2000: Ancient Art**

The artistic contributions of the ancient societies of Egypt, the Aegean, Greece and Rome, placed within appropriate cultural contexts.

Credits: 3**AAH 2001: Medieval Art**

European & Mediterranean art & architecture from the late Roman Empire to the 14th c. with emphasis on the social, religious & political contexts of visual production.

Credits: 3**AAH 2002: Early Renaissance Art in Italy**

Italian art & architecture from 1300-1480, investigation of the political, religious & social contexts of the visual productions of artists such as Giotto, Donatello, Masaccio, Mantegna & Botticelli.

Credits: 3**AAH 2003: Age of Rembrandt & Bernini**

Major works of European painting, sculpture, and architecture from the seventeenth through mid-eighteenth centuries. Special emphasis on how historical events affected the production of artistic monuments.

Credits: 3**AAH 2004: Modern Art**

An examination of the visual arts since 1900 that emphasizes their historical roots and present social significance.

Credits: 3**AAH 2005: Modern Architecture**

Notable buildings and architects in the last hundred years: Frank Lloyd Wright, Louis Sullivan, Antoni Gaudi, LeCorbusier, Mies van der Rohe, Robert Venturi, I.M. Pei, Walter Gropius, Philip Johnson, Frank Gehry. Emphasis on the influence of modern technology on the practice of architecture.

Credits: 3**AAH 2007: Hist. of Western Architecture**

Development of architectural styles from the Gothic to the contemporary, with emphasis on the modern period.

Credits: 3

AAH 2009: Contemporary Art

Artistic movements and artists around the world from the 1960s to the present; Pop Art, Minimalism, Neo-expressionism, Arte Povera, Graffiti Art, and Performance Art, from Warhol to Wyeth to Haring and Koons.

Credits: 3

AAH 2012: High Renaissance Art in Italy

Italian art & architecture from 1480 to 1550. Investigation of stylistic, political & social contexts of art. The idea of Mannerism & artists such as Leonardo, Michelangelo, Raphael & Titian.

Credits: 3

AAH 2993: Internship

Credits: 3

AAH 3001: Women in Art

Themes and images of women in the visual arts as an expression of the needs, desires and attitudes of society; and a study of women artists from ancient times to the present, with regard to how being female may, or may not, have affected their work.

Credits: 3

AAH 3002: Art of Philadelphia

Philadelphia's unique contribution to American painting, sculpture, and architecture, from the early Swedish and Welsh settlers of the Delaware Valley, to Andrew Wyeth and Robert Venturi.

Credits: 3

AAH 3003: Romantic to Post-Impress

Nineteenth century painting and sculpture in Europe and America, focusing on Cezanne, Courbet, Delacroix, Goya, Eakins, Homer, Manet, Monet, Rodin and West.

Credits: 3

AAH 3005: Gender Sexuality Visl Culture

Construction of gender and sexuality as visualized through art and various forms of visual culture. Topics include the gaze, feminist art, gendered construction of fashion, queer identities and art, and bodies and censorship.

Credits: 3

AAH 3006: History of Photography

Credits: 3

AAH 3007: The Art of Ireland

The visual arts in Ireland concentrating on the Golden Age from the 5th to the 9th Century: architecture of the early monastic settlements, manuscript illumination and its influence, and the cultural impact of the Irish forms of monasticism.

Credits: 3

AAH 3009: Topics in Art History

Selected themes or periods in the history of art examined in depth.

Credits: 3

AAH 3020: Topics in Archeology

Credits: 3

AAH 4004: Spec Top: Renais-Baroque

Credits: 3

AAH 4005: Picasso and Friends

Seminar on the 20th century's most famous artist, with discussion of friends such as Braque, Apollinaire, Gertrude Stein, and Erik Satie.

Credits: 3

Prerequisites:

AAH 2004 :D-

AAH 4007: Special Topics

The course will consist of two 50 min lectures (MF) and a Wednesday evening movie screening. There are no prerequisites, and the course will count for Fine Arts credit. Students will take both a midterm and final and write short movie review/responses.

Credits: 3

AAH 4010: Interpreting Art

An introduction to the theories and criticism relevant for the study and interpretation of art and art history such as feminism, psychoanalysis, structuralism, deconstruction, post-colonialism, and postmodernism. Prerequisite: At least one prior Art History course.

Credits: 3

Prerequisites:

At least one prior Art History course.

AAH 5010: Senior Research Seminar

Art History capstone writing and research seminar, which builds on AAH-4010 Interpreting Art. Students practice advanced art historical research and write culminating research project.

Credits: 3

Prerequisites:

AAH 4010

AAH 5515: Independent Research

An intensive research project under individual direction. Permission of chairperson required.

Credits: 3

Prerequisites:

Permission of chairperson required.

Astrophysics and Planetary Science

AST 1072: Birth & Death of Stars

The life cycles of the stars from birth in dark, dense interstellar clouds to death in nature's most violent cataclysms. Topics include: formation of the chemical elements; effects of nearby supernovae; future of the Sun; ultimate fate of the Earth.

Credits: 3

AST 1074: Planetary Skies and Landscapes

A study of the surfaces and atmospheres of other worlds and how they compare to Earth. Physical processes which shape planetary interiors and surfaces; atmosphere and climate evolution; formation of the Solar System; properties of "solar systems" around other stars.

Credits: 3

AST 1076: How Old is the Universe?

Explores one of the most basic questions in modern astronomy. Evidence from the Earth, Moon, and meteorites will be examined, along with that from stars, white dwarfs, and the Universe itself. Includes an overview of the formation and evolution of the Universe.

Credits: 3

AST 1078: Life in the Universe

Discusses Earthly "life as we know it," then considers the possibilities of biological life elsewhere in the Solar System - and beyond. Describes the general conditions favoring planetary habitability, planetary detection techniques, and the likelihood of finding intelligent extraterrestrial life.

Credits: 3

AST 2120: Sun and Stars

A technical study of the Sun and other stars; their internal constitutions and atmospheres, life cycles and evolutionary processes, memberships in groups, the radiations they produce, and the manner in which astronomers quantify their characteristics.

Credits: 3

Prerequisites:

MAT 1310 or MAT 1320 or MAT 1330 or MAT 1400 or MAT 1500

AST 2121: Solar System Astronomy

The science of the solar system. Early ideas of the nature of the solar system; the dynamics and compositions of the planets; atmospheric evolution and maintenance. How comets and meteorites reveal the structures of the primitive solar system.

Credits: 3

Prerequisites:

MAT 1310 or MAT 1320 or MAT 1330 or MAT 1400 or MAT 1500

AST 2122: Understanding Our Universe

A study of the formation and evolution of the Universe. Emphasis on the observational evidence leading to the Big Bang Theory, inflation, dark matter, and dark energy. Current model of the universe described and evidence for the "multiverse" discussed.

Credits: 3

AST 2123: Astrodynamics: Kepler & Beyond

Intermediate Newtonian dynamics: description of motion under forces as functions of position, time, velocity. Motion in one and three dimensions, the Kepler problem, gravitation, and the restricted three-body problem.

Credits: 3

Prerequisites:

MAT 1310 or MAT 1320 or MAT 1330 or MAT 1400 or MAT 1500

AST 2133: Observational Lab I

Astronomical instruments, methods of observing, reduction of observations, and discussion of astronomical data. Observations include CCD imaging, spectroscopy, and photoelectric photometry using the observatory reflector and Schmidt telescopes. Two hours per week in the laboratory in addition to the observing time necessary to complete the assigned projects. Corerequisite or prerequisite: AST 2120.

Credits: 2

Co-Requisites:

AST 2120.

AST 2134: Observational Lab II

Continuation of AST 2122.

Credits: 2

Prerequisites:

AST 2133 :D-

AST 3141: Galactic Astronomy

The nature, distribution, and motions of the constituents of the Galaxy; the major star system in which our Sun is located the stars, the gas and dust, star clusters, etc.; stellar distance determination, distribution of stars and gas, stellar kinematics, galactic dynamics, galactic radio emission, cosmic rays, and evolution of galaxies.

Prerequisite: one year of mathematics or physics and either AST 2120 or AST 2122.

Credits: 3

Prerequisites:

one year of mathematics or physics and either AST 2120 or AST 2122.

AST 3142: Intro to Astrophysics

Theories of stellar atmospheres, line-broadening and formation, radiative transfer, theoretical spectra, and the theory of stellar interiors are covered. Fundamental stellar timescales, thermonuclear reactions, evolutionary models, stellar pulsations, novae and supernovae.

Credits: 3

Prerequisites:

AST 2120 :D- or AST 2122 :D- and PHY 2410 :D-

AST 3143: Astrobiology, Planets, & Life

Are we alone? Does life exist elsewhere in the Universe? Focus on the origin of life on Earth and the possibility of life in the Solar System and beyond. Topics include: Planetary-Habitability, Exoplanets, Astro/Exobiology, Extremophiles, Techniques, and searches for Extraterrestrial-Intelligence.

Credits: 3

AST 3148: The Prncpl of Scientific Model

Discusses the principle aspects of computational modeling in science, with stress on interdisciplinarity and synergy with big data science. Students gain hands-on experience in solving prototypical scientific problems using modern computational techniques.

Credits: 3

AST 4121: Undergrad Research I

Student participation in departmental or independent research under faculty supervision; frequent conferences on literature search, research techniques, experimental procedures and results.

Credits: 3

AST 4122: Undergrad Research II

Continuation of AST 4121.

Credits: 3

AST 5900: Independent Study

Supervised study, activity or research in a selected area of astronomy & astrophysics. May be repeated for credit if the topics are different. Prior approval of chair and instructor.

Credits: 3

AST 5930: Topics in Astron & Astrophysics

Lecture presentation of selected topics in astronomy & astrophysics. May be repeated for credit if topics are different.

Credits: 3

Prerequisites:

Prerequisites may be imposed depending on the topics.

Biology

BIO 1057: Intro to Occupational Therapy

Provide an understanding of the practice of Occupational Therapy through observation & readings in an independent study format.

Credits: 2

BIO 1101: Biology

General principles, cells and energy, hereditary mechanisms, survey of organisms, evolution and ecological principles. For non-biologists who do not plan a more extensive study of biology. Open to VSB majors.

Credits: 3

BIO 1181: Microbiology and Genetics

The structure of prokaryotic and eukaryotic cells; microbial classification; control of microbial growth, principles of disease; pathogenic mechanisms; host defenses. Eukaryotic and prokaryotic gene organization and function; analysis of patterns of inheritance; recombinant DNA technology; linkage and genetic maps, genetic variation in human populations; inheritance, diagnosis and treatment of metabolic disease; cytogenetics; immunogenetics; cancer; developmental genetics. Open to Nursing majors.

Credits: 3

BIO 1205: Human Anatomy & Physiology I

Basic concepts and laboratory studies of anatomy and physiology with presentation of overall morphology and function of the integumentary, skeletal, muscular, nervous, and endocrine systems. Designed primarily for Nursing majors and students interested in allied health professions.

Credits: 4

BIO 1206: Human Anatomy & Physiology II

Continuation of Biology 1205. The structure and function of the cardiovascular, lymphatic, respiratory, digestive, urinary, reproductive, and immune systems. Designed primarily for Nursing majors and students interested in allied health professions.

Credits: 4

BIO 1903: Internship Elective

Open to BIO and BSC majors.

Credits: 3

Prerequisites:

(BIO 2105 :Y :D- or HON 1075 :Y :D-) and (BIO 2106 :Y :D- or HON 1076 :Y :D-)

BIO 1906: Internship Elective

Open to BIO and BSC majors.

Credits: 6

Prerequisites:

(BIO 2105 :Y :D- or HON 1075 :Y :D-) and (BIO 2106 :Y :D- or HON 1076 :Y :D-)

BIO 1950: TOPIC: Elective in Biology

Selected topics in biological and interdisciplinary studies. Will not count for credit for the biology major.

Credits: 3

BIO 1955: Lec&Lab Free Elective in Bio

Selected topics in biological and interdisciplinary studies with lectures and accompanying lab. Will not count for biology credit for the major or minor.

Credits: 4

BIO 2101: General Biology I Lecture

The lecture portion of Bio 2105. An introduction to biological organization stressing the molecular and cellular aspects of living organisms. The chemistry of life, the cell, the gene, and mechanisms of evolution.

Credits: 3

BIO 2105: General Biology I

An introduction to biological organization stressing the molecular and cellular aspects of living organisms. The chemistry of life, the cell, the gene, and mechanisms of evolution.

Credits: 4

BIO 2106: General Biology II

The origin of life and diversity of organisms seen in five biological kingdoms. Topics include nutrient acquisition, digestion, circulation, response to stimuli, movement, reproduction, behavior, and ecology.

Credits: 4

Prerequisites:

BIO 2105 :D- or HON 1075 :D-

BIO 2993: Internship

Open to BIO and BSC majors.

Credits: 3

Prerequisites:

(BIO 2105 :Y :D- or HON 1705 :Y :D-) and (BIO 2106 :Y :D- or HON 1076 :Y :D-)

BIO 2996: Internship

Open to BIO and BSC majors.

Credits: 6

Prerequisites:

(BIO 2105 :Y :D- or HON 1705 :Y :D-) and (BIO 2106 :Y :D- or HON 1076 :Y :D-)

BIO 3015: Animal Behavior

Lecture topics cover communication, foraging, territoriality, mating systems, parental behavior, and social organization. Laboratories include collection, statistical analysis, and interpretation of behavioral data, culminating in a small-group independent research project.

Credits: 4

Prerequisites:

(BIO 2105 or HON 1075) and (BIO 2106 or HON 1076)

BIO 3055: Animal Physiology

The basic principles underlying how animals function and the mechanisms used to solve physiological problems.

Credits: 4

Prerequisites:

(BIO 2105 :D- or HON 1075 :D-) and (BIO 2106 :D- or HON 1076 :D-)

BIO 3105: Biostatistics & Exp Design

The conceptualization of experimental design, hypothesis testing, execution of statistical analyses, written and oral expression of statistical results, and effective graphical presentation of quantitative data.

Credits: 4

Prerequisites:

(BIO 2105 or HON 1075) and (BIO 2106 or HON 1076)

BIO 3155: Comparative Anatomy

Evolution of homologous structures of vertebrates including functional considerations. Laboratory includes systematic and topical dissection of representative chordates and demonstrations of living organisms' functions.

Credits: 4

Prerequisites:

(BIO 2105 :D- or HON 1075 :D-) and (BIO 2106 :D- or HON 1076 :D-)

BIO 3225: Imaging Technology

Introduction to imaging technologies, including light and fluorescent microscopy and scanning and transmission electron microscopy. Course covers both theoretical and applied microscopy.

Credits: 4

Prerequisites:

(BIO 2105 :D- or HON 1075 :D-) and (BIO 2106 :D- or HON 1076 :D-)

BIO 3255: Evolutionary Ecology

Factors affecting the distribution, abundance, and interactions of organisms. Climate patterns, biomes, physiological adaptation, behavioral ecology, population dynamics, species interactions, biodiversity, and conservation ecology. Emphasis on community level of organization and below; complements BIO 3385 Global Change Ecology. Hypothesis testing using statistical analysis of data.

Credits: 4

Prerequisites:

(BIO 2105 :D- or HON 1075 :D-) and (BIO 2106 :D- or HON 1076 :D-)

BIO 3351: Genetics

Transmission, molecular, evolutionary and population genetics, gene regulation and genomics. Heredity; how genetic information is stored, regulated and transferred; how genes interact and relate to phenotype. Tutorials develop problem-solving and bioinformatics skills, and provide a forum for discussion. Chemistry pre-requisites may be taken concurrently.

Credits: 4

Prerequisites:

(BIO 2105 or HON 1075) and (CHM 1151 and CHM 1103) or (CHM 1311 and CHM 1301)

BIO 3385: Global Change Ecology

Roles of ecology in documenting, responding, feeding back to, and mitigating human-caused changes to Earth's chemistry, geography and climate. Laboratories include ecological techniques, such as carbon flux measurements, and independent research projects. Emphasis on ecosystem-level processes with global consequences; complements BIO 3255 Evolutionary Ecology.

Credits: 4

Prerequisites:

BIO 2105 and BIO 2106

BIO 3405: Higher Vertebrates

Evolutionary history, diversification and basic biology of birds and mammals: ecological and physiological adaptations, reproductive biology, social behavior, population ecology, life history strategies, taxonomy and identification. Field trips.

Credits: 4

Prerequisites:

(BIO 2105 :D- or HON 1075 :D-) and (BIO 2106 :D- or HON 1076 :D-)

BIO 3455: Histology

The microscopic study and demonstration of cells, tissues and organ systems of the mammalian body.

Credits: 4

Prerequisites:

(BIO 2105 :D- or HON 1075 :D-) and (BIO 2106 :D- or HON 1076 :D-)

BIO 3485: Marine Biology

An introduction to chemical, physical and geological oceanography; the biology and ecology of marine organisms (Plankton, seaweeds, invertebrates, fishes, sea birds, marine mammals); and the comparative ecology of marine communities and ecosystems (estuaries, rocky intertidal, kelp forests, coral reefs, the deep sea and hydrothermal vents).

Credits: 4

Prerequisites:

(BIO 2105 or HON 1075) and (BIO 2106 or HON 1076)

BIO 3505: Invertebrate Zoology

Credits: 4

BIO 3525: Entomology

Lecture includes anatomy, sensory systems, physiological adaptations, reproductive biology, social behavior and interactions with humans. Laboratory includes functional morphology, ecology and taxonomy of preserved and collected specimens. Complements Invertebrate Zoology, which covers freshwater and marine invertebrates.

Credits: 4

Prerequisites:

BIO 2105 and BIO 2106

BIO 3555: Lower Vertebrates

The biology of fishes, amphibians and reptiles: systematic and morphological diversity, physiological, reproductive and behavioral adaptations, ecology, and evolution. Required field trips to representative local habitats.

Credits: 4

Prerequisites:

(BIO 2105 :D- or HON 1075 :D-) and (BIO 2106 :D- or HON 1076 :D-)

BIO 3595: General Microbiology

Bacteria, viruses, eukaryotic microbes, immune function. Microbes in air, water, soil: interactions with plants and animals. Agricultural, commercial, industrial, and medical applications. Laboratory studies in growth and analysis of selected organisms/viruses.

Credits: 4

Prerequisites:

(BIO 2105 :D- or HON 1075 :D-)

BIO 3661: Environment and Human Health

Presentation and discussion of scientific aspects of topics relating to the environment and human health. Specific topics covered vary, but could include biodiversity and health, ecosystem services, infectious diseases, climate change, endocrine disruption, food production (including GMOs), and urban ecology.

Credits: 3

Prerequisites:

(BIO 2105 and BIO 2106) or (GEV 1050 and GEV 1051)

BIO 3755: Parasitology

Credits: 4

BIO 3801: Plant Physiology

Credits: 2

BIO 3802: Plant Physiology Lab

Credits: 2

BIO 3905: Vascular Plants

Organization of the vascular plant body, plant reproduction and development, systematic and environmental considerations, tissue culture and hormonal regulation.

Credits: 4

Prerequisites:

(BIO 2105 :D- or HON 1075 :D-) and (BIO 2106 :D- or HON 1076 :D-)

BIO 3950: Special Topics in Biology

Coverage of current topics in biology. Topics will be announced on a semester-by-semester basis. Specific information available in the departmental office.

Credits: 3

Prerequisites:

BIO 2105 and BIO 2106

BIO 3952: Special Topics in Biology LAB

One credit lab in Biology. Topic to be determined by term.

Credits: 1

Prerequisites:

BIO 2105 and BIO 2106

BIO 3955: Lec+Lab in Topics in Biology

Coverage of current topics in biology with lectures and accompanying lab. Topics will be announced on a semester-by-semester basis. Specific information available in the departmental office.

Credits: 4

Prerequisites:

BIO 2105 and BIO 2106

BIO 4105: Medical Microbiology

In-depth study of medical microbes including bacteria, viruses, fungi, parasites. Discussion of pathogenesis, disease diagnosis, vaccine design, microbe hunting. Case studies presented. Lab provides hands-on microbiology including diagnostics, horizontal gene transfer, and tissue culture assays.

Credits: 4

Prerequisites:

BIO 3595 :D- or BIO 3351 or BIO 3755

BIO 4205: Cell Biology

The mechanisms of cell signaling, regulation of growth and division, adhesion, movement, macromolecular biosynthesis, processing and trafficking. Important experimental techniques and strategies for study of the eukaryotic cell.

Credits: 4

Prerequisites:

BIO 3351 :D- and CHM 2212 :Y :D-

BIO 4251: Endocrine Physiol/ Pharmacology

Mechanisms of endocrine control of growth, metabolism, reproduction, adaptation, and behavior. The endocrine glands.

Credits: 3

Prerequisites:

BIO 3055 :D-

BIO 4252: Endocrine Physiol/ Pharmacology

Laboratory experience in endocrinology, demonstrative and analytical.

Credits: 1

Prerequisites:

BIO 3055 :D-

Co-Requisites:

BIO 4251

BIO 4285: Developmental Biology

Mechanisms and patterns of vertebrate embryo development from primordial germ cells to formation of organ systems. Lectures on, and laboratory work with living embryos; microscopic study of prepared embryos; and individual research projects.

Credits: 4

Prerequisites:

BIO 3351 :D-

BIO 4305: Evolution

Process and pattern from micro- and macro-evolutionary perspectives. Evolutionary genetics, natural selection, speciation, macroevolutionary trends, and extinctions. Field, laboratory, and computer approaches.

Credits: 4

Prerequisites:

BIO 3351 :D-

BIO 4331: Biology of Cancer

Coverage of causes, genetics, clinical aspects, and cell biology of cancer from preneoplastic state to invasive metastasis. Includes diagnosis, therapeutics, treatment, and prevention. Coursework in cell and/or molecular biology preferred.

Credits: 3

Prerequisites:

BIO 3351

BIO 4355: Experimental Genetics

Laboratory exploration and discussion of topics in bacterial, developmental, molecular, population and transmission genetics. Readings in the primary literature are stressed.

Credits: 4

Prerequisites:

BIO 3351 :D-

BIO 4451: Field Ecol and Evol

Advanced study of organisms and ecosystems of a particular region (location varies; has included Florida, Puerto Rico, Nova Scotia). General principles explored using examples from focal area: historical and ecological biogeography, habitat patterns, biotic and abiotic interaction, evolutionary processes, and conservation problems.

Credits: 2

Prerequisites:

BIO 3012 :D- or BIO 3255 :D- or BIO 4305 :D- or BIO 3505 :D- or BIO 3555 :D- or BIO 3905 :D- or BIO 4485 :D- or BIO 3505 :D-

BIO 4452: Field Ecol and Evol Lab

Field study of organisms and ecosystems of a focal region. Trip lasting 15-20 days usually in late May to geographical area covered in BIO 4451, with focus on local habitats and conservations projects, field identification, group exercises, and independent research projects. Costs to students and timing vary with site chosen. (2 cr) Sem 2, even year.

Credits: 2

Prerequisites:

BIO 3012 :D- or BIO 3255 :D- or BIO 4305 :D- and BIO 4451 :Y :D-

BIO 4505: Molecular Biology

DNA structure, replication, recombination, mutagenesis and repair, transcription, RNA processing, translation and the genetic code, control of gene expression, eukaryotic genome structure. Molecular aspects of immunity, cancer, and AIDS. Laboratory exercises in gene cloning and analysis.

Credits: 4

Prerequisites:

BIO 3351

Minimum Grade: D-

Co-Requisites:

CHM 2212

BIO 4605: Neurobiology

The physiology of the nervous system using vertebrates and invertebrates. The function of nerve cells, synapses, sensory, motor, behavior and learning.

Credits: 4

Prerequisites:

BIO 3055 :D-

BIO 4801: Conservation Biology

Scope of global biodiversity crisis and causes of endangerment. Ecology of rare and declining species. Biological aspects of species, community, and ecosystem management. Scientific foundation of conservation policy development and implementation.

Credits: 3

Prerequisites:

BIO 3255

BIO 4940: Topics in Biology

Current topics in biology. Topics will be announced on a semester-by-semester basis. Typically has a course at the 3000-level as a prerequisite. Specific information will be available in the department office.

Credits: 2

Prerequisites:

BIO 2105 and BIO 2106

BIO 4950: Advanced Topics in Biology

Coverage of current topics in biology. Topics will be announced on a semester-by-semester basis. Typically has a course at the 3000-level as a prerequisite. Specific information available in the departmental office.

Credits: 3

Prerequisites:

BIO 2105 and BIO 2106

BIO 4955: Lec+Lab in Adv Topics in Bio.

Advanced topics course with integrated lab. Topics will be announced on a semester-by-semester basis. Typically has a course at the 3000-level as a prerequisite. Specific information available in the departmental office.

Credits: 4

Prerequisites:

BIO 2105 and BIO 2106

BIO 5100: Senior Seminar

Special topics in modern biology, presented by student lectures and informal discussions. Topics to be announced each semester.

Credits: 1

BIO 5200: Biology Capstone

Special topics in biology, covered through readings from primary and secondary literature, student presentations and/or projects and discussions. Topics to be announced each semester.

Credits: 2

BIO 5300: Biology Capstone

Special topics in biology, covered through readings from primary and secondary literature, student presentations and/or projects, and discussions. Topics to be announced each semester.

Credits: 3

Prerequisites:

BIO 2105 :D- and BIO 2106 :D-

BIO 6100: Affiliation Study

Credits: 0

BIO 6401: BS/MS Independent Study 1

Supervised laboratory/field research

Credits: 1

BIO 6402: BS/MS Independent Study 2

Supervised laboratory/field research.

Credits: 1

BIO 6403: BS/MS Independent Study 3

Supervised laboratory/field research.

Credits: 1

BIO 6404: BS/MS Independent Study 4

Supervised laboratory/field research.

Credits: 1

BIO 6509: Directed Research

Library &/or laboratory research under student-selected Biology faculty member (can lead to thesis research.) Sem 1&2.

Prerequisite: permission of faculty mentor & instructor; 3.0 QPA. Restricted to junior or senior biology & BSC majors.

Does not count for biology laboratory credit alone.

Credits: 2

Prerequisites:

(BIO 2105 :D- or HON 1075 :D-) and (BIO 2106 :D- or HON 1076 :D-)

BIO 6609: Thesis Research I

Laboratory research with Biology faculty member selected by student (part 1 of two-semester sequence). Fall semester. Requires permission of faculty mentor & instructor and 3.0 QPA. Part 1 of two-semester sequence; continues as Thesis Research II, which culminates in a written thesis.

Credits: 3

Prerequisites:

(BIO 2105 or HON 1075) and (BIO 2106 or HON 1076)

Co-Requisites:

BIO 6610

BIO 6610: Thesis Proseminar

Scheduled group meetings with other research students in the department, focusing on general and specific aspects of thesis research. Fall semester.

Requires permission of instructor and 3.0 QPA.

Continues as Thesis Research II, which culminates in a written thesis. (Corequisites: BIO 6609 or HON 6000 or HON 6001)

Credits: 1

Prerequisites:

(BIO 2105 or HON 1075) and (BIO 2106 or HON 1076)

Co-Requisites:

BIO 6609 or HON 6000 or HON 6001

BIO 6709: Thesis Research II

Continuation of Thesis Research I or Directed Research. Laboratory research with Biology faculty member selected by student. Spring semester. Requires permission of faculty mentor & instructor and 3.0 QPA. Culminates in a written thesis. Counts typically for Laboratory credit toward the major.

Credits: 2

Prerequisites:

BIO 6509 or BIO 6609

Co-Requisites:

BIO 5100

BIO 6965: International Studies Biology

Credits: 4

BIO 7105: Vertebrate Ecology

Ecology of vertebrates at individual and population levels, with emphasis on birds and mammals. Natural selection and adaptation; demography; life history ecology and evolution; behavioral ecology; speciation and species interactions; biodiversity and extinction; population viability; and endangered species management. Laboratory exercises, field trips, and student projects complement lecture material, with emphasis on collection and analysis of field data, and on familiarity with regional organisms, habitats, and conservation problems. Prerequisites: BIO 3012 or BIO 3255 or BIO 3405 or BIO 4305, or one equivalent course, or consent of instructor.

Credits: 4

BIO 7151: Biogeochemistry Lec

For each of several elements of the periodic table, this course will focus on patterns of geological abundance, biotic and abiotic factors affecting solubility and therefore availability, and the role of each element in biological systems (deficiency, essentiality, toxicity). While the course will emphasize the essential elements, some attention will be paid to nonessential, but potentially toxic metals.

Credits: 2

BIO 7201: Ecosystem Ecology

Examination of how living organisms interact and role of non-living entities such as climate, soil and atmosphere in large-scale processes. Includes coverage of topics such as biodiversity and ecosystem function, climate change, and link between ecosystem processes, community ecology and genetics. Prerequisite: Course in ecology or permission of instructor.

Credits: 3

BIO 7321: Immunology

Fundamental principles underlying innate and adaptive immunity. Cellular and molecular mechanism of development and function of immune cells including lymphocytes and mechanisms related to self-tolerance, antigen processing and presentation, lymphocyte activation, lymphocyte death and generation of cellular and humoral immune response. Consequences of malfunctioning of the immune response and clinical implications discussed.

Credits: 2

BIO 7322: Immunology Laboratory

Experimental methods used to analyze humoral and cell mediated immune responses. Qualitative and quantitative analyses of immune response, with the focus on the understanding of the rationale behind the methods used and its applicability. Develop skills in researching the literature related to cellular and molecular immunology.

Credits: 2

BIO 7385: Global Change Ecology

Explores roles of ecology in documenting, responding, feeding back to, and mitigating human-caused changes to Earth's chemistry, geography and climate. Accompanying lab includes ecological techniques, such as carbon flux measurements, and develop independent research projects in the laboratory. Prerequisite: Course in ecology or permission of instructor.

Credits: 4

BIO 7451: Behavioral Ecology

Advanced course in topics relating to animal behavior, including foraging, communication, sexual selection, parental care, and sociality. Emphasis on critical analysis of research papers from the primary literature. Prerequisite: Undergraduate course in ecology or animal behavior or permission of instructor.

Credits: 3

BIO 7705: Plant Ecology

Ecological principles are considered at the plant species, population, community, and ecosystem levels of organization. Topics discussed in detail include ecological plant physiology, succession, productivity of ecosystems, soils, nutrient cycling, the effects of disturbances on ecosystem structure and function, and the major vegetation types in North America. Field and laboratory studies complement the lecture material.

Credits: 4

BIO 7755: Plant Ecophysiology

Plant interactions with the biotic and abiotic environment. Lecture emphasizes plant Anatomical, Morphological, Physiological, and Biochemical adaptations and acclimations determining plant and population survival, performance and distribution in dynamic ecosystems. Laboratory focuses on field methods and techniques culminating in student- driven, independent research projects.

Credits: 4**BIO 7805: Biostatistics & Exper. Design**

Conceptualization of experimental design, hypothesis testing, execution of statistical analyses, expression of statistical results, and effective graphical presentation of quantitative data. Includes a written exercise emulating peer-reviewed journal publication.

Credits: 4**BIO 7940: Special Topics in Biology**

Current topics in biology. Topics will be announced on a semester by semester basis. Specific information will be available in the department office.

Credits: 2**BIO 7950: Special Topics C/M/D Biology**

Current topics in cellular, molecular, and development biology. Topics will be announced on a semester by semester basis. Specific information available in the departmental office.

Credits: 2**BIO 7955: Biodiversity & Systematics**

Philosophical, methodological and practical aspect of systematics, from species description to phylogeny reconstruction. The role of systematics in comparative biology and its applications in biogeography, molecular biology, and other fields are investigated. Methods of biodiversity assessment and the implications of biodiversity data for conservation. Emphasis on the practical aspects of data collection, computer-assisted phylogeny reconstruction, and taxon identification.

Credits: 4**BIO 7960: Adv Topics: C/M/D Biology**

More intensive coverage of current topics in cellular, molecular, and developmental biology. Topics will be announced on a semester by semester basis. Specific information available in the departmental office.

Credits: 3**BIO 7962: Cell, Molecular & Develop Lab**

Lab to accompany Advanced Topics or other 3-credit graduate course in Cell, Molecular, and Developmental Biology. Topic to be determined by term. Three hours laboratory per week.

Credits: 1**Co-Requisites:**

BIO 7960

BIO 7970: Spec Topics: E/E/O Biology

Current topics in ecological, evolutionary and organismal biology. Topics will be announced on a semester by semester basis. Specific information available in the departmental office.

Credits: 2**BIO 7980: Adv Topics: E/E/O Biology**

More intensive coverage of current topics in ecological, evolutionary and organismal biology. Topics will be announced on a semester by semester basis. Specific information available in the departmental office.

Credits: 3**BIO 7982: Eco, Evol, & Organismal Lab**

Lab to accompany Advanced Topics or other 3-credit graduate course in Ecology, Evolution, and Organismal Biology. Topic to be determined by term. Three hours laboratory per week.

Credits: 1**Co-Requisites:**

BIO 7980

Business Administration

BA 1001: C.E.O. Program I**Credits:** 0**BA 1002: C.E.O. Program II****Credits:** 0**BA 2002: Bus Admin Internship-Global**

Employment with an approved firm with the internship taking place outside of the United States where experience is gained with appropriate training, instruction, and supervision. Prerequisites: minimum GPA; approval of chair.

Credits: 3**Prerequisites:**

minimum GPA; approval of chair.

BA 2500: Communication Portfolio I

Record/videotape 3-5 minute oral presentation for evaluation by Communication Department.

Credits: 0

BA 4500: Communication Portfolio II

Record/videotape 3-5 minute oral presentation for evaluation by Communication Department.

Credits: 0

Business Law

BL 2135: Bus. Entity Law, Gov, Ethics

The law of agency, partnerships and corporations; personal property; the Uniform Commercial Code sections dealing with secured transactions and negotiable instruments; moral and ethical dimensions; comparison with other legal systems.

Credits: 3

Prerequisites:

VSB 2007

BL 2149: Cont. Topics in Business Law

Contemporary issues and topics which affect the legal environment of business.

Credits: 3

Prerequisites:

VSB 2007

BL 2160: International Business Law

The nature, sources, functions and practical applications of International Law, approached from a perspective of the individual, governments, and business entities. Emphasis on the "rules" that govern doing business globally and resolving disputes.

Credits: 3

Prerequisites:

VSB 2007

BL 2185: Law of Contracts & Sales

Elements for legal agreements; Uniform Commercial Code Article 2; moral and ethical dimensions; comparison with other legal systems.

Credits: 3

Prerequisites:

VSB 2007

BL 3190: Indep Study & Research

Credits: 3

BL 3350: Independent Study - BL

Independent Study under faculty guidance in an area of student's special interest. Permission of Faculty and Department Chair.

Credits: 3

Prerequisites:

VSB 2007

Center for Irish Studies

IS 1111: Introductory Irish Language I

Groundwork in Irish (Gaelic), including oral proficiency, aural comprehension, and reading knowledge; for students with no prior knowledge of Irish. Supplementary language laboratory work and oral drills.

Credits: 4

IS 1112: Introductory Irish Language II

Groundwork in Irish (Gaelic), including oral proficiency, aural comprehension and reading knowledge; for students with one semester of Irish study completed. Supplementary language laboratory work and oral drills. Students should have completed IS 1111 or equivalent.

Credits: 4

IS 1121: Intermediate Irish Language I

Review of grammar and vocabulary in Irish (Gaelic). Recitations, readings and oral drills. Supplementary cultural study, language laboratory, and conversation comprehension. Prerequisites: IS 1111 and 1112, equivalent or permission of instructor. Taught by a Fulbright language instructor from Ireland. Counts toward the Irish Studies Concentration.

Credits: 3

Prerequisites:

IS 1112

IS 1111 and 1112, equivalent or permission of instructor. Taught by a Fulbright language instructor from Ireland. Counts toward the Irish Studies Concentration.

IS 2222: Topics: Irish Language

Specific topics concerning the Irish language (Gaelic); topics vary by semester.

Credits: 3

IS 3100: Topics: Irish Studies

Study of topics of special interest in Irish Studies, both on campus and abroad. May be repeated two times if topics change.

Credits: 3

IS 4100: Spec Top in Irish Studies

Perspectives on the culture and history of Ireland. Presentations by the Resident Program Director, lectures by a range of NUI faculty, readings by noted Irish writers, performances by local musicians, and field trips. Required of all students participating in the semester abroad program at NUI Galway, Ireland.

Credits: 3

IS 4101: Studying in Ireland

Credits: 1

Chemistry

The Department of Chemistry at Villanova University offers masters and bachelors degrees, including an American Chemical Society accredited degree program for undergraduates. Our faculty actively conduct research in diverse areas such as environmental chemistry, protein biochemistry, fuel cell research, and computational chemistry. We recognize that undergraduate research provides a unique opportunity to work closely alongside a faculty mentor, gaining an experience that extends far beyond typical classroom learning, and we encourage all undergraduates to participate in undergraduate research.

CHM 1000: Professional Development Sem

These courses taken by all chemistry majors each semester with presentations on the chemical profession by students, faculty and visiting chemical professionals. A broad range of activities will include presentations on undergraduate research, career planning, the chemical industry, chemical safety and such topics as medicinal chemistry, polymer chemistry, pharmacology, etc.

Credits: 1

CHM 1001: Experimental Chemistry I

Simple syntheses and quantitative measurements; analysis of materials and separations. Some experience with modern instrumentation will be provided to demonstrate the limitations accompanying the experimental method.

Credits: 1

Co-Requisites:

CHM 1050

CHM 1004: Water Chemistry Lab

Environmental water sampling and common water quality measurements including pH, alkalinity, dissolved oxygen, water hardness, bacterial content, and common water pollutants.

Credits: 1

Co-Requisites:

CHM 1056

CHM 1007: Criminalistics Laboratory

Forensic laboratory analyses: evidence collection, DNA sampling, microscopic evaluations of hair, fibers, etc., fingerprint analysis, etc.

Credits: 1

Co-Requisites:

CHM 1057

CHM 1008: Chemistry & Art Laboratory

Laboratory, instrumental, and microscopic methods to analyze authenticity, age, and composition of art of all forms.

Credits: 1

Co-Requisites:

CHM 1058

CHM 1050: Chem Themes Foundation

For non-science majors. Basic concepts of measurement, the S. I. system of units, structure of atoms and molecules, inorganic nomenclature, qualitative and quantitative aspects of chemical reaction, properties of gases, properties of solutions, principles of chemical equilibrium, acids and bases. The first semester in a two-semester sequence.

Credits: 3

CHM 1052: Organic and Biochemistry

Credits: 3

CHM 1054: Environmental Chemistry

Credits: 3

CHM 1055: Molecular Architecture

Credits: 3

CHM 1056: Water

The chemistry of water as well as its significance in biochemistry, geology, and the atmosphere are introduced and discussed.

Credits: 3

Co-Requisites:

CHM 1004

CHM 1057: Chem Theme: Criminalistics

For nonscience students. Introduction to the chemical aspects of forensic chemistry examining physical evidence found at a crime scene (hair, fibers, chemical residues, DNA, etc.), proper collection, preservation of evidence, and chemical principles involved in the analyses.

Credits: 3

Co-Requisites:

CHM 1007

CHM 1058: Chemistry & Art

The application of chemical methods to study the origin, preservation, and authenticity of works of art. Topics include light and color, pigments and dyes, photography, ceramics, and textiles.

Credits: 3

Co-Requisites:

CHM 1008

CHM 1103: General Chemistry Lab I

Qualitative and quantitative laboratory experiments which include: the reactions of metals with water; the collection and plotting of data; acid-base titrations; oxidation-reduction titrations; the use of the pH meter and the determination of acid-base titration curves; the use of the spectrophotometer. Coreqs. CHM 1131 or CHM 1151

Credits: 1

Co-Requisites:

CHM 1131 or CHM 1151

CHM 1104: General Chemistry Lab II

Students will be required to identify all metal ions present in an unknown solution. Quantitative titrations of sodium carbonate and the total hardness of water. Synthesis of inorganic compounds and determination of the formula of a transition metal complex ion using spectroscopic methods. Corequisites: CHM 1152 or CHM 1156 (Note: Engineering students are waived from this lab.)

Credits: 1

Prerequisites:

CHM 1103

Co-Requisites:

CHM 1152 or CHM 1156 (Note: Engineering students are waived from this lab.)

CHM 1107: General Chemistry Lab: Nursing

Qualitative and quantitative laboratory experiments which include: chemical identification testing, molecular modeling, coordination compound synthesis, reaction kinetics and equilibrium, acid-base titrations, and gas laws Coreq. CHM 1131.

Credits: 1

Co-Requisites:

CHM 1131
CHM 1131.

CHM 1108: General Chemistry Lab II

Chemistry of organic and biochemical compounds with an emphasis on the identification and chemical reactivities of functional groups. Students will be required to separate and identify various organic and biochemical compounds. Open to health affiliation students.

Credits: 1

Prerequisites:

CHM 1131 and (CHM 1103 or CHM 1107)

Co-Requisites:

CHM 1134

CHM 1131: General Chemistry I

Fundamental laws and theories of chemistry: atomic theory, chemical bonding, chemical kinetics and chemical equilibrium, gases, liquids, solids, solutions, stoichiometry, acid-base theories, electrochemical concepts, and an introduction to nuclear chemistry will be included. Open to health affiliation students.

Credits: 3

Co-Requisites:

CHM 1107

CHM 1134: General Chemistry II

Introduction to organic and biochemistry stressing the application of principles developed in CHM 1131. Open to health affiliation students.

Credits: 3

Prerequisites:

CHM 1131 and (CHM 1103 or CHM 1107)

Co-Requisites:

CHM 1108

CHM 1151: General Chemistry I

Basic concepts of chemistry covering the following topics: stoichiometry, redox reactions; properties of gases; thermochemistry; descriptive presentation of atomic orbitals; molecular structure and bonding; chemical trends in the periodic table; properties of bulk matter; colligative properties of solutions.

Credits: 4

Co-Requisites:

CHM 1103

CHM 1152: General Chemistry II

Continuation of CHM 1151. Introduction to chemical kinetics and equilibrium; the chemistry of acids and bases; buffers and titrations; complex ions and solubility; factors that drive chemical reactions; electrochemistry; nuclear chemistry.

Credits: 4

Prerequisites:

CHM 1151 :D-

Co-Requisites:

CHM 1104

CHM 1156: General Chemistry II for Egr

Continuation of CHM 1151. Introduction to chemical kinetics and equilibrium; the chemistry of acids and bases; buffers and titrations; complex ions and solubility; factors that drive chemical reactions; electrochemistry; introduction to organic chemistry.

Credits: 4

Prerequisites:

CHM 1151 :D- and CHM 1103 :D-

CHM 1301: Inorganic Chemistry Lab I

Selected experiments to illustrate fundamental laboratory techniques and skills. Qualitative and quantitative measurements, synthesis and characterization of inorganic complexes, literature searching and computer usage. Emphasis on modern research applications of metals and main group elements.

Credits: 2

Co-Requisites:

CHM 1311

CHM 1311: Inorganic Chemistry I

Fundamental principles in inorganic chemistry stressing relationships among structure, bonding, and reactivity. Properties of matter, periodic trends, acid/base reactions, redox reactions, and bonding in transition metal complexes.

Credits: 3

Co-Requisites:

CHM 1301

CHM 1502: Quant Anal Lab

Laboratory experiments to complement CHM 1512 covering the following: gravimetric analysis, acid-base titrations (weak acid; mixed acid), compleximetric titration and redox reactions.

Credits: 2

Prerequisites:

CHM 1301 :D-

Co-Requisites:

CHM 1512

CHM 1512: Quantitative Analysis

Chemical analysis, with emphasis upon statistical methods, acid-base properties, pH, equilibrium expressions, complexation equilibria, solubility properties, redox potentials, electrolysis, and electrochemical cells.

Credits: 3

Prerequisites:

CHM 1311 :D-

Co-Requisites:

CHM 1502

CHM 1903: Internship Elective

Credits: 3

CHM 1906: Internship Elective

Credits: 6

CHM 1909: Internship Elective

Credits: 9

CHM 2201: Organic Chemistry Lab I

Practical experience in techniques used for separation, purification, and isolation of synthetic as well as naturally occurring organic compounds. Semi-micro and micro scale experiments. Crystallization, distillation, extraction, and chromatography are introduced.

Credits: 1

Co-Requisites:

CHM 2211

CHM 2202: Organic Chemistry Lab II

Further training in laboratory techniques used in organic chemistry, including those introduced in CHM 2201, and utilization of such techniques in representative types of organic reactions. Semi-micro and micro scale experiments.

Credits: 1

Prerequisites:

CHM 2211

Co-Requisites:

CHM 2212

CHM 2211: Organic Chemistry I

Fundamental principles of organic chemistry stressing the relation of structure and reactivity. Structure and bonding; stereochemistry; acids, and bases; electrophilic addition, elimination and nucleophilic substitution.

Credits: 3

Prerequisites:

(CHM 1151 and CHM 1152) or

(CHM 1151 and CHM 1156)

Co-Requisites:

CHM 2201

CHM 2212: Organic Chemistry II

Continuation of CHM 2211. Carbonyl group reactions, aromatic chemistry, spectroscopy and special topics such as heterocycles, carbohydrates and nucleosides, amino acids and proteins, lipids, radicals, rearrangements, polymers and photochemistry.

Credits: 3

Prerequisites:

CHM 2211 :D- and CHM 2201 :D-

Co-Requisites:

CHM 2202

CHM 2993: Internship

Credits: 3

CHM 2996: Internship

Credits: 6

CHM 3201: Organic Chemistry Lab I

Provides practical experience in the principal techniques utilized for the purification, separation, identification, and synthesis of organic compounds on the micro scale. Open to Chemistry majors.

Credits: 2

Prerequisites:

CHM 1502 :D-

Co-Requisites:

CHM 3211

CHM 3202: Organic Chemistry Lab II

The semi-micro techniques include distillation, recrystallization, extraction, sublimation, and chromatography. Synthesis of representative organic compounds. An introduction to research in organic chemistry, introduction to qualitative organic analysis and practical use of infrared and nuclear magnetic resonance spectroscopies.

Credits: 2

Prerequisites:

(CHM 3211 and CHM 3201)

Co-Requisites:

CHM 3212

CHM 3211: Organic Chemistry I

Fundamental principles of organic chemistry stressing the relation of structure and reactivity from a physical-chemical viewpoint. Structure and bonding; stereochemistry; acids and bases; electrophilic addition reactions of alkenes, alkynes, and dienes; nucleophilic substitution reactions at saturated carbon atoms and elimination reactions leading to alkenes or alkynes. Open to chemistry majors.

Credits: 3

Prerequisites:

CHM 1512 :D- and CHM 1502 :D-

Co-Requisites:

CHM 3201

CHM 3212: Organic Chemistry II

Addition and substitution reactions of carbonyl compounds, electrophilic and nucleophilic aromatic substitutions, radical and concerted reactions, heterocyclic compounds and polymer chemistry. Spectroscopic methods of analysis including nuclear magnetic resonance, infrared spectroscopies and mass spectrometry. Introduction to multi-step organic synthesis. Open to chemistry majors.

Credits: 3

Prerequisites:

CHM 3211 :D- and CHM 3201 :D-

Co-Requisites:

CHM 3202

CHM 3301: Inorganic Chem Lab II

This laboratory course emphasizes preparative techniques of inorganic compounds. Instrumental methods of structure elucidation are included.

Credits: 2

Prerequisites:

(CHM 2212 :D- or CHM 3212 :D-) and (CHM 2202 :D- or CHM 3202 :D-)

Co-Requisites:

CHM 3311

CHM 3311: Inorganic Chem II

The second course in the sequence on principles of inorganic chemistry with emphasis on bonding, structure and reactivity. Application of these principles to problems in acid-base, coordination, organometallic, bioinorganic and materials chemistry.

Credits: 3

Prerequisites:

(CHM 2212 :D- or CHM 3212 :D-) and (CHM 2202 :D- or CHM 3202 :D-)

Co-Requisites:

CHM 3301

CHM 3312: Descript Inorganic Chem

Credits: 3

CHM 3401: Physical Chem Lab I

Credits: 1

CHM 3402: Physical Chem Lab II

Experimental methods of chemical kinetics will be covered. Spectroscopic, polarimetric, and conductimetric methods will be used.

Credits: 1

Prerequisites:

MAT 1505 :D-

CHM 3404: Physical Chem Lab I

Experiments centered on chemical thermodynamics including calorimetry and phase equilibria, emphasizing data treatment, including error analysis curve fitting, and related topics.

Credits: 2

Prerequisites:

(CHM 2212 :D- or CHM 3212 :D-) and (CHM 2202 :D- or CHM 3202 :D-)

Co-Requisites:

CHM 3412

CHM 3405: Physical Chem Lab II

Experiments centered on chemical rate processes and spectroscopy including NMR relaxation, classical rate studies, infrared spectroscopy, as well as computer simulation of experiments.

Credits: 2

Prerequisites:

CHM 3412 :D- and CHM 3404 :D-

Co-Requisites:

CHM 3413

CHM 3412: Quantum Chemistry

This course will present an introduction to quantum mechanics and its implications including molecular orbital theory, electronic structure, and molecular spectroscopy.

Credits: 3

Prerequisites:

MAT 1505 :D-

Co-Requisites:

CHM 3404

CHM 3413: Molecular Thermodynamics

First, second, and third laws of thermodynamics; phase equilibria and chemical equilibria; gases; and electrochemistry will be covered in this course.

Credits: 3

Prerequisites:

MAT 1505 :D-

Co-Requisites:

CHM 3405

CHM 3401 or CHM 3405.

CHM 3415: Physical Chem for Engineers

Credits: 3

CHM 3416: Physical Chem for Engineers

Chemical kinetics, electrochemistry, and the structure and properties of materials, including atomic structure, solid and liquid state chemistry, surface and colloid chemistry, and transport properties.

Credits: 3

CHM 3417: Biophysical Chemistry

A study of thermodynamics, kinetics, chemical equilibria, and spectroscopy as they apply to biological molecules, macromolecules, and cells.

Credits: 3

Prerequisites:

(CHM 2212 or CHM 3212) and (CHM 4611 or CHM 4621)

CHM 3501: Instrumental Analysis Lab

Laboratory techniques to obtain quantitative information about the composition of unknown samples, including potentiometric titration, spectrophotometry, chromatography, kinetic analysis, anodic stripping voltammetry, spectrofluorometry and atomic absorption spectrometry. Designed to complement CHM 3511 lecture.

Credits: 2

Prerequisites:

CHM 1152 :D- or CHM 1512 :D-

Co-Requisites:

CHM 3511

CHM 3503: Bioanalytical Chem Lab

Laboratory course to complement CHM. 3514; emphasis on the analysis of biological systems utilizing modern analytical techniques. Designed for the biochemistry concentration.

Credits: 1

Prerequisites:

(CHM 1152 and CHM 1104)

Co-Requisites:

CHM 3514

CHM 3505: Analytical Chem Lab I

Credits: 2

CHM 3506: Analytical Chem Lab II

Credits: 2

CHM 3511: Instrumental Analysis

The utilization of instruments covering the following topics: analog and digital signals, absorption and emission of light by molecules and atoms, chromatography (HPLC, GC) and detection, use of enzymes and antibodies, radioactivity, and chemometrics.

Credits: 3

Prerequisites:

CHM 1152 :D- or CHM 1512 :D-

Co-Requisites:

CHM 3501

CHM 3514: Bioanalytical Chemistry

Designed for the biochemistry concentration with emphasis on theory, instrumentation and practical applications of analytical chemistry to biological materials.

Credits: 3

Prerequisites:

CHM 1152 :D- or CHM 1512 :D-

Co-Requisites:

CHM 3503

CHM 3515: Analytical Chemistry I

Credits: 3

CHM 3516: Analytical Chemistry II

Credits: 3

CHM 4202: Org Struct Analysis Lab

Credits: 2

CHM 4222: Organic Struct Analysis

The currently most useful spectroscopic methods for the structural determination of molecular systems, including: NMR (2D and 2D), mass spectrometry, infrared and ultraviolet-visible spectroscopies.

Credits: 3

Prerequisites:

CHM 3212 :D-

**CHM 4224: Spec
Top:Medicinal Chemistry**

History and fundamentals of modern Medicinal Chemistry and drug discovery. Drug targets, drug-target relationships: (agonists/ antagonists, inhibitors/ activators, modulators), structure activity relationships, on-versus off-target relationships, physicochemical properties, pharmacokinetics, bioisosteres, structure- and property-based design. A previous Biochemistry class is suggested but not required.

Credits: 3

Prerequisites:

CHM 2212 or CHM 3212

**CHM 4229: Organic Reactions
& Synthesis**

Survey of organic reactions with emphasis on modern synthetic methods and their applications to the synthesis of complex organic compounds. Enolates, carbonyl condensation reactions, functional group interconversions, electrophilic addition reactions, reductions, organometallic reagents, concerted reactions, oxidations. Synthetic strategies including retrosynthetic analysis in the context of specific examples of multi-step synthesis from recent literature.

Credits: 3

Prerequisites:

CHM 3212 or CHM 2212

**CHM 4292: Advanced Organic
Chemistry**

An expanded presentation of fundamental topics in organic chemistry: structure, bonding, stereochemistry, molecular orbital theory, reactive intermediates and reaction mechanisms.

Credits: 3

Prerequisites:

(CHM 3212 :D- or CHM 2212 :D-)

**CHM 4313: Solid State &
Materials Chemis**

Credits: 3

**CHM 4314: Physical Meth in
Inorganic Chm**

Physical characterization of inorganic complexes via nuclear magnetic resonance, vibrational and electronic spectroscopies, electron microscopies, electrochemistry and other advanced techniques.

Credits: 3

Prerequisites:

CHM 3301 :D- and CHM 3311 :D-

CHM 4315: Organometallics

Examination of the bonding, spectroscopic properties and reactivity of a range of ligands and complexes. Reaction mechanisms and catalytic cycles will be emphasized.

Credits: 3

Prerequisites:

CHM 3301 :D- and CHM 3311 :D-

**CHM 4325: Introductory
Polymer Chemistry**

Topics include: step- and chain-polymerizations, copolymerizations, molecular weight determination, polymer morphology, polymer testing and characterization, and current advances in polymer chemistry.

Credits: 3

Prerequisites:

CHM 2212 or CHM 3212

**CHM 4331: Bioinorganic
Chemistry**

The roles metal ions play in biological systems are explored using relevant examples from natural systems and areas of current research including (but not limited to): catalysis, photosynthesis, respiration, biomimetic modeling, and solar energy conversion.

Credits: 3

Prerequisites:

CHM 3301 and CHM 3311

**CHM 4413: Spectroscopy &
Structure**

Use of the fundamental principles of atomic and molecular structure to study ultraviolet, infrared, microwave and magnetic resonance spectroscopies. Continuous-wave and Fourier transform methods will be included along with fluorescence, phosphorescence and laser spectroscopic techniques.

Credits: 3

CHM 4441:

Colloidal&Interfacial Science

Basic physicochemical principles of colloids and interfaces such as adhesion, capillarity, interfacial and solution thermodynamics as well as theories of colloidal stability (electrical double layer, zeta potential, DLVO theory), and Light scattering methods.

Credits: 3

**CHM 4447: Computational
Chemistry**

Focus on basic theories behind popular computational models (e.g., molecular mechanics, density functional theory) and their application to chemical problems.

Credits: 3

Prerequisites:

CHM 3412 and CHM 3416 and CHM 3417 or PHY 5100

**CHM 4512: Chemical
Instrumentation**

Credits: 3

CHM 4517: Environmental Chemistry

Apply key concepts in chemistry to global scales by examining chemical systems within Earth's lithosphere hydrosphere and atmosphere. Examine and discuss natural processes as well as anthropogenic impacts like climate change and environmental contamination using central scientific literature.

Credits: 3

Prerequisites:

CHM 2211 or CHM 3211

CHM 4601: Survey Biochemistry Lab

An introduction to laboratory techniques in biochemistry; enzyme kinetics, column chromatography, electrophoresis, standard biochemical assays and interpretation of data.

Credits: 1

Prerequisites:

CHM 2202 :D- or CHM 3202 :D- and CHM 4611 :Y :D- or CHM 4610 :Y :D- or CHM 3202 :D-

Co-Requisites:

CHM 4611

CHM 4603: Biochem Tech. and Pract.

A laboratory course to complement CHM 4621 with emphasis on enzyme purification, enzyme characterization, and nucleic acid analysis.

Credits: 1

Prerequisites:

(CHM 2212 :D- or CHM 3212 :D-) and CHM 4621 :Y :D-

CHM 4604: Biochem Tech. and Pract II

A continuation of the introduction of fundamental biochemistry laboratory techniques, along with the application of skills acquired in CHM 4603.

Credits: 1

Prerequisites:

CHM 4603 :D-

CHM 4610: Principles of Biochemistry

A terminal, one semester biochemistry course for the physical sciences and engineers; the kinetics and thermodynamics of biochemical systems and associated molecules, including proteins, nucleic acids, and carbohydrates.

Credits: 3

Prerequisites:

CHM 2212 or CHM 3212

CHM 4611: Survey of Biochemistry

A terminal, one semester survey of biochemistry; carbohydrates, lipids, proteins, nucleic acids, enzymes, vitamins & hormones; consideration of their utilization & metabolism in living systems.

Credits: 3

Prerequisites:

CHM 2212 :D- or CHM 3212 :D- and BIO 2105 :D-

CHM 4621: Biochemistry I: Structure

An in depth study of the structure and function of the structure and function of proteins, enzymes, carbohydrates, nucleic acids and lipids.

Credits: 3

Prerequisites:

CHM 2212 or CHM 3212

CHM 4622: Biochemistry II: Metabolism

A study of the metabolism of biomolecules, including carbohydrates, lipids, amino acids and nucleotides, including the integration, regulation and control of intermediary metabolism. Emphasized are the hormonal regulation of pathways and metabolic disease.

Credits: 3

Prerequisites:

CHM 4621

CHM 4623: Biochemistry III

Integration of metabolism in organisms, membrane receptors expression of genes, gene manipulation, translation, transcription.

Credits: 3

Prerequisites:

CHM 4622 :D-

CHM 4633: Biochemical Parasitology

Brief overview of parasitology, the unique biochemistry associated with parasites, discussions of relevant therapeutic applications. The parasites responsible for malaria, toxoplasmosis, trichomoniasis, giardiasis, and African Sleeping Sickness will be studied. The biochemistry of host parasite interaction will also be explored.

Credits: 3

Prerequisites:

CHM 4611 or CHM 4622

CHM 4641: Chemical & Biochemical Imaging

The course provides a survey of recent microscopy advances that push the boundaries of image resolution. Instruments and techniques that probe the inner workings of the cell at the level of individual molecules will be discussed, including confocal, TIRF, quantum dots, AFM, and PALM.

Credits: 3

CHM 4652: Biochemical Basis of Disease

A study of the relationship between protein structure and disease, enzymes as therapeutic targets, peptide hormones and obesity, and glucose metabolism and cancer.

Credits: 3

Prerequisites:

CHM 4611 or CHM 4622

CHM 4661: Proteomics

Principles, techniques and applications for the large-scale study of proteins, particularly in humans. Mass spectrometry will be covered in detail, and alternative methods and approaches will also be covered.

Credits: 3

Prerequisites:

CHM 4621 or CHM 4611

CHM 4663: Bioinformatics

This course focuses on bioinformatic approaches to studying protein function, structure, and evolution. Other topics will be discussed; for example, genomics and gene expression.

Credits: 3

Prerequisites:

CHM 2212 or CHM 3212

CHM 4664: Signal Transduction

Overview of signal transduction and the biochemistry of receptors and other cell sensors, with an emphasis on oxygen, reactive oxygen species, inflammation, and disease. Current literature will be used, in addition to the textbook.

Credits: 3

Prerequisites:

CHM 4611 or CHM 4622

CHM 4665: Enzymes

Structural and mechanistic aspects of enzymes. Topics include chemical catalysis, steady state and pre-steady state kinetics, mechanisms, and biological relevance of specific enzyme systems.

Credits: 3

Prerequisites:

CHM 4621 or CHM 4611

CHM 4710: Safety Culture in the Sci Com

Introduction to the principles and practices of laboratory safety; understanding, recognizing, and communicating laboratory chemical, physical and biological hazards; risk assessment and management of hazards; laboratory accident prevention and safe use of emergency equipment.

Credits: 3

CHM 4800: Research

Student participation in independent research under faculty supervision, frequent conferences with advisor on literature search, theoretical and experimental research.

Credits: 0

CHM 4801: Research I

Student participation in independent research under faculty supervision, frequent conferences with advisor on literature search, theoretical and experimental research.

Credits: 3

CHM 4802: Research II

Continuation of CHM 4801.

Credits: 3

Prerequisites:

CHM 4801

CHM 4803: Research III

Continuation of CHM 4802.

Credits: 3

Prerequisites:

CHM 4802

CHM 4851: Thesis Research I

Directed research with a Chemistry or Biochemistry faculty mentor that culminates in a written thesis and seminar presentation. Part I of a two-semester sequence with CHM4852. Permission of participating faculty member required. A written interim report is required at the end of the semester.

Credits: 3

Prerequisites:

Permission of participating faculty member required.

CHM 4852: Thesis Research II

Continuation of CHM4851 - Thesis Research I. Directed research with a Chemistry or Biochemistry faculty mentor that culminates in a written thesis and seminar presentation. Permission of participating faculty member required.

Credits: 3

Prerequisites:

Permission of participating faculty member required.

CHM 7100: Quantum Mechanics

Operators, Schrodinger Equation, one dimensional problems, harmonic oscillator, angular momentum, hydrogen atom, scattering theory. One year (two semesters) Undergraduate Physical Chemistry or equivalent.

Credits: 3

CHM 7200: Thermo/Statistical Mechanics

Statistical methods, statistical thermodynamics, Ensembles, Partition functions. Quantum statistics. Kinetic theory of transport processes. One year (two semesters) of Undergraduate level Physical Chemistry or equivalent.

Credits: 3

CHM 7222: Organic Structure Analysis

Spectroscopic methods for the structural determination of molecular systems, including: NMR (1D and 2D), mass spectrometry, infrared and ultraviolet-visible spectroscopies.

Credits: 3

CHM 7292: Core Organic Chemistry

An expanded presentation of fundamental topics in organic chemistry: structure, bonding, stereochemistry, molecular orbital theory, reactive intermediates and reaction mechanisms.

Credits: 3

CHM 7391: Core Inorganic Chemistry

An intensive survey of the basic principles of inorganic chemistry from the viewpoints of bonding, structure, and energetics. Topics include periodicity, symmetry, kinetics and mechanisms, spectroscopy, and acid-base theory. student who expects to do research in inorganic chemistry.

Credits: 3

CHM 7494: Core Physical Chemistry

A discussion of the fundamentals of quantum mechanics, statistical mechanics, and classical thermodynamics with applications to small molecules, solid state and polymers.

Credits: 3

CHM 7517: Environmental Chemistry

Apply key concepts in chemistry to global scales by examining chemical systems within Earth's lithosphere, hydrosphere and atmosphere. Examine and discuss natural processes as well as anthropogenic impacts like climate change and environmental contamination using central scientific literature.

Credits: 3

CHM 7595: Core Analytical Chemistry

An intensive survey of selected principles and techniques in modern analytical chemistry. Topics may include basic statistics, sampling, complexation and extraction, equilibria, molecular and atomic spectroscopy, microscopy, electroanalysis, and chromatography.

Credits: 3

CHM 7693: Core Biochemistry

Protein structure; protein function and structure-function relationships in proteins; regulatory mechanisms in proteins, including ligand effectors, covalent modification, and proteolysis; structural and functional genomics and proteomics.

Credits: 3

CHM 7807: MS Research I

Credits: 3

CHM 7808: MS Research II

Credits: 3

CHM 7809: MS Research III

Credits: 3

CHM 7810: MS Thesis

M.S. thesis research to be conducted in partial fulfillment of the M.S. degree in chemistry by those students who choose the thesis option. The research will be directed by a faculty member. Prerequisites: M.S. research I, II, and III.

Credits: 3

CHM 7892: Graduate Seminar

Presentation of M.S. thesis research, literature presentations by students, and faculty research seminars.

Credits: 1

Chinese Language

CHI 1111: Basic Chinese I

Functional use of Chinese for students with no prior knowledge of Chinese. New pronunciation system, PINYIN, readings and oral drills. Supplementary language laboratory work.

Credits: 6

CHI 1112: Basic Chinese II

Continuation of CHI 1111-Basic Chinese I New pronunciation system, PINYIN, readings and oral drills. Supplementary language laboratory work. CHI 1111 or equivalent or permission of instructor.

Credits: 6

Prerequisites:

CHI 1111 :D

CHI 1113: Business Chinese

No Chinese language skill prerequisite; cultural and linguistic combination; conduct in english; Mandarin Chinese and Pinyin system taught in class.

Credits: 3

CHI 1121: Intermediate Chinese I

Review of Grammar and vocabulary. New pronunciation system, PINYIN, reading and oral drills. Supplementary language laboratory work. CHI 1112 or equivalent or permission of instructor.

Credits: 5

CHI 1122: Intermediate Chinese II

Review of grammar and vocabulary. New pronunciation system, PINYIN, readings and oral drills. Supplementary language laboratory work. CHI 1121 or equivalent or permission of instructor.

Credits: 5

CHI 1131: Advanced Chinese I

Advanced communication skills including reading and discussing topics on current events. Supplementary language laboratory work. CHI 1122 or equivalent or permission of instructor.

Credits: 3

CHI 1132: Advanced Chinese II

Advanced communication skills including reading and discussing topics on current events. Supplementary language laboratory work. CHI 1131 or equivalent or permission of instructor.

Credits: 3

CHI 1133: Advanced Chinese III

Advanced communication skills including reading & discussing topics on current events. Supplementary language laboratory work. CHI 1132 or equivalent or permission of instructor.

Credits: 3

Prerequisites:

CHI 1132

CHI 1134: Advanced Chinese IV

Advanced communication skills including reading & discussing topics on current events. Supplementary language laboratory work. CHI 1133 or equivalent or permission of instructor.

Credits: 3

Prerequisites:

CHI 1133

CHI 1137: Advanced Chinese V

Further refinement of advanced communication skills in writing and the reading and analysis of Chinese text.

Refinement of conversational skills through reading and discussion of current events.

Prerequisites: CHI 1134 or approval of instructor.

Credits: 3

Prerequisites:

CHI 1134

CHI 1134 or approval of instructor.

CHI 1138: Advanced Chinese VI

Further refinement of advanced communication skills in writing and the reading and analysis of Chinese text.

Refinement of conversational skills through reading and discussion of current events.

Prerequisites: CHI 1137 or approval of instructor.

Credits: 3

Prerequisites:

CHI 1137

CHI 1137 or approval of instructor.

CHI 1151: Spec. Top. in Chinese Language

Intensive instruction in conversation, reading and writing with emphasis on the refinement of Chinese language skills.

Credits: 3

Prerequisites:

CHI 1122

CHI 2143: Chinese Culture

Chinese culture and civilization from the beginning to the present. Conducted in English.

Credits: 3

CHI 2144: Chinese Film & Novel

Credits: 3

CHI 3412: Chinese Special Topics

Advanced study of topics of special interest in Chinese literary and/or cultural studies. May be repeated for credit if topic changes. Taught in English.

Credits: 3

CHI 3413: Chinese Calligraphy

Two part course: Textual study: History of Chinese calligraphy emphasizing how the Chinese culture blossomed and developed; Calligraphy practice: an on-hand developing of Chinese characters including the study of character's original meaning, transformation, and cultural context.

Credits: 3

CHI 3414: Chinese Classical Thought

Credits: 3

CHI 5900: CHI:Independent Study

Supervised study, activity or research. May be taken more than once. Prior approval of chair and instructor.

Credits: 3

Classical Studies

CLA 1250: Enemies of Rome

Examination of the growth of the Roman Empire throughout the Mediterranean world, with an emphasis on issues of imperialism and cultural identity.

Credits: 3

CLA 1975: Literature and Classics

Survey of ancient and modern classical literature, varying in topic and theme, guiding students in written and oral analysis of themes in texts of the varying genres of epic, tragedy, comedy, novel, short story, film, et al., fulfilling core literature requirement.

Credits: 3

CLA 2021: Language of Science & Medicine

Language of Science and Medicine Greek and Latin prefixes, roots, and suffixes in modern vocabulary; vocabulary building, with emphasis on technical terminology in scientific and medical usage. Knowledge of the languages is not required.

Credits: 3

CLA 2032: Classical Mythology

The myths, legends and folklore of the Greeks and Romans as they developed in their life, thought and literature; their influence on the Renaissance and modern times.

Credits: 3

CLA 2051: Cities of Ancient Greece

Classical archaeology and architecture of Greece. Selected sites in the Greek world with emphasis on their architectural, artistic and history significance.

Credits: 3

CLA 2052: Rome: The Ancient City

Classical archaeology and architecture of Italy. Selected sites in the Roman world with emphasis on their architectural, artistic and historical significance.

Credits: 3

CLA 3001: Independent Study

Reading of selected material in Latin or Greek or in classical literature in translation under the direction of a member of the staff.

Credits: 3

CLA 3040: Studies in the Classics

Selected themes of special interest. Topics vary according to interests of students and instructor: e.g. Women in the Classical World, Slavery in the Ancient World, Classical Rhetoric, etc.

Credits: 3

CLA 3052: Roman Law

Credits: 3

CLA 5900: CLA: Independent Study

Supervised study, activity, or research. May be taken more than once. Prior approval of chair and instructor.

Credits: 3

CLA 7301: Topics in Classical Studies

A course in English on classical culture. Themes vary and may focus on: Greek and Roman art, architecture and archaeology, Greek and Roman social history, the classical tradition, etc.

Credits: 3

Cognitive Science

CGS 4000: Bilingualism

Examination of cognitive correlates of bilingualism and multilingualism through review of primary psycholinguistic research and hands-on linguistic experimentation. Focus on cross-language transfer, language coactivation, language mixing and immersion effects in language processing.

Credits: 3

CGS 5900: Cognitive Science Seminar

Interdisciplinary seminar focusing on theories, methods, and applications related to the study of intelligent systems.

Credits: 3

CGS 5910: Psychology of Language

Processes underlying use of language, including speech perception and production, comprehension of meaning and grammar, and conversational interaction. Draws upon research from psychology, linguistics, computer science, neuroscience, and speech pathology.

Credits: 3

CGS 5950: Ind. Res. in Cognitive Science

Credits: 3

CGS 5990: Special Topics

Selected topics in Cognitive Science: attention, computational modeling, linguistics, deep learning, embodiment etc.

Credits: 3

Cognitive and Behavioral Neuroscience

Chair: Michael Brown, PhD.
Office Location: Tolentine Hall
Rm. 334
Telephone: (610) 519-4722
[\[Website\]](#)

About

The major in Cognitive and Behavioral Neuroscience (CBN) provides an intensive course of study focused on brain-behavior relationships, ranging from genetic to whole brain contributions to behavior and mental processes. The program is excellent preparation for a variety of careers focusing on research and/or practice in neuroscience, medicine, allied health fields, and psychology, as well as for more general careers in areas such as public policy and education.

CBN 2900: Topics in Cog & Behav Neuro

Topics in Cog & Behav Neuro: Neuroscience and ethics, Neuroeconomics, Drugs and behavior, etc.
Credits: 3

CBN 4000: Cell & Behavioral Neuroscience

Neuronal mechanisms of behavior: Molecular and cellular processes, neural plasticity, sensory encoding, optogenetics, psychopharmacology.

Credits: 3
Prerequisites:
PSY 4200

CBN 4100: Cognitive Neuroscience

Theory and research on the neural and cognitive processes that support higher-level cognition, such as memory, attention, judgment & decision making, perception, language, emotion.

Credits: 3
Prerequisites:
PSY 4500

CBN 5000: Advanced Lab in Neuroscience

Advanced Laboratory in Neuroscience: Examination of research methodologies, analysis techniques and data interpretation at different levels of neuro-behavioral investigation.

Credits: 3
Prerequisites:
CBN 4000 and CBN 4100 :Y

CBN 5900: Undergraduate Research in CBN

Supervised research project and report. Student may register for CBN 5900 more than once; however, only 3 hours of research can be applied toward the degree requirements in cognitive and behavioral neuroscience.

Credits: 3

CBN 6001: Thesis Research I

Library and/or Laboratory Research under CBN-affiliated faculty mentor. Requires successful application as CBN junior, permission of faculty mentor, department chairperson, and major GPA >3.0. Culminates in a literature review and research proposal. CBN 6001 credit toward major requires completion of CBN 6002.

Credits: 3

CBN 6002: Thesis Research II

Credits: 3

Communication

COM 1000: Surv of Communication Studies

Process of communication; range of perspectives from which communication can be studied (from classical rhetoric to contemporary theory); the functions communication serves; and the forms of communication such as interpersonal, small group, organizational, public address, and mass media.

Credits: 3

COM 1100: Public Speaking

Principles of communication related to speech composition and delivery; finding, analyzing, organizing and presenting material in ways appropriate to and effective with diverse audiences.

Credits: 3

COM 1101: Business & Prof Communication

Communication strategies and skills for a variety of business professional settings. Combines public speaking and small group organizational communication, featuring individual and group presentations. Not intended for Communication Department majors.

Credits: 3

COM 1102: COM Foundations for Engrs

Technical & professional communication: Oral & visual presentations, including technical reports; formulation/evaluation of data-driven arguments; group communication & listening skills. This course is only for students enrolled in Mechanical Engineering.

Credits: 3

COM 1300: Film Analysis

Methods and perspectives used to analyze visual media drawing on contemporary and historically important films. Historical, theoretical, and aesthetic approaches to film analysis, as well as the social, political and economic forces that influence film content. This course does not fulfill a COM major requirement.

Credits: 3

COM 1903: Communication Internship

Supervised work/study program in radio, television, advertising, publicity or public relations.

Credits: 3

COM 1906: Communication Internship

Supervised work/study program in radio, television, advertising, publicity or public relations.

Credits: 6

COM 1909: Communication Internship

Supervised work/study program in radio, television, advertising, publicity or public relations.

Credits: 9

COM 2200: Theories of Rhetoric

Rhetoric as the process of symbolic creation and recreation of community identity. Theory and history of rhetoric applications to the study of politics, popular culture, speeches, media images, artistic works, advertising, and legal issues.

Credits: 3

COM 2240: Theories of Perform Studies

Exploration of theory surrounding the embodied and aesthetic elements of solo and group performance. Evaluates key approaches to performing literature, performance art, performance for social change, oral traditions, performance ethnography, and performance in everyday life.

Credits: 3

COM 2280: Theories of Persuasion

Presents the theoretical processes by which communication influences the attitudes, beliefs, and behaviors of message recipients. Both rhetorical and social scientific approaches to persuasion are examined. Application is made to the areas of advertising, public relations, politics and health communication.

Credits: 3

COM 2300: Theories of Mass Communication

Traces the evolution and structure of core theoretical approaches to understanding mass communication phenomena. Both behavioral and critical approaches and their related research traditions are explored.

Credits: 3

COM 2340: Theories of Visual Com & Cultu

Introduction to the major theoretical and methodological approaches to the study of images as communicative phenomena. Explores the philosophical and strategic implications of these approaches and applies them both to the analysis and production of visual messages in a variety of media and contexts.

Credits: 3

COM 2400: Theories of Interpersonal Com

Survey of concepts and theories in interpersonal communication. Focuses on dyadic interaction and relationships as created, maintained, and modified through verbal and nonverbal behavior.

Credits: 3

COM 2440: Theories of Organizational Com

Exploration of the relationship between organizational and communication theories. Addresses issues of leadership, structure, culture, decision-making, communication channels, conflict, change, motivation, performance, diversity management, and external communication as they relate to organizations.

Credits: 3

COM 2993: Communication Internship

Supervised work/study program in radio, television, advertising, publicity or public relations.

Credits: 3

COM 2996: Communication Internship

More intensive, in depth work/study/program in radio, television, advertising, publicity or public relations.

Credits: 6

COM 3201: Rhetoric & Social Justice

Examination of public discourse surrounding issues in social justice and human rights. Through traditional and contemporary rhetorical theory, rhetorical strategies are traced through contemporary movements.

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3202: Rhetoric, Identity & Conflict

Focused reading of contemporary rhetorical theorists. Examines the cultural use of symbols for the generation of community and/or the promotion of social conflict; rhetoric as performed through ritual acts; and correct and incorrect enactment resulting in social acceptance and alienation. Instructor's permission required.

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3203: Communication Law & Policy

Constitutional, statutory, and case law as well as other public policies affecting communication professions. Surveys a wide-range of issues related to the First Amendment, access, broadcasting, commercial speech, copyright, defamation, obscenity, political speech and privacy.

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3204: Rhetoric and Democracy

An upper-level course in which students study important rhetorical artifacts and theoretical perspectives to come to understand important ways that rhetoric has served and sometimes disserved democracy. The specific focus of the course will change according to the instructor and the semester taught. (Pre-requisites will be waived when the course is offered for the Study Abroad in Greece program). Instructor's permission needed to waive pre-requisites.

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3207: African American Rhetoric

The symbolic construction of African American identity in the United States through an analysis of speeches, films, television and other media. (Pre-requisites will be waived for Africana Studies concentrators or minors).

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3208: Rhetoric and Myth

The relationship among rhetoric, myth, and culture with attention paid to the forces that shape mythic consciousness in culture(s). The focus of the course will vary according to instructor and semester the course is taught. (Pre-requisites will be waived when offered for the study abroad in Greece program or instructor's permission).

Credits: 3

Prerequisites:

COM 2240 or COM 2280 or COM 2340 or COM 2200 or COM 2300 or COM 2400 or COM 2440

COM 3209: Rhetorics of Race

Credits: 3

COM 3210: Gender, Sexuality and Rhetoric

Credits: 3

COM 3240: Performance for Social Change

Performance as a powerful medium of art and art as a powerful tool for social change. Studying established performance artists and creating original performance pieces, students address social issues through various modes of performance.

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2340 or COM 2280 or COM 2300 or COM 2400 or COM 2440

COM 3241: Performance of Literature

Solo and group performance of poetry, prose, and drama. Focus on rhetorical power of performed literature. Combines elements of theatre, literature and communication.

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2400 or COM 2280 or COM 2300 or COM 2340 or COM 2440

COM 3243: Performance Art

Introduction to performance art, a highly diverse theatrical art form that has gained popularity in American and European performance since the 1960s. Analysis of well-known performance artists as well as creation and performance of original student pieces. Emphasis on relationships among language, visual arts, music and dance; the construction and expression of self and identity through performance; and the relationship of performance to rhetoric and social change. Previous performance experience a bonus but not required.

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2340 or COM 2280 or COM 2300 or COM 2400 or COM 2440

COM 3245: Voice & Diction

Improvement of vocal quality and articulation through study of vocal anatomy, phonetics, projection, and expressiveness. Emphasis on live and taped performance of readings.

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3246: Performance of Greek Lit

Students analyze and perform both ancient and contemporary Greek literary texts; the performances, both solo and group are at Greek archaeological sites based on Greek oral traditions, poetry and drama, such as from Homer, Sappho, Antigone and Medea. THIS COURSE IS ONLY OFFERED IN THE SUMMER STUDY ABROAD IN GREECE PROGRAM.

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3247: Storytelling

Focus on story craft, form and practice. May include sound stories, image stories, performance, personal narrative, oral history, nonfiction. Attention on how to use stories for personal and social change.

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2340 or COM 2280 or COM 2300 or COM 2400 or COM 2440

COM 3248: Performance Ethnography

Credits: 3

COM 3290: Spec Top in Rhetoric & Perf

Topic or problem in the Rhetoric & Performance area of communication selected by the instructor.

Credits: 3

COM 3301: Intro to Film & Video Prod

In-studio workshop that deals with basic television production techniques, including producing and directing short interview programs, news, demonstrations and short dramatic pieces. Discussion of current problems in the management and operation of a television broadcasting station.

Credits: 3

Prerequisites:

COM 2280 or COM 2300 or COM 2340 or COM 2200 or COM 2240 or COM 2400 or COM 2440

COM 3302: Advanced Film & Video Prod

Visual aspects of location single camera video productions, audio acquisition, lighting, post production support, video editing and digital effects and finished distribution. Each student will work as producer, director, cameraman, editor and writer. Helps students understand the world of film and video funding, production and distribution.

Credits: 3

Prerequisites:

COM 3301

COM 3303: Screenwriting

Development of narrative strategies through improvisation and techniques of mediated visualization using video.

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440 and COM 1300

COM 3304: Documentary Theory & Practice

A study of the documentary as art, propaganda, social document, and instrument for social change. After a review of theory and work in documentary, students develop their own short works. For COM majors who have taken COM 3600, this course counts as a Free Elective. For COM majors who have not taken COM 3600, this course counts as a COM 3000-level course.

Credits: 3

COM 3305: Radio Broadcasting

The history and principles of commercial radio broadcasting: programming, research, sales, promotions, broadcast engineering and federal regulations. Hands-on-audio production experience with broadcast equipment focusing on the art of audio production and development of public affairs radio program to air on WXVU.

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3306: Audio Production

Hands-on studio course serves as introduction to the history, fundamentals and methods of audio production used in radio, television and recording studios. Students learn, identify and operate different aspects of audio production hardware such as microphones, mixing boards, and digital multi-rack recorders. Students will complete in-studio or remote recording projects for evaluation.

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3308: Digital Image Production

This hands-on workshop introduces to the fundamentals of using digital images to communicate specific information. Students produce still and moving images for use in public relations, advertising, photojournalism, and electronic or web-based publication.

Credits: 3

Prerequisites:

(COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440)

COM 3321: Interactive Media Design

Study of the principles of creating effective communication for the World Wide Web. Explores basic web design techniques with emphasis on designing and integrating diverse media elements. Focus on the creation and manipulation of text, graphics, audio and video for the Web.

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3340: Film History

Evolution of film as an art form; includes the impact of technology.

Credits: 3

Prerequisites:

COM 1300 and COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3341: Gender and Film

This course attends to the role of cinematic images in the cultural production of gender in contemporary societies. Students analyze images of gender in a variety of films, as well as the work of film makers who have been marginalized because of gender. This analysis of specific films is grounded in course readings taken from primary sources in feminist film theory and criticism, gender theory and media studies. Students will have the opportunity to propose and explore analytic, creative, and/or theoretical projects within the purview of the course theme. Outside viewing required. (Pre-requisites will be waived for Women's Studies concentrators or minors).

Credits: 3**Prerequisites:**

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3342: International Cinema

Study of the film of or about a particular country with emphasis on political, social, cultural and artistic issues.

Credits: 3**Prerequisites:**

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2400 or COM 2440 or COM 2340

COM 3343: Contemporary Cinema

Seminar course in which various strategies are applied to the analysis of contemporary films.

Credits: 3**Prerequisites:**

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3351: Media & Society

Structure and content of the major media industries in America (radio, television, film, newspapers, magazines, recordings, and books), and how each interacts with individuals, groups, and institutions. Students analyze and critique media systems and content in terms of social, legal, political, and economics forces that influence them.

Credits: 3**Prerequisites:**

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3352: Media & Technology

Surveys the development of communication technologies from the printing press through the internet and beyond. Technological development will be used as a way to explore critical issues about economic development, the nature of meaning, technological determinism and globalization.

Credits: 3**Prerequisites:**

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3353: Media & Politics

Examination of political communication research, theory and history. A particular focus on the role of media, such as advertising and news reporting on political campaigns and policymaking.

Credits: 3**Prerequisites:**

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3354: Media Criticism

Analysis of contemporary film, television, music, print media and electronic media from a cultural studies perspective.

Credits: 3**Prerequisites:**

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3355: Media Effects

A service learning course that trains students on how to critically evaluate media content given its role in society and degree of compliance with prevailing media policies. The course culminates with a compilation of analysis results and the production of a research report to be disseminated to academics, advocacy groups, industry executives, and parents.

Credits: 3**Prerequisites:**

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3356: Media Audiences

Introduction to the study, measurement and analysis of media audiences, merging theoretical approaches with applied methods for understanding user behavior.

Credits: 3**Prerequisites:**

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3360: Introduction to Journalism

News is an integral part of our lives. This course aims to provide a critical understanding of the role of journalism in modern society, combining theoretical perspectives on the making of news with insights from the journalists, broadcasters and editors who produce it.

Students will analyze research material on journalism in the press, as well as examining newsmaking on television and on the internet.

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3361: Journalism Practices

Principles of gathering, researching and writing the news for students interested in journalism and those who expect to interact with journalists professionally. Press releases, news leads and features and techniques for successful interviewing. Surveys critical and ethical challenges facing today's journalist; explores business news, media reviews and comment writing, editing and page design, and how computer technology is changing investigative reporting. Classes will be held in a computer lab to simulate newsroom conditions.

Credits: 3

Prerequisites:

COM 3360

COM 3363: Broadcast Journalism

Styles and techniques of broadcast journalism performance, including studio and location reporting and interviewing. Historical and contemporary trends in broadcast journalism explored.

Credits: 3

Prerequisites:

COM 3360

COM 3365: Sports Journalism

Evolution and current trends in sports journalism, emerging platforms and technologies, reporting with social media, developing source relationships, competing with your sources, working with media relations, developing written and oral reporting skills, anchor-analyst and sports-talk formats.

Credits: 3

Prerequisites:

COM 3360

COM 3366: Multimedia Journalism

Students learn to write across media platforms, create integrated news packages, and maintain strong journalistic principles, techniques and ethics.

Credits: 3

Prerequisites:

COM 3360

COM 3367: Journalism Topics

Rotating topics in journalism. Each offering will give students in-depth exposure to a particular area of journalism, taught by a foremost expert in that area.

Credits: 3

Prerequisites:

COM 3360

COM 3390: Spec Top in Media & Film

Topic or problem in the Media & Film area of communication selected by the instructor.

Credits: 3

COM 3401: Relational COM Studies

Explores everyday communication between people across many contexts. Critical examination of the personal, social, and cultural dimensions of human relationships. Experiential activities augment lectures/discussions.

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3402: Family Communication

Explores the relationships that have the most consequences for us. Examines ways to rework relational dilemmas, collisions through dialogue, and generate effective communicative strategies.

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3403: Intercultural Communication

The impact on culture of communication styles, and practices. The role of communication in personal and professional intercultural relationships.

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3404: Communication & Conflict

Communicative elements of conflict that arise out of personal and cultural differences in a variety of interpersonal interactions and relationships.

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3406: Gender & Communication

Communication of women and men against the backdrop of society and feminism in such communicative contexts as families, schools, friendships and relationships, organizations, media, and technology. (Pre-requisites will be waived for Gender & Women's Studies concentrators or minors).

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3408: Facilitation & Dialogue

Credits: 3

COM 3441: Negotiation & Dialogue

Examination of the practical, theoretical, and critical analysis of a variety of approaches to negotiation and resolving conflicts. Verbal forms of negotiation, mediation, and dialogue are developed as key components in the maintenance of any healthy organization.

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3442: Team Based Communication

Theory and practice of communication for idea generation and problem-solving in groups, teams, and in other multiple contexts.

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3443: Work Life Negotiation

Explores the increasingly blurred intersections of "public" work and "private" lives, focusing on how we navigate organizational, family, community and individual roles and responsibilities. Considers organizational policies, family practices, and larger social discourses such as gender, class, consumption, and entrepreneurialism.

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2340 or COM 2280 or COM 2300 or COM 2400 or COM 2440

COM 3444: Interviewing

Theory and practice of methods in selected interview settings: informational, employment, and persuasive. Emphasis on communication between two persons, questioning techniques, and the logical and cultural bases of organizational persuasion.

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3445: COM Consulting in Organization

Course explores theory and practice of communication consulting through a variety of case studies in the field of organizational/corporate communication. Students will be expected to work as part of a consulting team for part of the semester.

Credits: 3

Prerequisites:

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3446: Space, Time & Tech in Organiz.

Credits: 3

COM 3448: Multicultural Leadership & Dialog

Introduces scholarship addressing injustice and misunderstanding in America. Students will develop a dialogic perspective and a set of skills as one means of transforming themselves and their community. Must also participate in a one-credit COM 5300 topically focused dialogue group. Requires permission of chairperson.

Credits: 3

COM 3449: Applied Topics in Organization

Credits: 3

COM 3460: Public Relations

Provides a foundation for students interested in the field of public relations. It chronicles the development of the profession from its earliest beginnings to its role in modern management. Also attempts to bridge the gap that exists between theory and practice. It achieves this by emphasizing the fundamental management perspective of the profession and the persuasive intent of message construction while highlighting the four essential skills required for success in the industry - research, writing, planning and problem solving.

Credits: 3**Prerequisites:**

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3461: Advertising

Strategies and techniques used in contemporary American advertising: consumer behavior, market research and analysis, message development for print and broadcast, and media selection.

Credits: 3**Prerequisites:**

COM 2200 or COM 2240 or COM 2280 or COM 2300 or COM 2340 or COM 2400 or COM 2440

COM 3462: Public Relations Writing

Offers students the foundation for producing a variety of written public relations materials. Structure includes an overview of the journalistic style of writing along with extensive practice in writing fundamentals. Following the work on enhancing writing skills, students will develop a variety of pieces for their portfolios. Final class products include print news releases, position papers, feature stories, media advisories, media kit, and other related assignments. Course is strongly recommended for students interested in public relations, advertising, marketing, and organizational communication.

Credits: 3**Prerequisites:**

COM 3460

COM 3475: Com Challenge in Organizations

The purpose of the course is to make students aware of the psychology of communication and to assist them in becoming more discerning, discriminating recipients of the torrent of 24/7 bytes and bits of data. The course examines the dynamics of communication within organizations and the elements of effective leadership communication; that is, the written and spoken word; the behaviors exhibited by people who influence the way people think and act; internal and external communication planning; multigenerational communication; crisis communication; the impact of technology, and techniques used to assess the efficacy of planned communication.

Credits: 3**COM 3476: Managing Multi Gen. Workforce**

The focus of this course is on understanding the impact and implications of an aging workforce and examining best practices for managing multiple generations.

Credits: 3**COM 3477: Creativity, Innov., & Entrep.**

The course focuses on the similarities and dissimilarities among three related skills and competencies: creativity, innovation and entrepreneurship and the ways in which each can be applied to produce new or improved products and services. Topics are examined within in the context of the real-life situations and work-place scenarios with special emphasis on creating a culture that encourages and rewards risk taking and unconventional problem solving.

Credits: 3**COM 3490: Spec Top in Interpersonal Org**

Topic or problem in the interpersonal/Organizational area of communication selected by the instructor.

Credits: 3

COM 3600: Social Justice Documentary

Students will work together to create a documentary film that examines a social justice issue. This class requires substantial time commitments from all the students. Permission of instructor and at least three credits of prior courses in film or social justice. This six-credit course can be repeated once. For COM majors, six credits count toward the major. If taken twice, six credits count toward Free Electives. For the COM minor, only three credits of this six-credit course goes toward the minor.

Credits: 6

COM 4001: Qualitative Research in COM

Review of basis principles of critical inquiry in the interpretive paradigm. Reading and designing qualitative research in communication through gathering and critically analyzing literature in the field and proposing an original study. Methods include ethnography and textual analysis.

Credits: 3

COM 4002: Quantitative Research in COM

Review of basic principles of scientific inquiry in the empirical paradigm. Reading and designing quantitative research in communication through gathering and critically analyzing literature in the field and proposing an original study. Methods include experiments and surveys.

Credits: 3

COM 5050: Senior Project

Design, implementation, and presentation of a group research project in which students apply the knowledge and skills learned through the Communication program of study to the investigation of rhetorical or communication phenomena.

Credits: 3

Prerequisites:

COM 4001 or COM 4002

COM 5100: Directed Study

Supervised project culminating in term paper.

Credits: 3

COM 5150: Spec Top in Communication

Credits: 3

COM 5200: Topics

Intensive workshops in selected areas of professional development or communication research.

Credits: 1

COM 5300: Topics in Intergroup Dialogue

Using self-reflection, identity exploration, and dialogue, learn how everyday communicative interactions can lead to cross-cultural mistrust and misunderstanding. Students also learn how social structures and institutions, e.g., schools, neighborhoods, media, and health organizations, function to allocate privilege and sustain societal inequities. Permission of chair.

Credits: 1

COM 5464: Public Relations Campaigns

Course explores a variety of case studies in the field of public relations including examples in media relations, crisis communication and planning. Following the review of cases, student groups will be created and will spend the remainder of the semester developing a professional campaign for a client. The final project is a presentation of this overall public relations plan.

Credits: 3

Prerequisites:

COM 3462

COM 5600: Special Topics in Production

One-Credit Workshops in areas of media and multimedia production. Course may be repeated six times

Credits: 1

Computing Sciences

Chair: Daniel Joyce, Ph.D.

Office Location: Mendel

Science Center Rm. 161

Telephone: (610) 519-7307

[Website](#)

About

The Department of Computing Sciences seeks to provide outstanding education, to advance scholarship, and to engage in activities that benefit society as a whole, in accordance to the University mission. The Department aims to equip students with a solid foundation in computing theory, and to prepare them for lifelong independent learning and innovative thinking in a constantly changing discipline. Its faculty members strive to maintain professional currency, and to involve students and

colleagues in their research investigations. These endeavors support the University mission to transmit, pursue, and discover knowledge in an atmosphere of collegiality in the university community. Supported by a liberal arts education, the Department seeks to develop the total person, sensitive to social and ethical concerns affected by the computing discipline, and committed to addressing the needs of a diverse and interconnected modern society.

CSC 1010: Programming for All

Programming fundamentals using the Python programming language: data, variables, selection, loops, arrays, input/output, basic graphics and functions. Object-oriented design: encapsulation, objects, classes and methods.

Credits: 3

CSC 1020: Computing and the Web

Information representation and manipulation; file systems and directories; compatibility and data exchange; security and privacy; elements of computer architectures and operating systems; computer networks, the Internet, and the World Wide Web; web site design principles and creation; PC-based examples and illustrations.

Credits: 3

CSC 1024: Computing for Scientists

Credits: 1

CSC 1030: Prob Solv with Computers

Using the microcomputer as a problem solving tool; system use; general purpose language programming; spreadsheet analysis and modeling; retrieving information from the Internet; strengths and weaknesses of computer based problem solutions.

Credits: 3

CSC 1035: Databases for Many Majors

No background in computing necessary. Design and implementation of your own database as a group project. Cooperative learning techniques to demystify key concepts: the relational model, normalization, the Entity-Relationship model and SQL.

Credits: 3

CSC 1040: Computing with Images

Computing systems as tools for designing and publishing graphically rich material in many forms; image processing techniques and systems; image style and related tools; digital image processing theory; computational complexity; multimedia presentations.

Credits: 3

CSC 1043: Laptop Instrument

Music structure and theory; programming structures, algorithms and language to create music on your laptop; component of Living in the KnowlEdge Society project (NSF) connecting computing with other disciplines.

Credits: 3

CSC 1045: 3D Modeling and Animation

Computer-assisted animation & its programming dialects; cartoon creation from storyboarding to product delivery; algorithms - efficiency, correctness, understanding via animation.

Credits: 3

CSC 1051: Algorithms & Data Struc I

Object-oriented design: objects, classes, methods, encapsulation; programming fundamentals: data, variables, selection, loops, arrays, input/output; basic graphics and exceptions.

Credits: 4

CSC 1052: Algorithms & Data Struc II

Object-oriented design: inheritance, interfaces, polymorphism; problem analysis; recursion; abstract data types; dynamically linked structures; data structures: stacks, queues, lists, collections, trees.

Credits: 4

Prerequisites:

CSC 1051 :C or CSC 2014 :C

CSC 1300: Discrete Structures

Mathematical structures that support computer science: sets, matrices, trees, graphs, logic and proof, mathematical induction, relations, functions, sequences, summations, and elementary combinatorics.

Credits: 3

CSC 1600: Operating Systems

System software design and implementation; process and resource management; concurrency, scheduling, and deadlock; memory management; file systems and security.

Credits: 3

Prerequisites:

CSC 2400 :D- or ECE 2042 :D-

CSC 1700: Analysis of Algorithms

Efficiency classifications and mathematical analysis of recursive and nonrecursive algorithms; design techniques: brute force, greedy, divide-and-conquer, dynamic programming, backtracking, branch-and-bound, space and time tradeoffs; NP-completeness; approximation algorithms; computational problems: sorting, searching, string processing, graphs, arithmetic, linear algebra.

Credits: 3

Prerequisites:

(CSC 1300 or MAT 2600) and (CSC 1052 or ECE 2620)

CSC 1800: Organ of Prog Languages

High level language features: data types, control structures; formal lexical and syntactical analysis; operational semantics; language translation.

Credits: 3

Prerequisites:

CSC 1052 :D- and (CSC 1300 :D- or MAT 2600 :D-)

CSC 1930: Explorations in Computing

Emerging technologies & their applications; computing in support of investigations & applications in the humanities & social sciences.

Credits: 3

CSC 1990: Enrichment Sem in Computing

Skills for success in computing: research questions and methodologies, oral and written presentation techniques, argumentation and critical thinking, time and project management strategies, study skills.

Credits: 1

CSC 2014: Java Bootcamp

Fast-paced coverage of object-oriented programming using Java and the Java API, including packages for creating graphics and applets; Java syntax and control structures; arrays; designing objects, classes, and methods; graphical user interfaces; input streams, exception handling and threads.

Credits: 1

Prerequisites:

CSC 1010 or ECE 1620 or MIS 2020

CSC 2020: Web Devel & Tech I

Design of web content, utilization of web tools, configuration of supporting technologies. Emphasis on client-side services: HTML, style sheets, Javascript, DHTML.

Credits: 3

Prerequisites:

CSC 1020

CSC 2025: Web Devel & Tech II

Design of web content, configuration of supporting web technologies. Emphasis on server-side services: databases and forms, XML, AJAX, cookies, security CGI.

Credits: 3

Prerequisites:

CSC 2020

CSC 2053: Platform Based Computing

Topics include maps, hash tables, graphs, concurrency/interference/synchronization, internet programming and security.

Credits: 3

Prerequisites:

CSC 1052

CSC 2300: Statistics for Computing

Probability, counting, discrete and continuous distributions, descriptive and inferential statistics, experimentation, reading of scientific papers -- all taught from the point of view of computer science. Some programming may be required.

Credits: 3

Prerequisites:

CSC 1051 and CSC 1300

CSC 2400: Computer Systems I

Architecture of computer systems: representation of data; processor, memory and I/O organization. Assembly language programming. C programming language constructs and their relationship to the underlying architecture. Basics of operating systems: interrupts, concurrency, process scheduling, security, networking.

Credits: 3

Prerequisites:

CSC 1052 and (CSC 1300 or MAT 2600)

CSC 2405: Computer Systems II

Processes, threads and concurrent programming. Scheduling and dispatching. Linking and relocation. Memory management. Virtual memory. System-level I/O Device management. File systems. Security and protection in depth. Real-time and embedded systems. System performance evaluation. Scripting.

Credits: 3

Prerequisites:

CSC 2400

CSC 2500: Survey of Information Science

Brief introductions to several areas in which problems in information use are important. Examples are business, law, biology, medicine, electronic commerce, and libraries.

Credits: 3

CSC 2993: Internship in Computing

Internship in computer science involving computer system development, maintenance, or evaluation in an environment which supports sound software engineering techniques. Restricted to second semester sophomore with junior standing and above.

Credits: 3

CSC 2996: Internship in Computing

Credits: 6

CSC 3010: Overview of Cybersecurity

Exploration of the basic concepts and terminology in cybersecurity for students from a variety of technical or non-technical backgrounds; major sub-disciplines of cybersecurity; impact of cybersecurity on business, ethical, and technical levels; data protection concepts, privacy, and intellectual property; data protection techniques, encryption, and authentication; security in wired and wireless networks, operating systems, applications, databases, and the cloud; ethical hacking and vulnerability management; lab exercises and case studies to introduce technical concepts; prepares students to study cybersecurity in-depth in future coursework; course is the introductory required course for a minor in cybersecurity.

Credits: 3

CSC 3070: Emerging Technology Trends

Investigate new technologies and current applications. Explore when and how to apply new technologies with sensitivity to feasibility, financial viability, and overall effectiveness. Culminates in team-driven exploitation of a new technology.

Credits: 3

CSC 3080: Info Security & Protection

Explores the criticality of protecting information's availability, accuracy, authenticity, confidentiality, and integrity. Analysis of topics to include redundancy, backup and recovery, business continuity, security technologies, and controls such as audit, change management and testing.

Credits: 3

Prerequisites:

CSC 2400 or ECE 2042

CSC 3150: Game Development

Theory of game development, game programming, artificial intelligence, state machines, 2D/3D assets, visual communication, game mechanics, navigation meshes, path planning.

Credits: 3

Prerequisites:

CSC 1052 or ECE 2620

CSC 3300: Linear Algebra for Computing

Fields, vectors, matrices. Structures and computations in a high-level language for these mathematical objects. Computational applications including image morphing, page rankings, compression, search in images, graph manipulation.

Credits: 4

Prerequisites:

CSC 1300

CSC 3400: Information Retrieval

Theory and practice of location, organization, and rendering of meaningful content from largely unorganized sources.

Credits: 3

Prerequisites:

CSC 1052 :D- and CSC 1300 :D-

CSC 3990: Computing Research Topics

Team taught. Centered around the development of a research project in one of several selected computing topics. Methods for conducting research: experimentation, data collection, literature review. Standards for written presentation of information. Reports of progress required of all students.

Credits: 3

Prerequisites:

CSC 2053

CSC 4140: Theory of Information

Credits: 3

CSC 4170: Theory of Computation

Finite automata and regular expressions; push down automata and context-free grammars; Turing machines; Church's thesis; computability; NP-completeness.

Credits: 3

Prerequisites:

CSC 1700 :D-

CSC 4181: Compiler Construction

Lexical and syntactical analysis; code generation; error recovery; recursive descent compilation; handling of run-time environment.

Credits: 3

Prerequisites:

CSC 1600 :D- or CSC 2400 :D-

CSC 4280: Parallel Algs & Architecture

Credits: 3

CSC 4300: Computer Graphics

Hardware and software in computer graphics; graphics programming language; input/output device handling; modeling in 3D space; development of interactive software.

Credits: 3

Prerequisites:

CSC 2053 :D-

CSC 4380: Info Visualization

The presentation of information; visual cognition, scientific visualization, illustration presentation, color theory, motion dynamics, image processing.

Credits: 3

Prerequisites:

CSC 2053 :D-

CSC 4450: Digital Forensics

In-depth study of digital evidence presentation, digital forensic techniques, and data analysis. Password cracking, encryption/decryption, volatile data extraction and network forensics of advanced forensic tools, legal and ethical issues related to forensics and security management techniques required for resiliency in today's digital workplace.

Credits: 3

Prerequisites:

CSC 2400

CSC 4480: Principles of Database Systems

Concepts and technology of database management systems and data modeling with an emphasis on the relational model; database querying and normalization; physical data organization. A group project to design and implement a database is a key aspect of this course.

Credits: 3

Prerequisites:

(CSC 1051 or ECE 1620) and (CSC 1300 or MAT 2600)

CSC 4490: Data Warehousing & Mining

Tools and techniques, theory and practice for storage and effective use of massive data sets.

Credits: 3

Prerequisites:

CSC 4480 and (CSC 2300 or MAT 4310 or STAT 4310)

CSC 4500: Artificial Intelligence

The nature of intelligence and the question of its computer implementation; search algorithms; knowledge representation; automated deduction; natural language understanding; planning; problem solving.

Credits: 3

Prerequisites:

CSC 1052 or ECE 2620

CSC 4510: Machine Learning

The design of software systems that adapt to new circumstances and detect and extrapolate patterns; neural networks; decision tree induction; genetic algorithms and genetic programming.

Credits: 3

Prerequisites:

CSC 1051

CSC 4550: Expert & Knowledge Systems

Credits: 3

CSC 4598: Machine Translation

Exploration of the broad field of machine translation; automated computer systems that translate human language using statistical approaches; digital representation transformations, such as readability and sentiment analysis, spam filtering, plagiarism detection, and other natural language processing techniques; building machine translation systems using real-world data; formulating and investigating research questions in machine translation; typically includes collaboration with a non-Computer Science course on interdisciplinary, team-based student projects.

Credits: 3

Prerequisites:

CSC 1052

CSC 4600: Distributed Processing

Credits: 3

CSC 4630: Software Dev and Systems

Operating system structures; system calls; system libraries; interprocess communication; user-interface programming environments; software utilities; software portability.

Credits: 3

Prerequisites:

CSC 1600 :D- or CSC 2405 :D- and CSC 2053 :D-

CSC 4700: Software Engineering

Management and production of software systems; the software life cycle; software design techniques and methodologies; participation in a team software development project.

Credits: 3

Prerequisites:

CSC 1052 or ECE 2620

CSC 4710: Info Syst Project Management

Principles and techniques of information systems project management; qualitative and quantitative essentials to include project integration, scope, schedule, cost, quality, human resources, communications, and risk. Practical experience managing a project with complex technology issues.

Credits: 3

CSC 4730: Human Computer Interaction

Design of the user/system interface; measurement of human-computer interaction; models of the user and user communities; design criteria for the interface; user interface management systems (UIMS); test and evaluation strategies and tools.

Credits: 3

Prerequisites:

CSC 1052 :D-

CSC 4790: Senior Projects

Capstone course centered around a semester long software development or research project; project planning; requirements elicitation and specification; teamwork; oral presentations required of all students.

Credits: 3

Prerequisites:

CSC 4700 :D-

CSC 4797: Information Systems Capstone

A cumulative experience to complete a student's portfolio of expertise in information systems and technology. Student driven project emphasizing system integration, design and communication skills. Prerequisites: Information Systems majors or FIT certificate candidates only.

Credits: 3

Prerequisites:

CSC 4710 :D- and CSC 4700 :D- or DIT 2165 :D- and CSC 2500 :D- and DIT 2175 :D-

CSC 4800: Web Application Development

Theory and design of web-based applications: stylesheets, applets, HTML, CGI programming, web server design, website design, security, multimedia representations, encryption, compression.

Credits: 3

Prerequisites:

CSC 2053 :D-

CSC 4810: Mobile App Development

Theory and practice of designing apps for mobile devices; interface design, platform-specific and platform-independent programming, sensor-based computing, cloud data management, security, and privacy; entrepreneurial practices for app development: ideation, business planning, and commercialization.

Credits: 3

CSC 4900: Computer Networks

Underlying principles of computer networks; OSI and TCP/IP architecture; LAN technologies; interconnecting devices: hubs, bridges, switches, routers, gateways; IP addressing and forwarding; routing protocols; transport protocols; error, flow, and congestion control; client-server communication; authentication and authorization; security threats and solutions.

Credits: 3

Prerequisites:

CSC 2405 :D- or CSC 1600 :D-

CSC 5900: Seminar in Computing

Credits: 3

CSC 5920: Logic

Boolean connectives and propositional logic; quantifiers and first-order logic; natural deduction, resolution and other methods of human or computer reasoning; set theory; induction; formal arithmetic.

Credits: 3

CSC 5930: Topics Computer Science

Lecture presentation of selected topics in computer science. May be repeated for credit if topics are different. Prerequisites may be imposed depending on the topics.

Credits: 3

Prerequisites:

Prerequisites may be imposed depending on the topics.

CSC 5940: Topics in Information Science

Credits: 3

CSC 5993: Independent Study

Reading, research and/or projects in a selected area of computer science under the direction of a member of the staff. May be repeated for credit.

Credits: 3

SCSC 1000: The Practice of Computing

Selected interdisciplinary topics of special interest in the Social Sciences.

Credits: 3

Counseling

COU 2000: Introduction to Counseling

Designed to introduce students to the Counseling profession and to acquaint them with the history, structure, practices, standards, values and ethics of the counselor.

Credits: 3

COU 2500: Counseling for Women

Special needs and considerations for counseling with Women addressed, including: violence against women, women living in poverty, health concerns, infertility, motherhood, development and aging, racial-ethnic differences, inhibited anger, envy, success or inhibition, gender stereotypes, and more. Feminist psychoanalysis emphasized.

Credits: 3

COU 3000: Counseling Theory & Skills

Course will cover theories and research regarding effective helping skills. Students will practice helping skills with each other and will conduct research projects evaluating their helping skills. The course is divided into a didactic and experimental component.

Credits: 3

COU 3100: Group Counseling

An examination of group development theories, leadership, ethical and professional issues in groups. Students will apply learned group leadership skills within the classroom setting.

Credits: 3

COU 3400: Culturally Competent Counseling

Course explores historical and contemporary issues related to providing culturally congruent/competent human services with myriad populations. The impact of socio-identities (e.g., race, ethnicity, gender, religion, socioeconomic status, sexual orientation, and disability) will be examined, considering individual, group, and macro-system functioning.

Credits: 3

COU 3500: Devlp Perspective to Diagnosis

Not your average abnormal psychology class. Application of diagnostic systems of mental illness to counseling practice. Experiential and didactic learning methods elucidate the etiology and treatment of mental illness. Great course if planning to pursue psychology, social work, counseling, or other helping professions.

Credits: 3

COU 3600: Motivational Counseling Skills

Credits: 3

COU 3700: Family & Couples Counseling

Examines the principles of general systems theory as it applies to working with multi-person client systems in therapy.

Credits: 3

Criminology

CRM 1001: Introduction to Criminology

The nature and extent of crime; the factors related to criminal behavior; theories of the treatment and control of offenders; crime prevention programs.

Credits: 3

CRM 3001: Justice and Society

This course presents an overview of the criminal justice system. It focuses on the nature, operation and critical issues of law enforcement, the courts and corrections.

Credits: 3

CRM 3100: Juvenile Delinquency

Meaning and scope of delinquency; delinquency theories; role of social institutions and social agencies; prevention, control, and treatment programs.

Credits: 3

CRM 3200: Police & Society

Police are the gatekeepers of the criminal justice system - their decisions and actions can have enormous consequences for people's lives. But these decisions are not made mechanically by a simple application of criminal statutes. Rather police are empowered with discretion. The course will examine the police role in contemporary society, the nature of police discretion, and how discretion is exercised in the handling of individual cases.

Credits: 3

CRM 3300: Criminal Courts

This is a comprehensive introduction to the U.S. criminal court system. It provides an overview of the stages of the criminal process. It examines critical issues surrounding each stage and the roles of the prosecutor, defense attorney and judge.

Credits: 3

CRM 3330: Sociology of Law

The meaning, origin and impact of law viewed from several sociological perspectives; the law in action and the social context of legal professions.

Credits: 3

CRM 3350: The Supreme Court

This course examines the factors which influence the decision to charge a person with a crime, public policy considerations relating to restraints on law enforcement and the property and wisdom of some established rules of law. Supreme Court decisions affecting the criminal process will be discussed.

Credits: 3

CRM 3400: Punishment and Society

Survey of the historical and contemporary treatment of convicted offenders; analysis of the prison social system; analysis of the theory, practice and function of correctional programs.

Credits: 3

CRM 3500: Capital Punishment

This course will examine the historical, ethical and moral implications of the death penalty. This course will discuss the imposition and effectiveness of the penalty. The international perspective will also be addressed.

Credits: 3

CRM 3700: White Collar Crime

White collar crimes are committed by professionals for the benefit of individuals or organizations. This course examines the nature and magnitude (cost in dollars and lives) of white collar crime. Sociological theories explaining the commission of "crime in the suites" and society's response will be discussed.

Credits: 3

CRM 3800: Intro to Victimology

This is a study of the victims of crime. Topics include the victim-offender relationship, victim vulnerability and victim culpability. A typological study of the characteristics of crime, its victims and offenders will be presented. Victim rights and compensation will be discussed.

Credits: 3

CRM 3850: Drugs and Society

History of drug use and drug laws; relationship between drug use and crime; drug offenses and the criminal justice system; treatment and prevention issues.

Credits: 3

CRM 4000: Special Top In Criminology

This course investigates special topics or emerging issues within criminology. Topics are selected for their importance or the expertise of the instructor.

Credits: 3

CRM 5000: Criminology Independent Study

Supervised research project which results in a major research paper.

Credits: 3

CRM 5100: Criminological Theory

The nature of criminological theory and the major theoretical developments that have shaped criminology.

Credits: 3

Prerequisites:

CRM 1001 or CRJ 3000

CRM 5200: Criminology Res & Statistics

Basic methods of sociological research including the collection and organization of data, statistical analysis, testing hypotheses and the interpretation of data.

Credits: 3

CRM 6003: Internship

Supervised work experience in a criminal justice agency.

Credits: 3

CRM 6006: Internship

Supervised work experience in a criminal justice agency.

Credits: 6

CRM 6009: Internship

Supervised work experience in a criminal justice agency.

Credits: 9

CRM 6500: Senior Seminar

This course focuses on a particular substantive area and integrates criminological theory and research methodology.

Credits: 3

Prerequisites:

CRM 5100

SOC 5300

SOC 5400

(CRM 5100 and SOC 5300 and SOC 5400)

Cultural Studies

CST 2100: Intro. to Cultural Studies

Theoretical basis of cultural studies is covered; students are introduced to the most common methods of research in these areas. Mandatory for CST majors, open to others.

Credits: 3

CST 3000: Topics Course

Credits: 3

CST 4100: Capstone Sem of Cultural Stud

Application of different theoretical approaches to the study of cultural phenomena and praxis in a major research project, a senior thesis.

Mandatory for CST majors, open to others.

Credits: 3

CST 5900: Independent Study

Credits: 3

Economics

Chair: Peter Zaleski, Ph.D.
Office Location: 2014 Bartley Hall
Telephone: 610-519-4370
[Website](#)

About

Economics is the science that studies the behavior of social systems – such as markets, legislatures, corporations, and families – in allocating scarce resources. It is a discipline which brings together the diverse worlds of business, social science, and public policy. The study of economics is an excellent preparation leading to many career options. Economics majors are well positioned to be the future managers and leaders in both the private and public sectors. The study of economics at the

undergraduate level provides a solid basis for graduate study in the social sciences and for professional study in business administration, law, public administration, and in the health sciences.

ECO 1000: Introductory Topics-Economics

An examination of basic Micro- and Macroeconomic topics. CANNOT COUNT FOR ECONOMICS MAJORS.

Credits: 3

ECO 1001: Intro to Micro

The price system; demand and supply analysis; the production process; analysis of market structures.

Credits: 3

ECO 1002: Intro to Macro

The economic system and its fundamental principles. The economic functions of government, monetary and fiscal policy, and international trade.

Credits: 3

ECO 1565: Topics: Study Abroad

Specific topics vary. Only for study abroad. Cannot count for Economics major. May be taken more than once.

Credits: 3

ECO 1903: Internship Elective

Fulfills 3.0 free elective credits.

Credits: 3

ECO 1906: Internship Elective

Fulfills 6.0 free elective credits.

Credits: 6

ECO 1909: Internship Elective

Fulfills 9.0 free elective credits.

Credits: 9

ECO 2101: Macro-Econ Theory

The components of aggregate economic growth. Theories underlying public policies which attempt to achieve the objectives of price stability, full employment and economic growth in the United States.

Credits: 3

Prerequisites:

(ECO 1001 or SBI 2005) and (ECO 1002) and (MAT 1310 or MAT 1312 or MAT 1320 or MAT 1330 or MAT 1400 or MAT 1500)

ECO 2102: Micro-Econ Theory

Economic and mathematical analysis of the equilibrium conditions of the household, the firm, and industry, in various market structures, together with a brief examination of the general equilibrium of the economy; emphasis upon developing a working knowledge of elementary mathematical analysis as it applies to present economic theory.

Credits: 3

Prerequisites:

(ECO 1001 or SBI 2005) and ECO 1002 and (MAT 1310 or MAT 1312 or MAT 1320 or MAT 1330 or MAT 1400 or MAT 1500)

ECO 2130: Intro to R Prog for Econ & Fin

Fast paced coverage of R. Topics include libraries, tidyverse, IO, data types and storage, data analysis and display, function writing, higher order functions vs loops, and performance.

Credits: 1

Prerequisites:

MAT 1400 or MAT 1500 and (MAT 1235 or MAT 1430 or STAT 1235 or STAT 1430) and MIS 2020 or CSC 1010

ECO 2137: Economic Statistics

Credits: 3

ECO 2993: Internship

Fulfills 3.0 economic elective credits.

Credits: 3

ECO 2996: Internship

Fulfills 6.0 economic elective credits.

Credits: 6

ECO 3106: Econ of Money & Banking

Principles of money, banking and financial markets; the relationship of the monetary and banking system to the functioning of the economy; the theory and practice of monetary policy; the function of money in international payments.

Credits: 3

Prerequisites:

(ECO 1001 or SBI 2005) and ECO 1002

ECO 3107: FED Challenge

Competition style course structured to combine concepts of Federal Reserve monetary policy and advanced macroeconomic analysis with enhanced presentation skills. Students will be selected from the class to represent Villanova in an intercollegiate Fed Challenge Competition.

Credits: 3

Prerequisites:

(ECO 1001 or SBI 2005) and ECO 1002 and (ECO 2101 or ECO 3106)

ECO 3108: Global Political Econ

Socio-economic conditions, political history, and government policy and the global impact on international trade and monetary relations; regional integration; stability of international economic systems; economic development and transition strategies; role of multinational corporations in the global world.

Credits: 3

Prerequisites:

(ECO 1001 or SBI 2005) and ECO 1002

ECO 3109: International Economics

Comparative advantage; gains from foreign trade; Heckscher-Ohlin doctrine; technology and product cycles; tariff theory and policy; Other protection measures; economic integration; foreign exchange rates; fixed and flexible rates; balance of payments; multinational corporations.

Credits: 3

Prerequisites:

(ECO 1001 or SBI 2005) and ECO 1002

ECO 3111: Hist of Economic Thought

The evolution of economic analysis within the context of contemporary economic institutions and associated social, ethical, and political thought.

Credits: 3

Prerequisites:

(ECO 1001 or SBI 2005) and ECO 1002

ECO 3112: Public Sector Economics

The economic roles of various levels of government and the theory and practice of public expenditure and taxation. Government's impact on the allocation of resources and the distribution of income in a mixed economy.

Credits: 3

Prerequisites:

ECO 1001 or SBI 2005

ECO 3118: Women and the Economy

The role of women in the economy and its implications. Economics of the household, marriage, fertility, divorce unemployment, earnings of women and occupational choice. International comparisons and current public policy issues.

Credits: 3

Prerequisites:

ECO 1001 or SBI 2005

ECO 3120: Financial Economics

This course introduces students to the subject matter of corporate finance and financial economics. Topics covered include The Time Value of Money, Interest Rates, Stocks and Bonds, Firm Valuation, Investment Risk and Return, Corporate Financing, Capital Structure, Financial Modeling and Forecasting, Options, and Mergers and Acquisitions. Restricted to: Non-VSB majors and minors.

Credits: 3

Prerequisites:

(ECO 1001 or SBI 2005) and ECO 1002

ECO 3123: Labor Economics

Economic theories concerning the employer's labor demand, the individual's labor supply, educational/occupational choices, labor unions, on-the-job training, discrimination, labor market mechanisms and wage determination. Public policies which affect the market.

Credits: 3

Prerequisites:

ECO 1001 or SBI 2005

ECO 3124: Economics of Sports

Key economic concepts and theories of Industrial Organization and Public Policy, Public Finance, and Labor Economics, discussed in the context of the sports industry. An in-depth look at related econometric research of sports economists.

Credits: 3

ECO 3125: Industr Org & Public Pol

Economics of American industrial organization; market structure, conduct, and performance; the workability of competition in selected industries; the application of public policy and anti-trust law.

Credits: 3

Prerequisites:

ECO 1001 or SBI 2005

ECO 3126: Amer Econ Development

Growth of the American economy in terms of its various sectors and their interrelations; the evolution of important economic institutions and ideas and of the role of the entrepreneurs.

Credits: 3

Prerequisites:

(ECO 1001 or SBI 2005) and ECO 1002

ECO 3127: Econ Underdeveloped Area

Structural change in the process of development; growth patterns and income distribution; determinants and role of saving, investment, technological change; strategy and methods of development planning; the role of government; social institutions.

Credits: 3

Prerequisites:

ECO 1002

ECO 3128: Intro Mathematical Econ

Variables and functions, matrices and determinants, difference equations, and calculus. Applications to economic and business problems, including market equilibrium, revenue and cost functions, marginal theory, maximization problems, input-output analysis, and selected deterministic models.

Credits: 3

Prerequisites:

(ECO 1001 or SBI 2005) and (ECO 1002) and (MAT 1310 or MAT 1320 or MAT 1330 or MAT 1400 or MAT 1500)

ECO 3130: Programming for Econ & Fin

Programming in R for economics and finance applications. Topics include libraries, tidyverse, IO, data types and storage, indexing/slicing, data wrangling, regression, display, function writing, control structures, loops, higher order functions, performance, functional and objected oriented design.

Credits: 3

ECO 3132: Research Methods in Economics

The scientific methodology of studying economics. Emphasis on practical aspects of developing and undertaking an economics research project that includes the formation of a research question, literature review, and empirical testing.

Credits: 3

Prerequisites:

(ECO 1001 or SBI 2005) and (ECO 1002) and (MAT 1235 or MAT 1430 or MAT 2310 or MAT 4310 or STAT 1235 or STAT 1430 or STAT 2310 or STAT 4310 or VSB 2005)

ECO 3133: Economics of Healthcare

Examination of health as a durable good and specific markets for services to enhance health, including physician, nursing, hospital, and private insurance. The role of government and comparison to health care systems and outcomes in other countries are all studied.

Credits: 3

Prerequisites:

(ECO 1001 or SBI 2005) and ECO 1002

ECO 3135: Case Studies Amer Indust

Structure and conduct of selected industries in the U.S. Economy chosen from the manufacturing, finance, energy, public utility, and transportation sectors. Effects of government policies such as regulation, deregulation, antitrust, subsidization, and protection from foreign competition.

Credits: 3

Prerequisites:

ECO 1001 or SBI 2005

ECO 3137: Intro to Econometrics

Intermediate course in stochastic methods with emphasis on applications; estimation, hypotheses testing, regression analysis, economic forecasting, time series analysis and probabilistic formulation of economic relationships such as consumption and production functions.

Credits: 3

Prerequisites:

(ECO 1001 or SBI 2005) and (ECO 1002) and (MAT 1430 or MAT 1235 or MAT 2310 or MAT 4310 or STAT 1235 or STAT 1430 or STAT 2310 or STAT 4310 or VSB 2005)

ECO 3138: Game Theory

Basic game theoretic framework, concepts and applications; mathematical models to understand the behavior of humans in strategic situations.

Credits: 3

Prerequisites:

ECO 1001 or SBI 2005

ECO 3139: Behavioral Economics

Credits: 3

ECO 3140: Urban Economics

Utilizes economic theory to examine the major contemporary issues confronting urban areas; explores economic solutions to the problems of housing, transportation, education, poverty, crime, growth, employment, taxes and redevelopment.

Credits: 3

Prerequisites:

(ECO 1001 or SBI 2005) and ECO 1002

ECO 3200: Topics in Economic

Selected topics in economics currently of interest to faculty and students.

Credits: 3

Prerequisites:

(ECO 1001 or SBI 2005) and ECO 1002

ECO 4132: Seminar in Economics

Capstone course requiring students to utilize the tools of analysis and expression, including not only economic theory and applications, but also writing, speaking and mathematics. Computer skills expanded.

Credits: 3

Prerequisites:

ECO 2101 and ECO 2102 and (ECO 3132 or ECO 3137)

ECO 4200: Advanced Topics in Economics

Selected topics in economics currently of interest to faculty and students.

Credits: 3

Prerequisites:

ECO 2101 and ECO 2102 and ECO 3137

ECO 4201: Dynamic Macroeconomic Theory

Modern methods used in macroeconomic research based on microeconomic principles; dynamic processes of economic growth and business cycles; impact of rational expectations on fiscal and monetary policies; mathematical tools for dynamic economic models.

Credits: 3

Prerequisites:

ECO 2101 and ECO 2102

ECO 4203: Pol Eco of Development Aid

This course examines foreign aid using a variety of economic approaches and tools including growth models, a public choice approach, principal-agent theory, and econometric analysis. Building on the history and institutions of foreign aid, we will delve into current policy and academic debates including aid effectiveness, agency problems, conditionality, and selectivity. A recurring theme is how the economic and political objectives of aid donors and recipients influence the development effectiveness of aid.

Credits: 3

Prerequisites:

(ECO 2102 and ECO 3137)

ECO 4205: Time Series Analysis

Introduction to methods of time series analysis including univariate models, trends, seasonality, structural breaks, forecasting, policy analysis, vector autoregression and panel techniques.

Credits: 3

Prerequisites:

(ECO 2101 or ECO 2102) and ECO 3137

ECO 4207: Economics of Risk&Uncertainty

Credits: 3

ECO 4208: Public Choice

Credits: 3

ECO 4209: International Macroeconomics

Credits: 3

ECO 4210: Experimental Economics

Credits: 3

ECO 4500: Independent Study in Eco

Students with specific interests work on a tutorial basis with faculty. A departmental independent Research Proposal form must be approved by the directing faculty member and the department chairman prior to registration.

Credits: 3

Prerequisites:

ECO 2101 and ECO 2102

ECO 4650: Service Learning Practicum

Credits: 1

Education

EDU 1900: Literacy Instrn for Tutors

Workshop using a strength-based approach to provide an overview for tutoring school-aged children (K-12) in an afterschool setting. Intended for students who have some experience tutoring. 1 credit

Credits: 1

EDU 2201: Social Foundation Educ I

Major movements in the history of education to 1600 with emphasis on their social and philosophical context; historical development of educational aims, curriculum and types of education; religious and political influences on education.

Credits: 3

EDU 2202: Social Foundation Edu II

Development of public and private education in America in its social and philosophical context; types of education, governmental activity in education, educational finance, religious and political influences, impact of European developments.

Credits: 3

EDU 2253: History of American Education

Focus on the people, ideas, issues and controversies that have created the current American school system. Will chronicle attempts to include (and sometimes exclude) an expanding school population as racial, gender, religious and health issues became confrontational battlegrounds.

Credits: 3

EDU 2300: Research Seminar in Education

An opportunity for students to become acquainted with the various approaches to inquiry in educational research and to design a small scale research project. Students will learn how to locate, analyze and use both qualitative and quantitative research reports.

Credits: 3

EDU 3000: Prof. Development in Education

Required course upon entry in the Teacher Certification Program. Introduction to competencies required for state certification, Standards Aligned Systems, national and state teaching standards and code of conduct and evaluation methods leading to state licensure in teaching grades 7-12.

Credits: 1

EDU 3251: Psych of Teaching & Learning

The application of learning theory to classroom teaching.

Credits: 3

EDU 3253: Educational Policy Analysis

Examines the challenges facing public schools, the policies that are designed in response to these challenges, the effects of these policies on students, and efforts undertaken by some youth to improve education policy. Core course for Educational Policy & Leadership minor.

Credits: 3

EDU 3254: Prin & Tech of Instruct

Credits: 4

EDU 3258: Education & Society in 1960s

The relationship between educational developments and social change in the decade of the 1960s. The emergence of a distinctive youth culture and the educational impact of the civil rights and women's rights movements of the era.

Credits: 3

EDU 3260: World War II Experience in EDU

The impact of World War II on education and culture in the United States and foreign societies. Including educational experiences for women and ethnic and racial minorities.

Credits: 3

EDU 3261: Latinos in Education

Examination of methodological and analytical approaches to learning about the Education of US Latinos (Chicanos/ Mexican Americans, Puerto Ricans, Cubans, and other groups of Latin American origin.

Credits: 3

EDU 3262: Edu Pearl Harbor to Sputnik

The impact of World War II and the Cold War on American schools and society. The expansion of educational opportunities for women, ethnic and social minorities. The influence of advances in communications and technology on educational issues of the 1940s and 1950s.

Credits: 3

EDU 3263: Diversity and Inclusion

Introduction to the physical and social characteristics of diverse and exceptional students between 3 and 21. Issues of race, culture, gender, sexual orientation, and special education with respect to schools and in light of recent legislation and court decisions. Problem cases with an emphasis on the underprivileged, antisocial, and disadvantaged.

Credits: 3

EDU 3264: Intro to Disability Studies

Social, political, cultural and academic implications of disability; legacy of disability in the US and abroad; strategies for working with individuals with special needs. Service learning is required.

Credits: 3

EDU 3265: Global Racism in Schools

Credits: 3

EDU 3266: Civil War Exp in Education

Investigation of the impact of the Civil War on education and culture. Curricular and instructional issues in teaching the Civil War in selective education environments.

Credits: 3

EDU 3277: Urban Education

Examines the challenges of urban schooling, the historical roots of these challenges, and the pedagogical techniques and policy tools that are being used to respond to them. A weekly community-based learning lab in an urban school is required.

Credits: 3

EDU 4220: Spec Meth Secondary Sch

Credits: 3

EDU 4242: Special Topics: Education

Credits: 3

EDU 4245: Literacy & Eng Lang Learning

Techniques for literacy evaluation; methods of teaching literacy and English as a second language; strategies for basic skill development and student observation in the schools.

Credits: 3

EDU 4281: Meth English Sec School

The curriculum, planning units and lessons in the teaching area; general methods of teaching, special methods and instructional materials in the subject, including textbooks, courses of study and reference works; application of the principles and techniques studied in Education 3254 to teaching the subject; lesson plans, units and tests in using methods, techniques, and materials in the subject; planned experiences and weekly assignments in neighboring secondary schools to observe, assist teachers, and teach pupils in the subject.

Credits: 3

Prerequisites:

EDU 3251 :D-

EDU 4282: Meth Fgn Lang Sec School

The curriculum, planning units and lessons in the teaching area; general methods of teaching, special methods, and instructional materials in the subject, including textbooks, courses of study and reference works; application of the principles and techniques studied in Education 3254 to teaching the subject; lesson plans, units and tests and in using methods, techniques, and materials in the subject; planned experiences and weekly assignments in neighboring secondary schools to observe, assist teachers and teach pupils in the subject.

Credits: 3

Prerequisites:

EDU 3251 :D-

EDU 4283: Meth Math Sec School

The curriculum, planning units, and lessons in the teaching area; general methods of teaching special methods, and instructional materials in the subject; including textbooks, courses of study and reference works; application of the principles and techniques studied in Education 3254 to teaching the subject; lesson plans, units and tests and in using methods, techniques, and materials in the subject; planned experiences and weekly assignments in neighboring secondary schools to observe, assist teachers and teach pupils in the subject.

Credits: 3

Prerequisites:

EDU 3251 :D-

EDU 4284: Meth Science Sec School

The curriculum, planning units, and lessons in the teaching area; general methods of teaching special methods and instructional materials in the subject; including textbooks, courses of study and reference works; application to the principles and techniques studied in Education 3254 to teaching the subject; lesson plans, units and tests and in using methods, techniques, and materials in the subject, planned experiences and weekly assignments in neighboring secondary schools to observe, assist teachers and teach pupils in the subject.

Credits: 3

Prerequisites:

EDU 3251 :D-

EDU 4285: Meth Soc Stud Sec School

The curriculum, planning units, and lessons in the teaching area; general/ methods of teaching, special methods, and instructional materials, in the subject, including textbooks, courses of study and reference works, application of the principles and techniques studied in Education 3254 to teaching the subject, practice in preparing lesson plans, units and tests and in using methods, techniques, and materials in the subject; planned experiences and weekly assignments in neighboring secondary schools to observe, assist teachers and teach pupils in the subject.

Credits: 3

Prerequisites:

EDU 3251 :D-

EDU 4289: Education Independent Study

Supervised independent study, specific requirements will be determined by the faculty member. Students may only register for this class once with special permission of chairperson.

Credits: 3

EDU 4290: Philosophy of Education

The development of a sound personal philosophy of education and practice in applying that philosophy to current educational issues.

Credits: 3

EDU 4291: Student Teaching

Observation and teaching under actual classroom conditions in the student's field of teaching specialization; open only to students of the Senior year who have completed all the subject matter courses in the field of specialization.

Credits: 9

Prerequisites:

(EDU 2201 :D- or EDU 2202 :D-) and EDU 3251 :D-

Co-Requisites:

EDU 4292

EDU 4292: Senior Seminar

The student teaching experience; elements of school law; current educational issues; use of computers in the classroom; relationship of practice to theory; sharing of experiences, common problems and alternative teaching practices; open to student teachers.

Credits: 3

Prerequisites:

(EDU 2201 :D- or EDU 2202 :D-) and EDU 3251 :D-

Co-Requisites:

EDU 4291

EDU 4298: Student Teaching

Credits: 6

EDU 4301: Humanistic Education

Principles of humanistic psychology as they apply to education: Active listening, kinesics, values clarification, motivation, classroom groups, and the teacher as a group facilitator.

Credits: 3

EDU 7031: Independent Study

Credits: 1

EDU 7124: Digital Literacies

This one-credit course examines how digital technology is changing literacy and learning for K-12 students. Participants will study the ways in which digital tools shape and are shaped by sociocultural processes of learning and development.

Credits: 1

EDU 7126: Teaching for Engagement

This one-credit course will examine theory and research on student engagement, including its constituents, antecedents, and effects. Participants will learn to use this literature and design-thinking to create learning environments and experiences that promote active student engagement in learning.

Credits: 1

EDU 7133: Classroom Management

Investigation of successful strategies for positive approaches to classroom management as well as examination of school & school district policies.

Credits: 1

EDU 7141: Integr Teaching Sci, Mat, Tech

Students will learn a method of integrating the teaching of Science, Mathematics and Technology. The method is based on a laboratory experience and is modeled using physics experiments leading to determining the earth's field. Participants will take measurements and analyze results with the aid of the computer. There are no course prerequisites in the technical fields. Those seeking credit will be required to submit a formal laboratory report on the material learned with appropriate additional requirements.

Credits: 1

EDU 7142: Parents & Community Partnership

This one-credit course prepares teachers to build effective relationships with families and surrounding school communities. Participants will examine research and best practices on school-family partnerships, conferencing, communication, and the community schools model.

Credits: 1

EDU 7149: Mindfulness in Schools

Participants will examine the concepts and engage in the practice of the fundamental elements of mindfulness. The workshop will review the research on the integration of mindfulness into schools and prepare to incorporate these practices with their students.

Credits: 1

EDU 7150: Multiple Intelligences in Schl

Foundational to both theoretical and practical instructional strategies for teachers, addressing Gardner's Theory of Multiple Intelligences.

Credits: 1

EDU 7153: Urban Education

For inservice teachers, this workshop will provide confirmation of the challenges they face as well as a new set of instructional and affective strategies for meeting the needs of many urban students.

Credits: 1

EDU 7240: Soliciting Student Voices

The workshop will address the definition of student voices; the pedagogical and philosophical warrants for it; the benefits and drawbacks of student voice efforts; and best practices for soliciting and using student voice to improve instruction and strengthen schools.

Credits: 1

EDU 7271: Delivering Career Services

Explore how higher education career services functions deliver positive career outcomes to students and alumni in an environment fueled by rising costs, dynamically changing economic conditions, and an ever-increasing diverse community of scholars.

Credits: 1

EDU 7272: Systemic Approaches to Equity

Examines systemic approaches to address equity in education with a focus on institutional change models. Reviews common elements across models, as well as challenges and effectiveness of these approaches, through the use of case studies and current research.

Credits: 1

EDU 7275: Conducting Action Research

Provide practicing teachers and administrators in Graduate Teacher Education, including Master's + Certification, and Educational Leadership programs with the tools and guidance to carry out an action research project from statement of the problem to dissemination of the results.

Credits: 1

Prerequisites:

EDU 8603

EDU 7284: Differentiated Instruction

Overview of research that supports differentiated instruction and explores needs of struggling and advanced learners. Develop lesson plans that recognize academic standards and provide strategies and activities that honor individual learning styles.

Credits: 1

EDU 7285: Inclusive Classrooms

To equip teachers with the skills needed in accommodating students with disabilities in an inclusive setting. Review of current regulations and ways of meeting educational needs of all students.

Credits: 1

EDU 7295: Multi-Tier System of Supports

Multi-Tier System of Supports (MTSS) is the practice of providing high quality instruction and interventions matched to students with special needs. MTSS procedures, various applications, and standard implementations will be explored in school and classroom settings.

Credits: 1

EDU 7296: Catholic Higher Ed Stud Affair

How might an institution's identity and values inform the efforts within Student Affairs? What unique pathways are available to practitioners for student growth and learning in this context? Explore theory and practice of student development at faith-based colleges and universities.

Credits: 1

EDU 7298: Strategic Planning in Educ

Strategic planning opportunities abound in educational settings. Effective planning requires specific skills and disciplined, detailed work. This one-credit course is designed to help educators understand planning constructs and develop techniques to engage in and lead strategic planning efforts.

Credits: 1

EDU 7311: Diversity in Public Education

Examines the history of diversity of public education and the impact of policies and laws on current K-12 landscape. Considers how educators can become culturally proficient to address the needs and dreams of diverse student populations through an intersectional lens.

Credits: 1

EDU 7321: Student Teaching Seminar

Students simultaneously enrolled in Graduate Student Teaching meet bi-weekly with a faculty member to analyze and reflect upon their student teaching experience.

Credits: 1

EDU 7350: Title IX and Its Evolution

Learn about the evolution of Title IX since its enactment in 1972 to recent developments connecting Title IX to sexual violence on college campuses. Explore the implications for colleges as they seek to comply with Title IX requirements and expectations.

Credits: 1

EDU 7351: Campus Physical Environments

This applied theory workshop introduces the literature on higher education physical environments and student usage. We will explore the campus environment, focusing on promoting engagement and student learning through design planning.

Credits: 1

EDU 7416: Sports in Higher Education

Examines how colleges and universities support and spend on intercollegiate athletics and how this trend affects both campus life and the larger society. Topics include branding; how intercollegiate athletics challenges and reproduces structural inequalities; and the impacts of Title IX.

Credits: 1

EDU 7420: Program Evaluation & Edu

Workshop examines the systematic method for collecting, analyzing, and using information to answer questions about projects, policies and programs, particularly about their effectiveness, efficiency, merit, and worth. Examples from educational program evaluations will be explored, discussed, and evaluated.

Credits: 1

EDU 7542: Integrating Ipad in Classroom

Explores the use of online primary source collections and the affordances of iPads in the classroom to enhance instruction.

Credits: 1

EDU 7544: Educating Middle School

Credits: 1

EDU 7551: Lead Top in Higher Education

Evolution of presidential leadership in America universities and the professional conduct of university/college teachers and administrators. Exploration of how the moral tone set for the academic community by the faculty and administration frames choices, policies, and actions.

Credits: 1

EDU 7553: College Student Demographics

Provides an overview of the racial, class, and gender stratification of the higher education system, the emergence of institutions that serve diverse populations, and a critical review of campus social movements.

Credits: 1

EDU 7564: Classroom Mgt & Teach Wksp

Motivating of adolescent behavior, strategies for handling unacceptable behavior and creating positive classroom environments for effective communication, and protocols for effective communication with parents and administrators.

Credits: 1

EDU 7935: Dealing with Difficult Student

Techniques for dealing with difficult students, exploring the root causes of disrupting behavior and emphasizing a step-by-step approach for dealing with such students through communication approaches and intervention techniques.

Credits: 1

English

Upcoming Courses

- [Fall 2020 Upper-Level Courses](#)
- [Fall 2020 1842 First-Year Courses](#)

ENG 1050: The Literary Experience

Introduction to literature and the methods of literary analysis. Close readings of texts. Individual sections vary in the works covered.

Credits: 3

ENG 1842: Perspectives in Literature

Close readings of literary texts, examined from particular thematic perspectives. Individual sections vary in the works covered. Does not fulfill Core Curriculum requirements. Preference given to freshman students.

Credits: 3

ENG 1903: Internship Elective Credits: 3**ENG 1906: Internship Elective Credits: 6****ENG 1909: Internship Elective Credits: 9****ENG 1975: Core Lit and Writing Seminar**

Careful reading of and intensive writing about literature. Individual sections vary in themes and works covered. Restricted to Arts & Sciences students governed by the New Core Curriculum instituted in Fall 2011.

Credits: 3

ENG 2000: Adv Expository Writing

Practice in writing reports, reviews, arguments, description; emphasis on organization and development.

Credits: 3

ENG 2003: Intro to Creative Writing

Designed for students who wish to experiment with composing several kinds of creative writing: short fiction, creative nonfiction, and poetry.

Credits: 3

ENG 2004: Intro to Creative Nonfiction

Creative nonfiction has been described as "true stories well told." Students will write, close read, and workshop "true stories," including travel writing, food writing, and the lyric essay.

Credits: 3

ENG 2005: Writing of Short Story

Instruction in writing short story.

Credits: 3

ENG 2006: The Writing of Poetry

Instruction in poetry writing, including how to craft imagery, figurative language, sound, line, and rhythm, as well as traditional and contemporary forms. Students read widely and write lyric, narrative and experimental poems that are shared in a supportive workshop setting.

Credits: 3

ENG 2007: The Writing of Screenplays

Instruction in writing screenplays. Limited to 15 students. Permission of instructor required.

Credits: 3

Prerequisites:

Permission of instructor required.

ENG 2009: Writing the Traditional Novel

A creative writing workshop course designed for students eager to leap into the complex process of writing a novella or short novel. Students will close-read short novels to analyze elements of craft and workshop sections of their own novel in-progress.

Credits: 3

ENG 2011: Writing the Experimental Novel

Reading of a variety of experimental fictional models and application of these models to the construction of a larger experimental group novel, thus expanding students' repertoire of narrative techniques.

Credits: 3

ENG 2012: Advanced Creative Writing

Usually taught by visiting professors. For writers of poetry and short fiction. Reading of models of exemplary technique and application of these to students' own work. Critical feedback from peers and professors.

Credits: 3

ENG 2013: Writing of Memoir

Through readings of seminal essays and memoirs and writing assignments that emphasize voice, structure, research, dialogue and the reconstruction of events, students learn to shape personal experiences into compelling narratives.

Credits: 3

ENG 2015: Business Communication

The essential elements of corporate communication, with emphasis on writing.

Credits: 3

ENG 2016: Writing Speculative Fiction

This creative writing workshop explores craft elements of writing short- and long-form fiction. Reading and writing assignments focus on speculative fiction, including the genres of horror, fantasy, science fiction and historical fiction.

Credits: 3

ENG 2017: Writing Detective Fiction

Do you love detective fiction? Have you always wanted to write your own "whodunit?" In this course, you'll read and analyze classic and contemporary detective fiction while working to produce, workshop, and polish your own creative work.

Credits: 3

ENG 2018: Nature Writing Workshop

The natural world will be a source for the creative non-fiction, poetry, and fiction pieces students will write in this class. Through readings, field trips, writing exercises, and workshops students will learn to sharpen their language and see more deeply.

Credits: 3

ENG 2020: Journalism

News gathering and news writing; principles, rules and techniques of news, editorials, features.

Credits: 3

ENG 2021: Journalism for Co-ops

Journalistic principles and practice for students doing individual co-ops via ENG 2999. Distance learning.

Credits: 3

Co-Requisites:

ENG 2999

ENG 2030: Tutoring Writers

Theory and practice of Writing Center Work; writing, editing and tutoring skills. Permission of instructor required.

Credits: 3

Prerequisites:

Permission of instructor required.

ENG 2041: Travel Writing

Writing of travel narratives with focus on descriptive and narrative techniques. Readings in contemporary travel tales as well as critical theory associated with travel writing.

Credits: 3

ENG 2042: Web Writing Theory & Practice

Design and completion of web writing projects and web sites. Theoretical and critical attention to the different rhetorical situations of print and hypertext media.

Credits: 3

ENG 2043: Writing About US Pop Culture

Analysis of popular culture: TV, advertising, the visual arts, music, the Internet, sports, and best-selling books. Extensive writing for individual student web pages.

Credits: 3

ENG 2045: Sp Top in Writing & Rhetoric

Special writing and rhetoric topics selected by the instructor.

Credits: 3

ENG 2046: English as a 2nd Language

This service-learning course provides students with the background, tools, and experience needed to teach English to non-native speakers. In addition to classes at Villanova, students practice teaching at a Hispanic culture center.

Credits: 3

ENG 2050: Writing for Magazines

The craft of magazine writing. Genres of non-fiction including profile writing, essay writing, travel writing, criticism, and long-form journalism.

Credits: 3

ENG 2051: Sports Writing

Sports are more than games; they're a crucible for examining human experience. By examining the work of some of the genre's best writers, students will learn to report and write about this arena with deeper understanding and thought.

Credits: 3

ENG 2060: Desktop Publishing

Use of software to write editorials, news articles, and press releases, and to design flyers, brochures, and newsletters for community organizations. The basics of web page design.

Credits: 3

ENG 2070: Legal Writing and Analysis

Fundamentals of legal writing and analysis.

Credits: 3

ENG 2080: Hist of English Language

The development of the English language from Old English to Modern English.

Credits: 3

ENG 2101: Brit Literary Trad 1

British literature from Anglo-Saxon to the Neo-Classical periods.

Credits: 3

ENG 2102: Brit Literary Trad 2

British literature from the genesis of Romanticism in the 19th century to the literature of modern times.

Credits: 3

ENG 2103: Amer Literary Trad 1

American literature from the Colonial Period to the era of Walt Whitman and other writers whose lives and works largely precede the Civil War.

Credits: 3

ENG 2104: Amer Literary Trad 2

American literature from the Civil War to modern times.

Credits: 3

ENG 2250: Ways of Reading:Lit Analysis

An exploration of how we engage, understand, explicate, and enjoy texts of all sorts.

Credits: 3

ENG 2300: Women in Literature

Study of the place of women in literature, with emphasis on modern fiction, drama and poetry written in English.

Credits: 3

ENG 2301: Science Fiction

Science fiction as a significant genre.

Credits: 3

ENG 2302: Apocalyptic Literature

One of the oldest forms of narrative, apocalyptic literature is more popular - and powerful - than ever. Starting with Revelation, this course traces this tradition through fascinating poems, stories, novellas, novels and films to the present day.

Credits: 3

ENG 2304: Cont World Lit & Environment

The study of global contemporary fiction, poetry, creative non-fiction, and film that focuses on the environment, climate change, social justice and the future of nature.

Credits: 3

ENG 2310: Study of Poetry

Concepts of poetry with detailed analyses of selected poems.

Credits: 3

ENG 2320: Forms of the Novel

The nature of the novel as an art form in British, American, and European works.

Credits: 3

ENG 2330: Forms of Drama

Drama as a genre; the main types of European and American drama.

Credits: 3

ENG 2340: Modern Short Story

Contributions to the short story form made by American, Irish, British, and Continental writers.

Credits: 3

ENG 2350: Narrative Television

Plot, character, voice, point of view in visual, aural, dramatic, and verbal aspects of serial television. What works similarly or differently in television and prose fiction? In television and film?

Credits: 3

ENG 2360: Adaptation:Film as Literature

The relationship between movies and literature dates back to film's earliest days. Comparing films and texts allows for an explanation of storytelling and the fascinating choices auteurs make. Plot, tone, and symbolism are considered alongside questions of power and representation.

Credits: 3

ENG 2400: Western World Literature I

Readings in translation of some of the classics of Western literature from the ancient world to the Renaissance, by such writers as Homer, Sophocles, Virgil, Dante, and Cervantes.

Credits: 3

ENG 2410: The Art of Translation

Translation is a passport to the world. Explore texts translated from a range of languages into English. Translation theory and experiments in translation will support our reading and writing across boundaries. Fluency in a second language is not required.

Credits: 3

ENG 2610: Tutorial Readings

Program of approved readings under the supervision of a selected faculty member; examination on readings and a lengthy paper required. Restricted to senior English majors with high cumulative averages. Permission of chair required; ordinarily may not be repeated.

Credits: 3

Prerequisites:

Permission of chair required; ordinarily may not be repeated.

ENG 2790/2791/2792/2793: Topics in Lit. and Culture

Specific topics vary each semester.

Credits: 3

ENG 2791: Topics in Lit. and Culture

Specific topics vary each semester.

Credits: 3

ENG 2800: Teaching Practicum

Open only to senior English majors with a GPA of at least 3.5. Permission of consulting teacher and chair required.

Credits: 3

Prerequisites:

Permission of consulting teacher and chair required.

ENG 2991: English Majors in Workplace

Communicating and applying skills of English Majors in the workplace.

Credits: 1

ENG 2992: English Topics Abroad

Co-requisite 1-credit course designed to provide an embedded study-abroad experience to complement a requisite English course.

Credits: 1

Co-Requisites:

ENG 2003

ENG 2041

ENG 2993: Internship

Internship

Credits: 3

ENG 2996: Internship

Credits: 6

ENG 2998: Publishing Co-op

Full-time employment with a selected firm in the area of publishing, where experience is gained through appropriate training, instruction, and supervision. Approval of English Department Chair required.

Credits: 6

Prerequisites:

Approval of English Department Chair required.

ENG 2999: Publishing Co-op

Full-time employment with a selected firm in the area of publishing, where experience is gained through appropriate training, instruction, and supervision. Approval of English Department Chair required.

Credits: 9

Prerequisites:

Approval of English Department Chair required.

ENG 3000: Intro to OE Lang & Lit

Old English literary works in translation and original language.

Credits: 3

ENG 3150: Chaucer

The Canterbury Tales, Troilus and Criseyde, and additional works.

Credits: 3

ENG 3160: Fabulous Middle Ages

The Middle Ages mixed history (historia) and fable (fabula) freely. This course traces the intersections between the fabulous (the fictional and fantastic) and the "real" in medieval narratives about the history, global travel, and the natural world.

Credits: 3

ENG 3181: Irish Epics, Visions&Hauntings

A study of Irish literature from its origins in the world of Celtic mythology, epic and saga through the development of Anglo-Irish literature.

Credits: 3

ENG 3190/3191: Medieval Brit/ Ir Lit. & Cult.

Specific topics vary each semester.

Credits: 3

ENG 3201: English Renaissance

Non-dramatic literature of the English Renaissance.

Credits: 3

ENG 3230: Eliz & Jacobean Drama

Playwrights of the English Renaissance excluding Shakespeare.

Credits: 3

ENG 3250: Shakespeare

A selection of plays by Shakespeare.

Credits: 3

ENG 3260: Revenge Tragedy

This course studies a popular and influential type of Renaissance drama: the revenge tragedy, a genre preoccupied with spectacular acts of murder and revenge and with the psychological, social, familial, and political circumstances that motivate and justify violent revenge.

Credits: 3

ENG 3290/3291: Renaissance Br/Ir Lit. & Cult.

Specific topics vary each semester.

Credits: 3

ENG 3291/3292: Renaissance Br/Ir Lit. & Cult.

Specific topics vary each semester.

Credits: 3

ENG 3300: 17th Cent Poetry & Prose

The poetry of Donne, Jonson, Lanyer, Herrick, Herbert; essays, sermons, journals, letters, pamphlets of Bacon, Donne, Milton, and others.

Credits: 3

ENG 3350: Milton

English poems and selected prose on issues of gender, politics, religion, culture.

Credits: 3

ENG 3420: 18th Century British Novel

Writings by Defoe, Fielding, Sterne, and others; and the Gothic novel of terror.

Credits: 3

ENG 3430: Restor & 18th cent Drama

Dramatists from Dryden to Sheridan.

Credits: 3

ENG 3440: Harlots, Rakes, & Libertines

Discover the Libertine authors of the seventeenth and eighteenth century, whose witty, scandalous works promoted a freethinking philosophy of sexual pleasure and individual freedom, and provoked critics who blamed them for modern social problems such as prostitution, poverty, and crime.

Credits: 3

ENG 3450: Dryden Swift & Pope

The study of the principal works of the major Neo-Classical writers.

Credits: 3

ENG 3490/3491: 18th c. Brit/Ir Lit. & Culture

Specific topics vary each semester.

Credits: 3

ENG 3501: Early Romantic Writers

Wordsworth, Coleridge and other writers of the first half of the Romantic period.

Credits: 3

ENG 3502: Later Romantic Writers

Byron, Shelley, Keats and other writers of the second half of the Romantic period.

Credits: 3

ENG 3504: 19th Cent Brit Women Writers

Writings by important nineteenth-century British women novelists and poets, including Mary Shelley, Charlotte Bronte, Christina Rossetti, Elizabeth Barrett Browning, and others.

Credits: 3

ENG 3505: Poetry & Prose 1830-1865

The poetry and prose of Carlyle, Tennyson, Browning, Newman, Arnold, and other writers of the era.

Credits: 3

ENG 3506: Poetry & Prose 1865-1900

The poetry and prose of Ruskin, Rossetti, Swinburne, Hopkins, Pater, Hardy, and others.

Credits: 3

ENG 3520: 19th Cent British Novel

Selected novelists from Jane Austen to Thomas Hardy.

Credits: 3

ENG 3525: Dickens

Selected novels by Charles Dickens.

Credits: 3

ENG 3530: Victorian Doubles

Investigate how Victorian literature represents doubles - self and other, women and men, past and present, public and private - and study changing constructions of gender, industrialization, and imperial expansion in nineteenth-century Britain.

Credits: 3

ENG 3580: Topics in 19th C Irish Lit&Cul

Special topic in 19th century Irish literature and culture. For access to the full course description, go to this course number in the Villanova Master Schedule and click on the "syllabus available" link.

Credits: 3

ENG 3590/3591: 19th c. Brit/Ir Lit. & Culture

Specific topics vary each semester.

Credits: 3

ENG 3610: Modern British Poetry

British poetry from 1900 to the present, with emphasis on Hopkins, Hardy, Yeats, Eliot, Auden, Muir, Edith Sitwell, K3 Dylan Thomas, and Philip Larkin.

Credits: 3

ENG 3615: James Joyce

A study of the novels and short stories of James Joyce, with concentration on Ulysses.

Credits: 3

ENG 3616: Irish American Drama & Film

Depictions of the American Irish in popular dramas and films from colonial times to the present. Popular Irish-American actors and their appeal, the Irish-American musical stage tradition, and the cross-over from popular drama to popular films such as John Ford's *The Quiet Man* and *The Informer*.

Credits: 3

ENG 3617: Irish Revivalism

Credits: 3

ENG 3618: Intro to African Lit I

Credits: 3

ENG 3619: Intro to African Lit II

Credits: 3

ENG 3620: Modern British Novel

The British novel from the turn of the century to World War II.

Credits: 3

ENG 3621: Contemp British Novel

This course explores British fiction written after the second World War until today. What stories do novelists tell about the meaning of "Britishness" after the British empire? We investigate themes of nostalgia, xenophobia, feminism, and class warfare in stylistically varied novels.

Credits: 3

ENG 3630: Modern British Drama

British drama from the 1890s to the Theatre of the Absurd.

Credits: 3

ENG 3640: Irish Drama

Credits: 3

ENG 3650: African Drama

Credits: 3

ENG 3680: Top: 20th-21st C Irish Lit&Cul

Special topic in 20th-21st century Irish literature and culture. For access to the full course description, go to this course number on the Villanova Master Schedule and click on "syllabus available" link.

Credits: 3

ENG 3682: Contemporary Irish Literature

Credits: 3

ENG 3690/3691: Br/Ir Lit. & Cult. after 1900

Specific topics vary each semester.

Credits: 3

ENG 3691: Br/Ir Lit. & Cult. after 1900

Credits: 3

ENG 4001: Major Amer Writers I

The masterpieces of selected American writers from early times to the Civil War era.

Credits: 3

ENG 4002: Major Amer Writers II

The masterpieces of selected American writers since the Civil War era.

Credits: 3

ENG 4003: African-American Lit Trad 1

Black people helped craft the narrative of their lived experiences from their arrival in the New World. Students read the earliest African American literary offerings through the first decade of the twentieth century, including political treatise, autobiography, poetry and novels.

Credits: 3

ENG 4040: American Short Story

Development of the short story in America from Washington Irving to the present.

Credits: 3

ENG 4500: American Slave Narrative

Slavery as a central paradox of American history and literature with emphasis on race and gender. Readings by Douglass, Brent, Stowe, Morrison, and others.

Credits: 3

ENG 4501: Amer Transcendentalism

An intensive analysis of Emerson, Thoreau, and other Transcendentalists.

Credits: 3

ENG 4505: Concord Writers

The major works of and interactions between Concord's most celebrated writers: Ralph Waldo Emerson, Henry David Thoreau, Nathaniel Hawthorne, Bronson and Louisa May Alcott.

Credits: 3

ENG 4510: 19th Cent Amer Poetry

American poetry from its beginning to Emily Dickinson.

Credits: 3

ENG 4515: American Gothic

The nature and evolution of horror writing in America from the eighteenth-century to today.

Credits: 3

ENG 4520: American Novel to 1895

The genesis of the American novel.

Credits: 3

ENG 4530: The American Renaissance

Pre-Civil War text, primarily from 1850-1855.

Credits: 3

ENG 4540: The American Revolutionary Era

Lives and writings of the American Revolutionary Era Founders.

Credits: 3

ENG 4590/4591: Am. Lit. & Cult. before 1900

Specific topics vary each semester.

Credits: 3

ENG 4590/4591/4592: Am. Lit. & Cult. before 1900

Specific topics vary each semester.

Credits: 3

ENG 4591: Am. Lit. & Cult. before 1900

Credits: 3

ENG 4602: African American Lit Trad 2

Credits: 3

ENG 4603: Black Lit. Short Story

Credits: 3

ENG 4605: Amer Poetry: 1900-1950

American poets of the first half of the twentieth Century, including Robinson, Frost, Stevens, Cummings, Williams, Millay, Pound, Eliot, and others.

Credits: 3

ENG 4610: Black Literature: Poetry

Credits: 3

ENG 4615: Amer Poetry since 1950

American poets since 1950, including Lowell, Plath, Sexton, Snodgrass, Ginsberg, Rich, Snyder, Baraka, and others.

Credits: 3

ENG 4618: Harlem Renaissance

Credits: 3

ENG 4619: The Works of Edith Wharton

The Works of Edith Wharton in context.

Credits: 3

ENG 4620: American Novel 1895-1950

Representative novelists from Crane to Steinbeck.

Credits: 3

ENG 4621: Amer Novel since 1950

Novels of the late Modern Period and of the early Post-modern period.

Credits: 3

ENG 4622: African American Women Writers

From Phyllis Wheatley to Zora Neale Hurston, Lorraine Hansberry to Alice Walker, Toni Morrison to Chimamanda Adichie, black women writers have helped shape and complicate the contours of the American literary canon. Students read an exciting range of genres.

Credits: 3

ENG 4623: Black Literature: Novel

Credits: 3

ENG 4630: American Drama to 1960

Major plays of the period.

Credits: 3

ENG 4631: Amer Drama since 1960

Major plays of the period.

Credits: 3

ENG 4632: Black Literature: Drama

Credits: 3

ENG 4635: Contemporary American Poetry

Focused study of contemporary American poetry emphasizing gender, ethnicity, aesthetic principles or genre.

Credits: 3

ENG 4636: Contemp Amer Women's Poetry

The work of American women poets from the last forty years.

Credits: 3

ENG 4640: Contemp Amer Women's Lit

Writings by women from WW II to the present. Works by Ann Petry, Maxine Hong Kingston, Toni Morrison, Joyce Carol Oates, Kathy Acker, Bobby Ann Mason, and others.

Credits: 3

ENG 4645: Post Modern Amer Fiction

Experimental narratives by American writers of the last four decades. Works by Vladimir Nabokov, Thomas Pynchon, Ishmael Reed, Don DeLillo, Joanna Russ, and others.

Credits: 3

ENG 4646: Race & Ethnicity: Amer Novel

Canonical texts that treat questions of race and ethnicity. Focus on the critical role of language and literature in constructing and deconstructing racial categories.

Credits: 3

ENG 4647: Gender & Sexuality in US Lit

This course examines a fascinating range of contemporary US literary texts to explore the ways that gender and sexuality intersect with race, class and other categories of identity to form our experiences of selfhood, community, national belonging, and power.

Credits: 3

ENG 4648: U.S. Empire & Cont. Am. Lit.

Examines American literature in the context of U.S. empire, including histories and effects of settler colonialism, overseas expansion, and war. Focuses on authors of color from 1945 to the present.

Credits: 3

ENG 4649: Intro to Asian American Lit

Examines literature, film art, and other cultural productions by Asian Americans and explores Asian American histories from the early 20th century to the present.

Credits: 3

ENG 4651: Lives of the Undocumented

The lived experiences of undocumented immigrants in the U.S. told in their own words through memoir, fiction, poetry, graphic novel, testimony, creative and critical essays.

Credits: 3

ENG 4652: Letters, Texts, & Twitter

How does writing bring together distant lovers, friends, family? We'll read letters, the digital forms (social media, instant messaging) that have replaced them, and their representation in novels, poems, and essays to explore how intimacy forms across distance.

Credits: 3

ENG 4690/ 4691/ 4692: Amer. Lit. & Cult. after 1900

Specific topics vary each semester.

Credits: 3

ENG 4691: Amer. Lit. & Cult. after 1900

Specific topics vary each semester.

Credits: 3

ENG 4700: Caribbean Literature

Explores representations of the culture and history of the Caribbean in the literary and performance traditions of creative artists from the region. Examines postcolonial discourse and folklore aesthetics across genres and in cultural forms such as carnival and Caribbean music.

Credits: 3

ENG 5000: Senior Seminar

Capstone experience combining immersion in primary and secondary materials with an intensive writing experience. Limit of 15 students.

Credits: 3

Entrepreneurship

ENT 2020: Intro to Entrepreneurship

Process of starting new business including business models and plans, legal and HR issues, product design, supplier relationships, business growth.

Credits: 3

Prerequisites:

(VSB 2020 and VSB 2009 :Y or VSB 2010 or VSB 2030 and VSB 2040) or ((ECO 1001 or SBI 2005) and ECO 1002 and ACC 1101 and FIN 1113 and MGT 1102 and MKT 1137)

ENT 2021: Entrepreneurship Mkt

Marketing strategies for new ventures including target markets, research, sales strategy, guerilla marketing, promotion, distribution, pricing.

Credits: 3

Prerequisites:

(VSB 2020 and VSB 2009 :Y or VSB 2010 or VSB 2030 and VSB 2040) or ((ECO 1001 or SBI 2005) and ECO 1002 and ACC 1101 and FIN 1113 and MGT 1102 and MKT 1137)

ENT 2022: Entrepreneurship Fin

Funding strategies and accounting for new ventures including cash management, forecasting, account procedures, inventory models and management, pro forma financial statements, credit policies, taxation, exit options.

Credits: 3

ENT 2023: Entrepreneurship Practicum

Develop a business plan, plan for, finance and start an actual business; end business and analyze experience; profits donated to charity of choice.

Credits: 3

Ethics

ETH 2050: The Good Life:Eth & Cont Prob

Major Western ethical traditions as they apply to selected contemporary ethical problems, with special consideration to Jewish and Christian perspectives.

Credits: 3

ETH 3010: Topics in Ethics

Addresses a special topic in ethics of current interest to faculty & students.

Credits: 3

ETH 4000: Integrating Seminar

A capstone course which integrates academic work and service pursued for concentration, topics determined by professor and research projects of students.

Credits: 3

ETH 4975: Independent Study in Ethics

Topic in Ethics chosen by the student and approved by the professor and the Director of the Ethics Program.

Credits: 3

Finance

FIN 1113: Principles of Finance

The theory and techniques of financial management. Time value of money; risk and return; financial analysis and planning; working capital management, capital budgeting; cost of capital; strategic long term financing decisions.

Credits: 3

Prerequisites:

ACC 1101 and (ECO 1001 or SBI 2005) and ECO 1002 and VSB 2006 and (MAT 1235 or MAT 1430 or STAT 1235 or STAT 1430)

FIN 2114: Intermediate Corp Finance

Risk and return relationships; valuation models; cost of capital; capital structure; capital budgeting; dividend policy; international financial transactions; financial statement analysis and forecasting; working capital management. Emphasis on computer applications and case studies.

Credits: 3

Prerequisites:

(VSB 2020 :Y and VSB 2009 or VSB 2010 or VSB 2030 and VSB 2040) or FIN 1113

FIN 2121: Special Topics in Finance

Special finance topics offered in lecture/seminar format. Permission of Department Chair or Instructor.

Credits: 1

FIN 2227: Fixed Inc Markets & Valuation

Overview of fixed income markets and securities traded within those markets; bond valuation; duration and convexity of fixed income securities; asset backed security markets and valuation; credit risk analysis interest rate determination and models; interest rate risk management.

Credits: 3

Prerequisites:

(VSB 2020 :Y and VSB 2009 or VSB 2010 or VSB 2030 and VSB 2040) or FIN 1113

FIN 2230: Risk Mgmt of Fin Institutions

The structure, operation, management, and regulation of commercial banks, savings and loan associations, mutual savings banks, credit unions, insurance companies, finance companies, pension funds, investment companies, and international financial institutions; structure and operation of the Federal Reserve system; measurement and management of the risks of financial institutions.

Credits: 3

Prerequisites:

(FIN 2227 and FIN 2323 and FIN 2114)

FIN 2323: Equity Markets and Valuation

Risk and return; market efficiency; structure of equity markets; equity trading strategies; financial statement analysis and ratio analysis; financial forecasting; valuation of common stocks using fundamental, relative, and technical analysis; convertible securities, warrants, equity options, and risk management applications.

Credits: 3

Prerequisites:

(VSB 2020 :Y and VSB 2009 or VSB 2010 or VSB 2030 and VSB 2040) or FIN 1113

FIN 2324: Portfolio Management

Advanced investment management with an emphasis on portfolio management; forecasting economic conditions; risk-return characteristics of securities; asset allocation (optimization) techniques; selecting investment goals; evaluating portfolio performance; international diversification; portfolio management with options and futures; computer applications in investment management.

Credits: 3

Prerequisites:

(FIN 2227 and FIN 2323 and FIN 2114)

FIN 2325: Introduction to Derivatives

Overview of financial and non-financial derivatives including options, forwards, futures and swaps; derivatives valuation; trading strategies; application of derivatives for managing financial risks. Prerequisite senior standing.

Credits: 3

Prerequisites:

(FIN 2227 and FIN 2323 and FIN 2114)

FIN 2326: Mkt.Struct., Trading&Liquidity

Liquidity, market structure, and trading in financial markets; alternative market structures and their economic and operational underpinnings; tactical trading decisions within different market structures using simulation software and real-time data services.

Credits: 3

Prerequisites:

(FIN 2227 and FIN 2323 and FIN 2114)

FIN 2330: Corporate Restructuring

Acquisition process and other methods of corporate restructuring. Advantages of internal and external expansion; types of combinations; requisite financial analysis; negotiation strategies; tax options; the role of government. Benefits and limitations of IPOs, leveraged buyouts, employee stock ownership plans and bankruptcy.

Credits: 3

Prerequisites:

FIN 2227 and FIN 2323 and FIN 2114

FIN 2333: Financial Modeling & Valuation

Financial modeling; valuation methods; investment banking process; discounted cash flow models; comparable firms; precedent transactions; leveraged buyout model; mergers & acquisitions; restructurings. Emphasis on computer applications.

Credits: 3

Prerequisites:

(FIN 2323 and FIN 2227 and FIN 2114)

FIN 2335: Intl Financial Management

Foreign exchange markets, foreign derivatives markets, external currency market and their instruments, international parity conditions, foreign exchange risk management, foreign investment analysis, political risk assessment, financing foreign trade, managing the multinational financial system.

Credits: 3

Prerequisites:

(ECO 3108 and VSB 2020 :Y and VSB 2009 or VSB 2010 or VSB 2030 and VSB 2040) or (FIN 1113 and ECO 3108)

FIN 2340: Contemporary Topics in Finance

Contemporary issues and topics in Financial Management, Financial Markets, Investments, or International Finance.

Credits: 3

Prerequisites:

(FIN 2227 and FIN 2323 and FIN 2114)

FIN 2342: Student-Managed Funds I

Management of real-dollar portfolios using various investment styles; business cycle analysis; industry analysis; investment objective screening; security analysis; portfolio analysis, compliance; portfolio reporting. Approval of Finance Department Chair and instructor required.

Credits: 3

Prerequisites:

(FIN 2227 and FIN 2323) and (FIN 2114 :Y)

FIN 2343: Student-Managed Funds II

Continuation of FIN 2342. This course will not be used to fulfill a Finance major or minor elective requirement. NOTE: This course does not fulfill a FIN elective.

Credits: 3

Prerequisites:

FIN 2342

FIN 2350: Real Estate Capital Markets

Public real estate debt and equity markets. Mortgage Backed Securities, Commercial Mortgage Backed securities, Collateralized Mortgage Obligations, Prepayment Modeling, Real Estate Equity Valuation.

Credits: 3

Prerequisites:

(FIN 2227 and FIN 2323 and FIN 2114)

FIN 3350: Finance Internship

Employment with an approved firm in the area of Finance where experience is gained with appropriate training, instruction, and supervision. Course does not fulfill the requirements for major. Prerequisites: junior or senior standing, a minimum GPA of 2.5, approval of department chair.

Credits: 3

Prerequisites:

junior or senior standing, a minimum GPA of 2.5, approval of department chair.

FIN 3360: Independent Study - Finance

Independent study under a faculty member's guidance in an area of special interest to the student. The area of interest must be discussed with the faculty member prior to registration. Course does not fulfill the requirements for major. Prerequisites: Finance major with senior standing, and written permission of chairperson required.

Credits: 3

Prerequisites:

(FIN 2227 and FIN 2323) and (FIN 2114 :Y)

FIN 3470: Finance Co-Op

Full-time employment with an approved firm in the area of Finance where experience is gained through appropriate training, instruction, and supervision. Course does not fulfill the requirements of the major. Prerequisite: Finance major with junior status; minimum gpa requirements will vary; approval of department chair.

Credits: 6

Prerequisites:

Finance major with junior status; minimum gpa requirements will vary; approval of department chair.

French and Francophone Studies

FFS 1111: Introductory French I

Groundwork in French, including oral proficiency, aural comprehension and reading; for students with no prior knowledge of French.

Supplementary language laboratory work and oral drills.

Credits: 4

FFS 1112: Introductory French II

Groundwork in French, including oral proficiency, aural comprehension and reading; for students with one year of high school French.

Supplementary language laboratory work and oral drills. Students should have completed FFS 1111 or equivalent.

Credits: 4

FFS 1121: Intermediate French I

Review of grammar, composition, reading and conversation. Students should have completed FFS 1112 or equivalent.

Credits: 3

FFS 1122: Intermediate French II

Review of grammar, composition, reading and conversation. Students should have completed FFS 1121 or equivalent.

Credits: 3

FFS 1130: Intensive French Language

Regular practice in conversation and composition with review of grammar and continuing work on language skills in French. Offered in Lille through the Villanova-in-Lille program and Intensive Language and Culture Summer Program in Lille and Paris.

Credits: 3

FFS 1131: Conversation and Composition I

Regular practice in conversation and composition with review of grammar and continuing work on language skills in French. Students should have completed FFS 1122 or the equivalent.

Credits: 3

FFS 1132: Conversation & Composition II

Regular practice in conversation and composition with review of grammar and continuing work on language skills in French. Students should have completed FFS 1131 or the equivalent.

Credits: 3

FFS 1134: Business French

An introduction to French business terminology and discourse related to economic, finance, and management.

Credits: 3

FFS 1138: Advanced Grammar

Intensive practice of spoken and written French.

Credits: 3

Prerequisites:

FFS 1132 or FRE 1132

FFS 1139: Intercultural Comm in French

Offered in Lille through the Villanova-in-Lille program, this course aims to develop students' intercultural sensitivity and competence by helping them to reflect on their experiences as they occur.

Credits: 3

FFS 1140: Writing & Stylistics in French

Intensive practice in written expression and textual analysis. Compositions are modeled on selected French texts.

Credits: 3

Prerequisites:

FFS 1132 or FRE 1132

FFS 1151: Intro to Translation of French

Introduction to the principles of translation from French to English and from English to French.

Credits: 3

Prerequisites:

FFS 1132 or approval from the FFS coordinator.

FFS 2075: Introduction to French Cinema

Introduction to major works of French cinema from the silent era to the 2000s. Prerequisite: FFS 1132 or authorization from instructor.

Credits: 3

Prerequisites:

FFS 1132

FFS 1132 or authorization from instructor.

FFS 2076: Intro To Francophone Cinema

Introduction to major films from various Francophone traditions (Maghreb, Sub-Saharan Africa, Caribbean, Quebec).

Credits: 3

Prerequisites:

FFS 1132 or authorization from instructor.

FFS 2220: Lit and Culture of France

Significant developments in the arts, society, and literature in France from the Middle Ages to the French Revolution. Prerequisite: FFS 1132 or authorization from instructor.

Credits: 3

Prerequisites:

FFS 1132

FFS 1132 or authorization from instructor.

FFS 2221: Lit/Cult Francophone World

Significant developments in the literatures of the French-speaking world from the 20th century to the present.

Credits: 3

Prerequisites:

FFS 1132

FFS 2285: Intro to Comics of French Expr

An overview of the voices, forms and innovations of the comics traditions of France and the French-speaking world. Works studied may include Tintin, Asterix et Obelix, Persepolis, Lapinot, Gaston Lagaffe.

Credits: 3

Prerequisites:

FFS 1132

FFS 2993: Service Learning Internship

Translation of documents as part of the CRS Partnership, working on water supply, sanitation, and environmental health issues, within the historical and cultural context of the region. Prerequisites: FFS 1132 or approval from instructor.

Credits: 3

Prerequisites:

FFS 1132

FFS 1132 or approval from instructor.

FFS 3025: Reading 20th-C Francophone Lit

Regions may include North Africa, the Caribbean Islands and Canada. Pre-requisite: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from instructor.

Credits: 3

Prerequisites:

FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285

FFS 3046: Readings 20th C French Lit

Analysis of specific trends of 20th-century French literature. Topics may include Surrealism, the New Novel, or Existentialism, among others.

Credits: 3

Prerequisites:

FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from instructor.

FFS 3075: Themes in French Cinema

Analysis of films that deal with this topic. Prerequisites: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from instructor.

Credits: 3

Prerequisites:

FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285

FFS 3076: Selected Works French Cinema

Analysis of major works of French cinema. The course may be organized around a single director (Renoir, Clouzot, Truffaut, Resnais, Malle etc.) It may also explore a specific movement (poetic realism, the New Wave, or the so-called "cinema du look"). Prerequisite: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from instructor.

Credits: 3

Prerequisites:

FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285

FFS 3145: The Extreme Contemporary

Analytical readings of major texts published within the past ten years.

Credits: 3

Prerequisites:

FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285

FFS 3225: Readings In Maghrebi Lit

Analytical readings of major texts of the French-speaking North-African traditions.

Credits: 3

Prerequisites:

FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from instructor.

FFS 3226: Readings in Caribbean Lit

Analytical readings of major texts of the French-speaking Caribbean traditions.

Credits: 3

Prerequisites:

FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from instructor.

FFS 3227: Readings Sub-Saharan Afr Lit

Analytical Readings of major texts of the French-speaking Sub-Saharan traditions.

Credits: 3

Prerequisites:

FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from instructor.

FFS 3255: Themes in Poetr of Frch Expres

An overview of the voices, forms and innovations of the poetic traditions of France and the French-speaking world through the themes of love; subjectivity and objectivity; masculinities and femininities; collective identity formation and affirmation and others.

Credits: 3

Prerequisites:

FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from Instructor.

FFS 3285: Fr Popular Music, 1950-pres

Survey of popular music, 1950 to the present, considering literary influences and trends in music and in the industry.

Credits: 3

Prerequisites:

FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from Instructor.

FFS 3287: Cult Studies: France & Maghreb

Exploration of the rich inter-cultural connections between France and its former North-African colonies. Prerequisites: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from Instructor.

Credits: 3

FFS 3412: Special Topics

Advanced study of topics of special interest in French literary and/or cultural studies. May be repeated for credit if topic changes. Prerequisite: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from Instructor.

Credits: 3

Prerequisites:

FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285

FFS 3625: Readings in Medieval&Renai Lit

Analytical readings from the Medieval and Renaissance periods. Works studied may include La Chanson de Roland, Tristan et Iseult, fabliaux, Montaigne, Rabelais, Ronsard, Marguerite de Navarre.

Credits: 3

Prerequisites:

FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from Instructor.

FFS 3725: Readings in 17th C Literature

Analytical readings of major texts.

Credits: 3

Prerequisites:

FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from Instructor.

FFS 3765: French Classical Theatre

Classical dramaturgy and modern interpretations of Corneille, Moliere and Racine.

Credits: 3

Prerequisites:

FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from Instructor.

FFS 3845: Utopia in 18th-C Fr Lit

Emphasis on real and fictional travel accounts as well as works in which homesteading on islands or in isolated natural settings plays an important role.

Credits: 3

Prerequisites:

FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from Instructor.

FFS 3846: The Epistolary Novel

Study of 18th-century literary works in the form of letters
Prerequisite: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from Instructor.

Credits: 3

Prerequisites:

FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285

FFS 3925: Paris, Capital of the 19th-C

Literary, artistic, political, and social overview of France's capital city following the French revolution. Prerequisites: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from Instructor.

Credits: 3

Prerequisites:

FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285

FFS 3945: Readings in 19th C Prose

Analytical readings of major novels from the 19th century. Prerequisite: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from Instructor.

Credits: 3

Prerequisites:

FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285

FFS 3956: Modernism in French Poetry

Study of the birth of modernism as seen through French poetry set in its historical and cultural context.

Credits: 3

Prerequisites:

FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from instructor.

FFS 3970: Research Seminar

Principles and techniques of literary research. Overview of major French and Francophone authors and representative works. Students should have completed FFS 1132 or the equivalent.

Credits: 3

FFS 3971: Directed Research in FFS

Directed semester-long research project that satisfies the College research requirement, taken in conjunction with another upper-level FFS content course. Pre-requisite: FFS 2220, FFS 2221 or FFS 2075, or approval from the FFS coordinator.

Credits: 1

Prerequisites:

FFS 2220 or FRE 2220 or FFS 2221 or FRE 2221 or FFS 2075 or FRE 2075

FFS 5900: Independent Study

Credits: 3

Prerequisites:

FFS 1132 :D- or FRE 1132 :D-

FFS 7111: Reading Knowledge in French I

A course that provides reading knowledge and prepares doctoral students in Philosophy and theology for independent research in French. No prior knowledge of French is required.

Credits: 3

FFS 7121: Reading Knowledge in French II

A course that provides further reading knowledge and prepares doctoral students in Philosophy and theology for independent research in French. PRE-REQUISITES: FFS 7111 or equivalent knowledge of French.

Credits: 3

Prerequisites:

FFS 7111

Gender and Women's Studies

GWS 2050: Introduction to Gender Studies

The history and evolution of feminist analysis as a force of history, theory, art, and culture. Critical distinctions between the biology of sex and the social construction of gender. Basic principles of feminist thought, from its origins in the Women's Movement of the late 1700s and 1800s, through modern manifestations, including today's diverse narratives. Multi-disciplinary and writing enriched.

Credits: 3

GWS 2993: GWS Internship

Internship.

Credits: 3

Prerequisites:

GWS 2050

GWS 3000: Independent Study

Approval of Gender and Women's Studies Director required.

Credits: 3

Prerequisites:

Approval of Gender and Women's Studies Director required.

GWS 5000: Integrating Seminar

An interdisciplinary course that focuses on a topic through methodology that requires Gender and Women's Studies minors to provide input from the research areas of their majors. Approval of Director of Gender and Women's Studies required.

Credits: 3

Prerequisites:

GWS 2050

Approval of Director of Gender and Women's Studies required.

Geography and the Environment

GEV 0010: Freshmen Peer Mentoring

Credits: 0

GEV 0020: Sophomore Peer Mentoring

Credits: 0

GEV 1002: Geo. of a Globalizing World

The human and physical realms of Geography. Focus on current geographic problems facing specific regions of the world.

Credits: 3

GEV 1003: Geo. of Earth's Environments

World climates, water, landforms, soil, and vegetation form the basis of this global environmental approach.

Credits: 3

GEV 1004: Climate Change

Spatial patterns of global and regional climate systems. Natural and anthropogenic factors that cause climate change. Understanding human-climate system interaction.

Credits: 3

GEV 1005: Geospatial Analysis & Society

Use of geospatial technologies to analyze, solve, and understand modern social and environmental issues involving population, development, and urbanization trends around the world.

Credits: 3

GEV 1050: Environmental Science I

Multidisciplinary foundation in Environmental Science; first of two semester course. Science course linking environmental biology, chemistry, earth sciences, and climate change. Collection of data from lab experiments and field-based observations.

Credits: 4

GEV 1051: Environmental Science II

Second of two course sequence. Multidisciplinary foundation in Environmental Science: natural resources, pollution, & energy, with related field trips & laboratory sessions.

Credits: 4

Prerequisites:

ENV 1050 :D- or GEV 1050 :D-

GEV 1052: Environmental Studies

Free elective course to provide Advanced Placement credit for Environmental Science. Prerequisite: Score of 4 or 5 on AP Environmental Science Test.

Credits: 3

Prerequisites:

Score of 4 or 5 on AP Environmental Science Test.

GEV 1053: Environmental Studies II

Overview of fundamental environmental topics, including themes in energy, pollution, and resources.

Credits: 3

GEV 1750: Geo-Techniques

Principles and applications of geographic technologies and field techniques with emphasis on: field surveys, cartography, global positioning systems, aerial photography, satellite imagery & remote sensing, computer-aided cartography, digital elevation models & geographic information systems.

Credits: 4

GEV 1903: Internship Elective
Credits: 3**GEV 1906: Internship Elective**
Credits: 6**GEV 1909: Internship Elective**
Credits: 9**GEV 2001: Prof Dev in Geo and Env**
Credits: 1**GEV 2310: Environmental Chemistry**

Interdisciplinary approach to chemical and biochemical phenomena. Sources, reactions, transport, effects, and fates of chemical species in the air, soil, and water environments, and their effect on human activity.

Credits: 4

Prerequisites:

GEV 1050 and (CHM 1151 or CHM 1131) and CHM 1103

GEV 2500: Global Change in Local Places

Geographic research methods to address spatial implications of current local issues.

Relationships between global environmental & societal processes & local landscapes. Collection, evaluation, analysis & presentation of qualitative & quantitative geographic data.

Credits: 3

GEV 2510: Political Geography
Credits: 3**GEV 2525: Population Geography**

Geographic dimensions of global population trends, emphasizing global demographic divides. Considers population processes (mortality, fertility, migration), population structures (age, gender, ethnicity), and population policy. Special topics may include population and the environment, food supply, and HIV-AIDS.

Credits: 3

GEV 2893: Independent Study

Independent study under the direction of faculty member of selected topics in geography, environmental studies, and environmental science.

Instructor Permission Required

Credits: 3

GEV 2993: Internship
Credits: 3**GEV 2996: Internship**
Credits: 6**GEV 3000: Special Topics**

Contemporary topics in Geography and Environmental Science. Topics will be announced on a semester-by-semester basis. Specific information will be available on the department's web page.

Credits: 3

GEV 3001: Intro to Sustainability Study

Development that meets the needs of the present without compromising the needs of future generations. Social, engineering, and economic dimensions, which make up the sustainability model.

Credits: 3

GEV 3002: Ecosystem Services

Four major categories of ecosystem services: provisioning services, regulating services, cultural, and supporting services.

Credits: 3

GEV 3003: Environmental Geology

Application of the principles of geology in the solving of environmental problems.

Credits: 3

**GEV 3004: Geographies
Envrnl Justice**

Patterns of environmental inequality that affect health and quality of life. Relationship between environmental harms and benefits and different groups in society. Case studies explore fundamental aspects of environmental justice.

Credits: 3

**GEV 3300: Stats. in
Environmental Sci.**

Statistical methods and application. An introduction to statistical concepts, techniques, and applications to data analysis and to problems in the design, analysis, and interpretation of experiments in the environmental sciences.

Credits: 3

GEV 3301: Fisheries

Current practices and the environmental, political and social implications of this global industry.

Credits: 3

**GEV 3302: Agricultural
Science**

Environmental implications of agriculture, incl. a scientific analysis of soil, pesticides, fertilizer, and biodiversity.

Credits: 3

GEV 3303: Soil Science

Soil, soil properties, and biota in various ecosystems with a focus on human impacts to soil mesocosm.

Credits: 3

GEV 3304: Air Pollution

Analysis of natural and human-caused environmental impacts to the atmosphere.

Credits: 3

GEV 3305: Energy Systems

Assessment of current methods for supplying energy, incl. fossil fuels, nuclear energy, and renewable energy.

Credits: 3

GEV 3306: Alternative Energy

Analysis of emerging and established alternative energies, incl. wind, solar, biofuel, and hydropower.

Credits: 3

**GEV 3308: Environmental
Health**

Health issues, scientific understanding of causes, and possible future approaches to control of the major environmental health problems in industrialized and developing countries.

Credits: 3

GEV 3309: Coral Reefs

Overview of the science, policy, and management issues for coral reef ecosystems in a changing world.

Credits: 3

**GEV 3310: Special Topics in
Geology**

Topical approach to geology to include the terroir of wines, to the geology behind current events.

Credits: 3

**GEV 3395: Int'l. Studies in Env.
Sci.**

Credits: 3

**GEV 3500: Geography of
North America**

Physical and human geography of North America from a regional perspective. Key geographic concepts of site, situation, and the interaction between society and the environment for each region.

Credits: 3

**GEV 3501: Geomorphic
Environments**

Landform processes and development. Geomorphic processes, dynamics, and equilibrium systems. Data collection, statistical analysis, and interpretation of landform development models.

Credits: 3

**GEV 3503: Earth's Weather
Systems**

Sciences of the atmosphere: meteorology and climatology. Atmospheric composition and structure, clouds, precipitation atmospheric motion and winds, organized weather systems, air masses, fronts, tropical storms, and severe weather.

Credits: 3

**GEV 3510: Geo of Europe & the
Euro Union**

Credits: 3

**GEV 3515: Geography of
Africa**

Major geographic problems facing contemporary Africa, with a special emphasis on spatial planning within a number of national contexts.

Credits: 3

**GEV 3521: GIS for Urban
Sustainability**

Review and analyze sustainability issues faced by cities. Learn GIS applications related to urban sustainability

Credits: 3

**GEV 3522: Geography of the
Middle East**

Survey of the region's geography including its physical geography, environmental issues, urban-economic development, cultural geography, historical evolution, and the spatial patterns of its human landscapes. Special emphasis placed on its strategic importance in a globalizing world and understanding the historical background to current geopolitical conflicts.

Credits: 3

GEV 3525: Geography of Asia

Credits: 3

GEV 3550: Natural Hazards

Processes determining physical risk, societal vulnerability, and response to major hazards including: blizzards, tornadoes, hurricanes, drought, flooding, earthquakes, volcanoes, landslides, avalanches, and wildfires.

Credits: 3

GEV 3570: Land Use Planning & Mgmt

Land use planning and management with focus on land-law interfaces between the physical, cultural, and legal realms. Survey of natural and political systems as the basis for land use controls at the federal and regional levels. The environmental, economic, and ethical impacts of land management.

Credits: 3

GEV 3580: Natural Res and Conservation

Assessment of natural resource and conservation issues in the U.S. and around the world. Distribution and use patterns of air, water, mineral, energy, and biologic resources. Examination of exploitation, conservation, and preservation management strategies.

Credits: 3

GEV 3590: Topical Research Problems

Individual projects or studies in geography and the environment.

Credits: 3

GEV 3595: Int'l. Studies in Geography

Credits: 3

GEV 3750: Remote Sensing

Data collection and analysis with high-technology platforms such as conventional and color infrared photography, multi-spectral scanners, satellite imagery, thermal infrared, LIDAR, and radar. Application of remotely sensed data to solve complex, human, environmental, and engineering problems.

Credits: 3

GEV 3775: Digital Image & Airphoto Inter

Concepts and techniques in digital image processing and air photo interpretation: image classification, three-dimensional photography, identification, and measurements of features from photographic imagery.

Credits: 3

GEV 3790: Global Positioning Systems

Principles, techniques, and applications of Global Positioning Systems (GPS). Laboratory employs data collection, mapping, and analyses with state-of-the-art GPS equipment and software.

Credits: 4

Prerequisites:

GEV 1750

GEV 4001: Advanced Sustainability Study

Credits: 4

GEV 4300: Selected Topics

Credits: 1

GEV 4310: Environmental Issues Seminar

Interdisciplinary coverage of current global environmental issues, emphasizing their complexity, analyses, and solutions.

Credits: 3

Prerequisites:

GEV 1050 and GEV 1051

GEV 4320: Spec. Topics in Env Lab Sci

Advanced laboratory science topics in the Environment presented by senior faculty. Specific subject matter will vary with the expertise of the professor.

Credits: 4

GEV 4321: Microbial Processes

Examination of Earth's dynamic systems and the environmental consequences of environmental processes.

Credits: 4

GEV 4322: Ocean Environments

Investigation of the biological, geological, chemical, and physical characteristics of the ocean.

Credits: 4

Prerequisites:

GEV 1050 and GEV 1051

GEV 4323: Watershed Biogeochemistry

Biogeochemical and physical characteristics of watersheds and the threats they currently face.

Credits: 4

Prerequisites:

GEV 1050 and GEV 1051

GEV 4324: Wetland Science and Management

Wetland flora and fauna, hydrology, soils and ecology.

Credits: 4

GEV 4325: Environmental Ecology

Principles of ecology and their implications for analyzing environmental problems. Understanding processes controlling the dynamics of populations, communities, and ecosystems.

Credits: 4

Prerequisites:

GEV 1050 and GEV 1051

GEV 4326: Environmental Geology

Geologic processes, formation of fossil fuel and ore deposits, and the environmental impact of their extraction.

Credits: 4

Prerequisites:

GEV 1050 and GEV 1051

GEV 4327: Process Geomorphology

Processes that shape landforms. Major components of geomorphology, including fluvial, glacial, periglacial, aeolian, slope, and weathering process.

Credits: 4

GEV 4328: Climatology

Approaches to understand and identify recent and long-term climate behavior in different parts of the world. Basic meteorological factors that influence climate. General climate classification schemes, theories of climate cycles and climate change.

Credits: 4

GEV 4329: Global Change Research

Research Advanced field and laboratory research focused on contemporary issues in environmental science.

Credits: 4

GEV 4330: Spec Topics in Environm Policy

Advanced topics in environmental policy and management presented by senior and visiting faculty. Specific subject matter will vary with the expertise of the visiting professor or senior faculty member conducting the course. Course may be taken under multiple titles.

Credits: 3

GEV 4331: Env. Policy & Management

National and international debates of key environmental issues from policy and management perspectives.

Credits: 3

GEV 4332: Water Resources Planning

Management and planning of natural and constructed water systems.

Credits: 3

GEV 4333: Politics and the Env.

Analysis of current affairs related to the environment.

Credits: 3

GEV 4334: Environmental Law

Legal analysis of the environment, incl. seminal national and international laws.

Credits: 3

GEV 4335: Energy Policy

Policies pertaining to the extraction, supply, distribution, and use of energy.

Credits: 3

GEV 4340: Spec Topics in Environm Issues

Advanced topics in environmental social science and humanities presented by senior and visiting faculty. Specific subject matter will vary with the expertise of the visiting professor or senior faculty member conducting the course.

Credits: 3

GEV 4350: Spec Topics in Environm Sci

Advanced topics in environmental science presented by senior and visiting faculty. Specific subject matter will vary with the expertise of the visiting professor or senior faculty member conducting the course. Course may be taken under multiple titles.

Credits: 3

GEV 4351: Oceanography

Biology, geology, chemistry, and physical environment of the ocean.

Credits: 3

GEV 4352: Physical Geology

Earth's dynamic systems and the environmental consequences of geologic processes.

Credits: 3

GEV 4353: Green Science

Application of eco-friendly thinking to scientific disciplines. Scientific solutions to global warming, pollution and other impacts on nature and the planet.

Credits: 3

GEV 4354: Biomimicry

Design and production of materials, structures, and systems that are modeled on biological entities and processes.

Credits: 3

GEV 4355: Tropical Ecology

Environmental issues unique to tropical latitudes and ecosystems.

Credits: 3

GEV 4356: Global Change Science

Advanced exploration and discussion focused on contemporary issues in environmental science.

Credits: 3

GEV 4360: Field Methods in Env Science

Environmental field research focusing on a specific environmental issue including an extensive field trip.

Credits: 4

Prerequisites:

GEV 1050 and GEV 1051

GEV 4361: Field Research

Design and conduct environmental research during a 1-2 week field trip to various locations; Lectures will incl. natural history, ecology, and geology of the location.

Credits: 4

GEV 4510: Special Topics in Geography

Advanced topics in Geography presented by senior and visiting faculty. Specific subject matter will vary with the expertise of the visiting professor or senior faculty member conducting the course. Course may be taken under multiple titles.

Credits: 3

GEV 4511: Climate Variability

Seasonal, interannual, and decadal variations in climate variables. Atmospheric circulation patterns, teleconnections, and their impacts on the environment and society.

Credits: 3

GEV 4512: Medical Geography

Spatial patterns and epidemiology of disease. Characteristics of epidemics and pandemics from a geographic perspective. Case studies, spatial/statistical analyses, and transmission processes.

Credits: 3

GEV 4513: Geography of National Security

Geography of the national security landscape and the nexus of geography and conflict. Modern trends in national security, historical case studies, and geospatial analysis.

Credits: 3

GEV 4514: Geomorphology

Processes that shape the natural landscape. Descriptive and quantitative techniques to examine balance between tectonic activity and subsequent modification of landforms by weathering, erosion and deposition.

Credits: 3

GEV 4515: Terrestrial Ecosystems

Spatial distribution of species, biomes, and ecosystems at local, regional, and global scales. Ecological and historical processes responsible for geographic patterns of biodiversity

Credits: 3

GEV 4516: Environmental Security

Broad range of security issues triggered by demographic and environmental factors such as competition for resources, population growth/displacement, disease, natural disasters, environmental change, and non-sustainable practices.

Credits: 3

GEV 4517: Sustainable Development

Environmental, economic, and justice issues facing developing countries. Historical review of post-colonial experiences and the impact of modern global economic and environmental changes on the political, economic, and demographic experiences of Latin America, Africa, and southern Asia.

Credits: 3

GEV 4550: Geographical Issues Seminar

Credits: 3

GEV 4700: Geographic Information Systems

Principles, techniques, and applications of Geographic Information Systems (GIS). Laboratory employs analyses with state-of-the-art GIS software.

Credits: 4

GEV 4710: Adv. Geographic Info Sys

Spatial problem solving by focusing on theoretical/conceptual and practical aspects of GIS modeling and spatial analysis.

Credits: 4

GEV 6005: Senior Research Seminar

Scheduled group meetings with other research students in the department, focusing on general and specific aspects of the senior research project/thesis. Requires permission of instructor.

Credits: 1

Co-Requisites:

GEV 6200

GEV 6006: Research Colloquium

Presentations by speakers including faculty, students, and guests from the academic, public, and private sectors. Lectures feature new creative and scholarly work that encompasses the disciplines and areas of interest of the department.

Credits: 0

GEV 6200: Independent Study

Individual projects or studies in geography & the environment.

Credits: 3

GEV 6210: Senior Thesis Research I

Research with faculty member selected by student. Part 1 of two-semester sequence. Continues as Thesis Research II, which culminates in a written thesis. Requires permission of the faculty mentor.

Credits: 3

GEV 6220: Senior Thesis Research II

Second phase of senior thesis sequence. Research with faculty mentor selected by student. Culminates in a written senior thesis. Requires permission of the faculty mentor.

Credits: 3

GEV 7000: Research Methods in Env Sci

Analytical and research techniques for environmental scientists.

Credits: 2

GEV 7001: Research Experience

Research experience in conjunction with a faculty member. Restricted to: Masters in Environmental Science; Permission of Instructor required.

GEV 7010: Environmental Colloquium

Attendance at departmental seminars and student presentations.

Credits: 1

Prerequisites:

GEV 7000 :Y

GEV 7020: Advanced Env Issues Seminar

Interdisciplinary coverage of salient environmental issues, emphasizing their complexity, analyses, and solutions.

Credits: 3

Prerequisites:

GEV 7000

GEV 7030: Proposal Development

Development and presentation of the masters thesis research proposal.

Credits: 1

Prerequisites:

GEV 7000 :Y

GEV 7040: Intro to Gis

Principles, techniques, and applications of Geographic Information Systems (GIS).

Credits: 4

GEV 7041: GIS for Environmental Systems

Advanced techniques, applications and projects in GIS focused on supporting graduate level research.

Credits: 4

Prerequisites:

GEV 4700 or GEV 7040

GEV 7100: Remote Sensing-Env Analysis

Basics of remote sensing, sensor characteristics, and remote sensing applications in support of graduate research. Emphasis on image/data acquisition and analysis.

Credits: 3

GEV 7101: Land Use & Env Assessment

Legal and environmental management for the regulation of private and public lands. Zoning, environmental legislation, urban renewal, eminent domain, and the law of nuisance. Cannot be taken if student has already taken GEV 3570.

Credits: 3

GEV 7103: Env. Policy and Law

Federal environmental law, regulation, and policy in the U.S. Comparative and dynamic view of environmental protection under U.S. law.

Credits: 3

GEV 7106: Ecosystems Services

Economic and other benefits nature provides to people. Ecological Foundations of quantifying ecosystem services and practical issues involved with putting them to use.

Credits: 3

GEV 7112: Environmental Health

Health issues, scientific understanding of causes, and possible future approaches to control of the major environmental health problems in industrialized and developing countries.

Credits: 3

GEV 7126: Process Geomorphology

Physical processes and resultant landforms. Spatial distribution of landforms and physical environments at local, regional, and global scales.

Credits: 3

GEV 7200: Advanced Quantitative Analysis

Multivariate statistical method applications to spatial problems. Linear and non-linear correlation and regression, factor analysis, cluster analysis. Spatial statistics including: trend surfaces, sequences, point distributions.

Credits: 3

Global Interdisciplinary Studies

The Department of Global Interdisciplinary Studies (GIS) provides students with a tripartite of skills, knowledge, and values that foster critical thinking, problem solving, and preparation for responsible global citizenship. Students

gain an understanding of global studies, acquiring the know-how in global and digital literacy, cultural diversity and intercultural competences, interdisciplinary research, and a passion for social justice, nurtured in experiential learning.

All students must choose one specialization from the sections listed below.

The Department of Global Interdisciplinary Studies also offers minors in the following programs: Arabic Language and Cultural Studies, Chinese Language and Cultural Studies, Japanese Language and Cultural Studies, Russian Language and Cultural Studies. Visit these individual pages to view requirements.

GIS 2000: Intro to Global Interd Studies

Gateway course to Global Interdisciplinary Studies, preparing for area studies specializations and GIS interdisciplinary programs. Focuses critical thinking skills through the comparative lens of both global and interdisciplinary analyses. Mandatory preparatory course for advanced study in GIS major.

Credits: 3

GIS 2993: Global Studies Internship

Permission of Chairperson required.

Credits: 3

Prerequisites:

Permission of Chairperson required.

GIS 2996: Global Studies Internship

Permission of Chairperson required.

Credits: 6

Prerequisites:

Permission of Chairperson required.

GIS 3000: Special Topics Study Abroad

Special topics in global and interdisciplinary studies taken while studying abroad.

Credits: 3

GIS 3992: Global Topics Abroad

Credits: 1

GIS 4000: Global Env Justice Movements

Credits: 3

GIS 4100: Topics in GIS

Specific topics in global interdisciplinary studies that vary each semester.

Credits: 3

GIS 4275: Global Religions & the State

Team-taught, interdisciplinary seminar. Study of World Religion in a 21st century socio-political context. Rituals, symbols, myths & doctrinal components of Hindu, Buddhist, Jewish, Islamic & Christian traditions.

Consideration of the writings of contemporary religious international figures.

Credits: 3

GIS 4277: Writing Brazilian Culture

The course examines through film and literature several important aspects of regional Brazilian subcultures, such as the Amazonian indigenous, the coastal African, and the inner city youth cultures, the samba schools and football as cultural practices in the context of human rights.

Credits: 3

GIS 4278: Pro-Seminar in Sustainability

Interdisciplinary seminar course explores historical, philosophical, environmental, scientific, economic, and political dimensions of sustainability. Using scientific theory, GIS data, documentary films, historical documents, guest speakers, and other diverse source. Students will examine case studies of local, national and international sustainability initiatives.

Credits: 3

GIS 4279: Global Masculinity

Will explore how the lives of men and ideas about masculinity are shaped by war, sports, work, family life, politics, history and popular culture and defined in relation to other identities including race, ethnicity, and sexuality.

Credits: 3

GIS 4280: Race and the Renaissance

This interdisciplinary seminar examines concepts of Africa, Europe, and the Renaissance during the period associated with the emergence of modernity and increasing global contact through trans-cultural and global roots.

Credits: 3

GIS 4281: The Tale of Shanghai and Tokyo

Struggling with their identity while being nurtured by their traditional culture for more than a century, today's Shanghai and Tokyo eventually emerged from a feudal society as modern, sophisticated, and diversified metropolises on the global stage. Explore how the two Asian cities encountered the West, as well as how they were forced to change through revolutions and reforms in the realms of culture, sociology, literature, history, ideology, and philosophy of life.

Credits: 3

GIS 4282: Race & Social Structure: Brazil

Interdisciplinary, team taught course which will explore the race and social structure of Brazil in through a comparative perspective.

Credits: 3

GIS 4283: Global Tea Culture

Interdisciplinary, team taught course which will explore the history and influence of tea in various cultures of the world through a comparative perspective.

Credits: 3

GIS 4284: Glob. Racial Images Film & Lit

An examination of the globalization of racial images through a comparative study of film and literature, using historical inquiry and literacy criticism. Topics include institutional and intellectual racism, imperialism and segregation, racial violence, miscegenation and sexuality, and resistance to stereotypes.

Credits: 3

GIS 4285: GIS Special Topics

Interdisciplinary study of topics of special interest in Global Interdisciplinary Studies related to course(s) taken through the International Studies Program. May be repeated for credit if topic changes.

Credits: 3

GIS 4286: Bridging Global Cult Conflict

Interdisciplinary, team taught course which will explore culturally global based conflicts with social, political, economic elements through a comparative perspective. This is a team taught course and will be capped at maximum student enrollment of 17 students.

Credits: 3

GIS 4290: African & Caribbean Pol & Lit

Interdisciplinary exploration of diverse literary traditions of Africa and its large diaspora in the Caribbean through political science and development economics theories. Examines political dysfunctions that follow postcolonialism; offers theoretical and aesthetic tools to appreciate interface between politics and culture.

Credits: 3

GIS 4675: East Asian Comparative Lit

Team-taught interdisciplinary seminar. Examination of Modern East Asian Literature with Japanese and Chinese Components.

Credits: 3

GIS 4751: Cultural Studies

Advanced course in cultural studies. Mastery of theoretical vocabulary & analytical thinking. Thematic foci such as definition of culture, production of cultural meaning & identity, role of cultural forms in creating & maintaining power relationships & social boundaries from a variety of perspectives.

Credits: 3

GIS 4950: Latin Amer Studies Seminar

Examines the complexity of Latin America from the American Southwest & the tropical islands of the Caribbean to the southern tip of South America. Rich & diverse cultural roots in Native American civilizations, Spain & Portugal, & Africa. Multicultural peoples & search for alternative social structures.

Credits: 3

GIS 5000: Special Topics

Intensive seminar taught by distinguished visiting faculty on a topic of global and interdisciplinary significance.

Credits: 1

Prerequisites:

GIS 2000 :Y

GIS 5011: GIS Select

Interdisciplinary team-taught courses offered by GIS to fulfill requirements for the Junior Research Seminar and additional GIS Select course. May be taken by GIS majors in any of the specializations, including Gender and Women's Studies and Peace and Justice Education, to fulfill requirements in their specialization if the specific GIS Select topic carries the attribute of their specialization.

Credits: 3

GIS 5012: GIS Select

Interdisciplinary team-taught courses offered by GIS to fulfill requirements for the Junior Research Seminar and additional GIS Select course. May be taken by GIS majors in any of the specializations, including Gender and Women's Studies and Peace and Justice Education, to fulfill requirements in their specialization if the specific GIS Select topic carries the attribute of their specialization.

Credits: 3**GIS 5021: GIS Select**

Interdisciplinary team-taught courses offered by GIS to fulfill requirements for the Junior Research Seminar and additional GIS Select course. May be taken by GIS majors in any of the specializations, including Gender and Women's Studies and Peace and Justice Education, to fulfill requirements in their specialization if the specific GIS Select topic carries the attribute of their specialization.

Credits: 3**GIS 5022: GIS Select**

Interdisciplinary team-taught courses offered by GIS to fulfill requirements for the Junior Research Seminar and additional GIS Select course. May be taken by GIS majors in any of the specializations, including Gender and Women's Studies and Peace and Justice Education, to fulfill requirements in their specialization if the specific GIS Select topic carries the attribute of their specialization.

Credits: 3**GIS 5031: GIS Select**

Interdisciplinary team-taught courses offered by GIS to fulfill requirements for the Junior Research Seminar and additional GIS Select course. May be taken by GIS majors in any of the specializations, including Gender and Women's Studies and Peace and Justice Education, to fulfill requirements in their specialization if the specific GIS Select topic carries the attribute of their specialization.

Credits: 3**GIS 5032: GIS Select**

Interdisciplinary team-taught courses offered by GIS to fulfill requirements for the Junior Research Seminar and additional GIS Select course. May be taken by GIS majors in any of the specializations, including Gender and Women's Studies and Peace and Justice Education, to fulfill requirements in their specialization if the specific GIS Select topic carries the attribute of their specialization.

Credits: 3**GIS 6000: Independent Study**

Individual students with specific interests will work on a supervised project.

Credits: 3**GIS 6500: Capstone I: Research**

Team-taught, interdisciplinary seminar. Integration of work for GIS major, leading to the research & writing of the major thesis, topic determined by faculty of record. Senior standing.

Credits: 3**Prerequisites:**

GIS 2000

GIS 6600: Capstone 2:Thesis

Directed research seminar focusing on the writing of the major theses. Senior standing.

Credits: 3

Greek

GRK 1051: New Testament Greek I**Credits: 5****GRK 1052: New Testament Greek II****Credits: 5****GRK 1111: Introductory Ancient Greek I**

The basic forms, syntax and vocabulary of Ancient Attic Greek; selected prose in second semester.

Credits: 4**GRK 1112: Introductory Ancient Greek II**

The basic forms, syntax and vocabulary of Ancient Attic Greek, selected prose in second semester.

Credits: 4**GRK 1113: Intensive Intro. Ancient Greek****Credits: 3****GRK 1121: Intermediate Ancient Greek I**

Having reviewed the primary grammar and syntax of Attic Greek, this course will examine selections from several principal prose authors of the classical period (e.g. Herodotus, Plato, Thucydides, et al).

Credits: 3**Prerequisites:**

GRK 1111 and GRK 1112

GRK 1122: Intermediate Ancient Greek II**Credits: 3****Prerequisites:**

GRK 1111 and GRK 1112 and GRK 1121

GRK 3001: Readings in Authors

Selected readings from a variety of Greek authors. Fulfills advanced literature requirements.

Credits: 3

GRK 4250: Greek Historians**Credits:** 3**GRK 4350: Greek Orators****Credits:** 3**GRK 4450: Greek Philosophers****Credits:** 3**GRK 5250: Homer****Credits:** 3**GRK 5850: Greek Tragedy****Credits:** 3**GRK 5900: Greek: Independent Study**

Supervised study, activity or research. May be taken more than once. Prior approval of chair and instructor.

Credits: 3**GRK 5950: Greek Comedy****Credits:** 3**GRK 6001: Senior Greek Capston****Credits:** 3**GRK 7000: Koine Greek Workshop**

Koine Greek Workshop

GRK 7101: Intensive Greek

Intensive study of ancient Greek grammar, morphology and vocabulary.

Credits: 3**GRK 7250: Hist of Greek Literature****Credits:** 3

History

HIS 1002: The United States to 1877

For AP and transfer credit only. Does not fulfill Arts and Sciences core history requirement.

Credits: 3**HIS 1003: The United States Since 1877**

For AP and transfer credit only. Does not fulfill Arts and Sciences core history requirement.

Credits: 3**HIS 1021: Hist of Western Civil II****Credits:** 3**HIS 1040: Themes Pre Mod World History**

Comparative exploration of at least three different pre-modern civilizations (pre-1750). Cultural contact and exchange; pre-modern economies, state formation; political institutions; and social structures; religion and culture; art, architecture and literature.

Credits: 3**HIS 1050: Themes in Modern World History**

Investigation of history of diverse nations and regions since 1500. Political, technological, and economic revolutions; modern state formation; cross-cultural conflict and exchange; social movements; environmental transformation; rise of global economy.

Credits: 3**HIS 1060: Topics in Religion & Society**

Selected core courses exploring religion in different eras with emphasis on cross cultural interaction.

Credits: 3**HIS 1065: Topics Nature, Environ & Tech**

Selected core courses exploring relationship between environmental and technological change in different eras and societies.

Credits: 3**HIS 1070: Topics Empire and Imperialism**

Selected core courses on empire and practice of imperialism in different eras.

Credits: 3**HIS 1075: Topics in Race & Gender**

Selected core courses exploring issues of race and/or gender in different eras.

Credits: 3**HIS 1150: Topics in Atlantic World**

Selected core courses on political, social, and cultural interaction in the Atlantic basin beginning in the 15th century.

Credits: 3**HIS 1155: Topics in America & the World**

Selected core courses offering transnational perspectives on the development of American society.

Credits: 3**HIS 1160: Topics in Asia & Pacific**

Selected core courses on political, social, and cultural interaction among different societies in Asia and Pacific basin.

Credits: 3**HIS 1165: Topics Global Perspectives**

Selected core courses that take a global or comparative approach to major issues.

Credits: 3**HIS 1250: Top in Ancient Civilizations**

Selected core courses on different aspects of ancient societies.

Credits: 3**HIS 1903: Internship Elective****Credits:** 3**HIS 1906: Internship Elective****Credits:** 6

HIS 1909: Internship Elective
Credits: 9

HIS 2000: Investigating U.S. History I

In-depth study of American history from the pre-Columbian period to the Civil War and Reconstruction, with a particular emphasis on engaging historical problems as a process of inquiry and interpretation. Designed especially for history majors and future teachers, but open to all students.

Credits: 3

HIS 2001: Investigating US History II

In-depth study of American history from the end of Reconstruction to the present, with a particular emphasis on engaging historical problems as a process of inquiry and interpretation. Designed especially for history majors and future teachers, but open to all students.

Credits: 3

HIS 2151: Colonial America

The political, economic, social, and intellectual life of the American colonies and the clash of racial and ethnic groups in America to 1763.

Credits: 3

HIS 2161: Revolutionary & Fed Amer

The colonial resistance to Great Britain; the making of the Constitution; and the continuing struggle, to 1810, to define the meaning of the Revolution.

Credits: 3

HIS 2171: Building a Nation 1800-50

The development of the Republic from the presidency of Jefferson through the Mexican War; revolutions in transportation and commerce, struggles of nationalism and sectionalism; issues of race and gender and the ferment of reform.

Credits: 3

HIS 2181: Civil War & Reconstruct

A study of the causes of a war in which Americans fought Americans; the war's evolving nature and eventual outcome; the fight over the meaning and the extent of reconstruction; and the long term political, economic, and social consequences of the war and the end of slavery.

Credits: 3

HIS 2191: Pursuits of Power, 1876-1920

Causes and results of industrialization and urbanization; responses to economic and social change, including popular protest movements; nationalism following the Civil War; U.S. imperial ambitions.

Credits: 3

HIS 2201: United States 1914-1945

Major problems and domestic developments in the United States in World War I, the 1920s, the Great Depression and World War II.

Credits: 3

HIS 2202: United States since 1945

Major problems and domestic developments in the United States since 1945: reconversion, Cold War, the "Good Society" of the 1950s, turmoil of the 1960s, Vietnam War and its aftermath, contemporary challenges and problems.

Credits: 3

HIS 2251: U. S. Foreign Rel 1776-1914

The completion of independence, hemispheric diplomacy, expansion, Civil War, and imperialism.

Credits: 3

HIS 2252: U.S. For Rel 1914 - Present

Diplomatic history from World War I to the present, including involvement in European and Asian struggles, cooperation in international organizations.

Credits: 3

HIS 2265: American Military History

The wars of America from their European antecedents to 1900; relations between the military and society; role of the military in national development.

Credits: 3

HIS 2272: History of Amer Capitalism

American economic growth from the colonial era to the present and its impact on political, social present and cultural life, including American industrialization; rise of the corporation; military-industrial complex; capital-labor relations; globalization of American capitalism.

Credits: 3

HIS 2274: History of American Medicine

The evolution of American Medicine from the colonial period to the present day. Topics include the rise and fall of heroic medicine, the demise of scientific medicine, the growth of modern surgery, the evolution of medical practice.

Credits: 3

HIS 2276: American Environmental Hist

Social, cultural and economic forces that reshaped the American landscape from the colonial era to the present; the place of nature in American thought and society; and the evolution of environmental politics in the 20th century.

Credits: 3

HIS 2278: Native American History

Study of American Indians from pre-Columbian times to the present, including land use practices, social customs, gender relations, U.S. government removal and assimilation policies, post-colonial political economy, and contemporary issues of cultural identity and sovereignty.

Credits: 3

HIS 2280: Catholic Church in America

Development and shaping of the Roman Catholic Church by diverse cultures of Catholicism from 1500 to the present. The first contact of Europeans and Native Americans; growth through European immigration; challenges facing the modern, multicultural Church of the present day.

Credits: 3

HIS 2281: Immigration in Amer Hist

Population factors in the development of the American nation; the processes of migration, assimilation and intergroup relations and their effects in society and politics; intensive study of selected ethnic groups.

Credits: 3

HIS 2286: Irish-American Saga

Pre-famine Irish emigration to North America; the famine; post-famine movement; Irish-American labor, politics, urban and suburban developments.

Credits: 3

HIS 2291: African Amer His during Slaver

The forced migrations of Africans to the New World, the institution of slavery, and the struggle of Afro-Americans to gain equality in American society.

Credits: 3

HIS 2292: African Amer His since Emancip

Themes of resistance and creativity with the development of the African-American communities in the era following the Civil War. Reconstruction, Northern migration, Jim Crow and segregation, and protest thought and Civil Rights.

Credits: 3

HIS 2294: His of Childhood in US

The experience of childhood in America, including topics such as the invention of adolescence; child abuse and protection; child labor; compulsory schooling and immigrant assimilation; juvenile delinquency; age of consent; dating; children in the movies; children as consumers; and youth culture and rebellion.

Credits: 3

HIS 2296: History of American Women

The study of the influence of region, race, and ethnicity on gender definitions in America; and the impact of those ideas in shaping women's lives, sexuality, housework and wage labor, and access to power and politics, from the colonial period to the present.

Credits: 3

HIS 2303: History of Philadelphia

An investigation of the city's past and present through reading historical accounts and exploring today's city. Changes and continuity in politics, economy, and social composition from 1682 to today, with particular attention to social structures and the changing physical environment of the city.

Credits: 3

HIS 2306: Culture of Indus Am 1820-1920

Credits: 3

HIS 2309: Artifacts in History

Cultural history as revealed through artifacts, including everyday objects, decorative arts, and architecture; issues and controversies related to museum exhibits; the role of the Internet in material culture studies.

Credits: 3

HIS 2993: Hist Internship

An internship in a local historical archive, museum, park, or library.

Credits: 3

HIS 2996: Hist Internship

A more extensive internship in a local historical archive, museum, park, or library.

Credits: 6

HIS 2998: Topics in American History

Selected topics in American history of interest to faculty and students.

Credits: 3

HIS 3006: Medieval Europe 500-1500

The evolution of the European West from its classical origins. The influence of Christianity upon the development of European institutions and culture. Relations and mutual influences of the European West with its neighbors, the new world of Islam in the Near East and North Africa, and the Christian Byzantine East of Europe and Russia.

Credits: 3

HIS 3007: Early Mod Europe 1500-1750

The rise of Protestantism; the emergence of national monarchies; the growth of science and technology; colonial expansionism and the impact of the New World on the West; the clash of cultures with Islam and other civilizations on the peripheries.

Credits: 3

HIS 3011: Greek Civilization

The rise of Greek civilization from Mycenaean times to the Macedonian conquest of Greece by the father of Alexander the Great: Homer, the emergence of the polis, the Persian and Peloponnesian wars, and the flowering of Greek culture at Athens during the 5th and 4th centuries.

Credits: 3

HIS 3014: Medit Wrld Alexander to Caesar

The interaction of cultural forces between the conquests of Alexander the Great and the consolidation of Roman rule under Caesar; Hellenistic civilization, the rise of Rome in Italy, Rome and the Greek world, and the fall of the Roman Republic.

Credits: 3

HIS 3017: The Roman Empire

The achievement of the Pax Romana from the reforms of Augustus to the break-up of the western Empire in the fifth century A.D. Topics treated include life in the provinces, the romanization of indigenous peoples, the legions and society, culture and decadence in the capital, and the rise of Christianity.

Credits: 3

HIS 3018: Pagans, Jews, and Christians

Society and religion between Alexander the Great and the coming of Islam. The classical pantheon, domestic religion, magic, the imperial cult; the variety of Judaism in Palestine and the Diaspora, Judaism and the state; the rise of Christianity, the persecutions, Constantine and the conversion of the empire.

Credits: 3

HIS 3019: The Fall of Rome

The end of the ancient world -- ancient sources and modern theories. A multi-faceted analysis of Mediterranean society from AD 200 - 750: politics, economy, religion, urban life, art, social relations, literature.

Credits: 3

HIS 3095: Topics in Ancient History

Selected topics in Ancient history of interest to faculty and students.

Credits: 3

HIS 3108: The Crusades

The medieval conflict between the rival cultures and religions of Christendom and Islam.

Credits: 3

HIS 3115: The High Middle Ages

The major western European institutions that took form during the classical period of medieval civilization and were bequeathed to modern European society.

Credits: 3

HIS 3121: The Renaissance

The decline of society in the Late Middle Ages and the emergence of commercial capitalism; the disintegration of the Holy Roman Empire and the evolution of city-states and new monarchies in the fifteenth century; the crisis of the Papacy and the emergence of humanism; the Italian universities in the Late Middle Ages and the development of new tastes in literature, art, and architecture.

Credits: 3

HIS 3126: Hist of Italian Cities

Credits: 3

HIS 3131: The Reformation

Catholic, Protestant, and popular reform theories and religious upheaval, and the revolution of the common people in the 16th century, with emphasis on the material "structures of everyday life" and the economic, social, and political background of the "crisis of feudalism" and critique of the church and early modern state.

Credits: 3

HIS 3142: The Enlightenment

The cultural transition of traditional Western Christendom to modernity in the 18th Century, including its clash with religion; emphasis on scepticism and empiricism; rehabilitation of natural desires and emotion; efforts to re-engineer human society; new perceptions of economics, crime and punishment, and aesthetics; creation of a reading public; role in the American founding; impact upon issues of gender and race.

Credits: 3

HIS 3151: Eur Nationalism 1800-present

Constructing nations and nationalism in Europe from the Napoleonic wars to post-Yugoslavia; competing conceptions of nationality (on the basis of race, gender, politics, culture, etc.) and resulting conflicts.

Credits: 3

HIS 3161: 20th Century Europe

Social, political, and cultural history of Europe from the fin de siècle to European unification; world wars and revolution, East-West divide, consumer society and popular protest.

Credits: 3

HIS 3171: Europe since 1945

Europe from the end of World War II to the European Union; postwar reconstruction; Cold War; the growth of consumer society; the collapse of the Soviet Empire; changing conceptions of European identity.

Credits: 3

HIS 3200: Medieval Britain and Ireland

The debts England owes to the Celtic, particularly the Irish, world; changed relations, from fruitful cultural exchange to antagonism, after the Norman Conquest of England. Irish missionary and educational importance; relations between Celtic peoples; why monarchy developed in England and Scotland, but not in Wales and Ireland.

Credits: 3

HIS 3202: Britain 1660-1815

Emergence of Britain as the preeminent global capitalist economy and political power from the glittering court of Charles II to Britain's loss of its American colonies and its victory over revolutionary France. Connections between political-economic developments and social and cultural change including industrialization; war, economic growth and state formation; smuggling, gin, and criminality; empire; domesticity, women and the novel, high and low art in London.

Credits: 3

HIS 3203: Great Britain since 1815

Credits: 3

HIS 3214: Eighteenth Century Ireland

Credits: 3

HIS 3216: Ireland since 1800

The social and political history of the Irish state in the 19th and 20th centuries.

Credits: 3

HIS 3218: Topics in Irish History

Exploration of emerging topics in field of Irish History, including but not limited to the Act of Union, the impact of the Protestant Ascendancy, and the cultural, social and political history of the modern Irish state.

Credits: 3

HIS 3221: French Rev and Napoleon

Causes, nature and course of the French Revolution, including a study of its historical interpretation, and the Napoleonic aftermath of the Revolution.

Credits: 3

HIS 3222: History of Modern France

Credits: 3

HIS 3230: Modern Germany

The German lands from 1800 to the present, changing conceptions of Germany and dilemmas of German history.

Credits: 3

HIS 3233: Hitler and Nazi Germany

Germany from the rise of Hitler to the end of the Second World War.

Credits: 3

HIS 3240: Russian History to 1861

The development of Russia from the "rude and barbarous kingdom" of Ivan the Terrible to the great European power ruled by Catherine the Great. The political, economic and social systems of Muscovite and eighteenth-century Russia; civil wars, peasant rebellions, and foreign invasions; the reforms of Peter the Great; female monarchs in the 18th century; enlightened absolutism under Catherine the Great.

Credits: 3

HIS 3241: Revolutionary Russia 1861-1939

Major political, economic and social changes in the Russian Empire from the war against Napoleon to World War I; reform from above and revolution from below; Russia's industrial revolution; social and cultural modernization; the institution of monarchy under the last Romanov tsars; Russia's expansion in the East.

Credits: 3

HIS 3242: Russia from Stalin to Putin

Russia from the 1917 Revolution to the present; the radical transformation of a state, economy and society in revolution and civil war, the Stalin dictatorship, the trial of World War II, and the patterns of reform and continuity in the post-Stalin and post-Soviet eras.

Credits: 3

HIS 3351: 19th c. European Cult & Soc

Social and cultural impact of industrialization, the evolution of mass society, changing conceptions of elite and popular culture; social conflict, revolution, and imperialism.

Credits: 3

HIS 3352: 20th C European Cult & Soc

Credits: 3

HIS 3360: Women in the Pre-Modern West

Roles of women from ancient world to revolutionary France, including analysis of the status of women in Biblical, Greek, Roman, medieval, early modern and Enlightenment cultures and times. Themes of motherhood, women's work, women in literature and women's ways of exerting control over their lives.

Credits: 3

HIS 3361: Women in Modern Eur Soc

The changing roles of women in society and politics in Europe from the 18th to 20th centuries. Topics include women and the household economy; women and revolution; feminism and feminist movements; the rise of female professions; women's literature and feminist critical theory.

Credits: 3

HIS 3995: Topics in European History

Selected topics in European history of interest to faculty and students.

Credits: 3

HIS 4031: Islamic Civilization to 1800

Credits: 3

HIS 4041: Hist Modern Middle East

The political, economic and social history of the Middle East with emphasis on the passing of imperial institutions and emergence of republics, trade and commerce, colonialism, and revolutionary movements.

Credits: 3

HIS 4076: Jewish History

The relation of the Jews to the historical process; the Jews in relation to the larger civilizations in which they have lived; Jewish intellectual and moral contributions; Jewish history in the Christian world; the Holocaust; formation of a Jewish homeland, Israel.

Credits: 3

HIS 4090: Women in the Middle East

Roles of Middle Eastern women from the seventh century to the present era. Women's lives and experiences, with emphasis on their influence and contribution to the economy, politics, literature and the arts. Attention to the effects of regional, ethnic, class, and religious differences on women's status and activities.

Credits: 3

HIS 4095: Top Middle Eastern Hist

Selected topics in Middle Eastern history of interest to faculty and students.

Credits: 3

HIS 4120: Emergence Modern Africa

The impact of 19th century European colonialism on Africa; the division of Africa into European dependencies; change and continuity in African culture; the emergence of independent African nation states after World War II; their difficulties and opportunities.

Credits: 3

HIS 4195: Topics African History

Credits: 3

HIS 4210: Byzantine Civilization

The history and culture of the eastern Roman Empire from the founding of Constantinople in 330 by Constantine to its capture by the Ottoman Turks in 1453. The emperor and his court, Byzantine art and architecture, monasticism, Byzantine women, the rise of Islam, the Latin west and the Crusades.

Credits: 3

HIS 4316: Intro to His of Japanese Civ

Credits: 3

HIS 4320: Modern East Asia

The political, economic and social history of Modern East Asia (China, Japan and Korea) with an emphasis on the impact of the West, the Japanese Empire and the development of modern institutions.

Credits: 3

HIS 4325: Modern China I, 1644-1912

Survey of Chinese history, 1644 to 1912, covering demise of last Chinese empire: the Qing empire. Topics include emergence of commercial society; Opium Wars, Imperialism, engagement with European world, and demise of the Empire and birth of modern Chinese nation.

Credits: 3

HIS 4330: Modern China II, 1912-Present

China during its republican and Communist periods.

Credits: 3

HIS 4335: Modern Japan

The social and political history of modern Japan (1868-Present); its dramatic rise to world power status, the long road to WW II, the impact of Allied Occupation; themes of cooperation and conflict in state-society relations.

Credits: 3

HIS 4340: Cult. of East Asian Capitalism

This course is a thematic historical survey focusing on the relationship between economic and non-economic processes -- social, cultural, and intellectual -- around the world the last three centuries. Readings are global in scope but will emphasize the historical experiences of East Asia, and in particular modern China and Japan.

Credits: 3

HIS 4360: History of Modern South Asia

History of Indian subcontinent from late Mughal period through British Empire, culminating in independence and partition in 1947. Emphasis on knowledge, power and state formation; resistance, revolution, and nationalism; gender and the role of women; and post colonial legacies.

Credits: 3

HIS 4365: Modern India and Pakistan

Modern history of the Indian subcontinent from late Mughal Empire to the present. Themes include: expansion of British power, anti-colonial nationalism, birth of India and Pakistan, and contemporary politics, economics, and culture in the region.

Credits: 3

HIS 4395: Topics in Asian History

Selected topics in Asian history of interest to faculty and students.

Credits: 3

HIS 4405: The Americas & Span Conquest

Incas, Mayas, Aztec and Mochica cultures in Ancient Latin America; indigenous cultural and military clashes with European invaders; the 16th-century political economy and subsequent theological debates regarding the humanity of Indians; social repercussions of an "incomplete" conquest.

Credits: 3

HIS 4410: Colonial Latin America

Establishment and maintenance of a Hapsburg colonial state; indigenous responses to religious and secular colonization; the creation of a multicultural society from African, indigenous, and Iberian peoples from the 1580s the 1780s.

Credits: 3

HIS 4415: Revolutionary Latin America

Latin America's revolutionary century from the beginnings of political revolt in the 1780s to the beginning of economic modernization in the 1880s. Social and economic impact of the Bourbon Reforms; indigenous revolts and slave rebellions; liberal revolutionary movements culminating in the political independence but economic dependence of Spanish America; slavery and abolition.

Credits: 3

HIS 4420: Contemp Lat Amer History

20th century economic inequalities, U. S. intervention and military dictatorships, cultural imperialism and immigration Communism in Latin America, human rights within a multiracial society.

Credits: 3

HIS 4495: Topics Latin Amer Hist

Selected topics in Latin American history of interest to faculty and students.

Credits: 3

HIS 4499: Topics in World History

Selected topics in world or non-western history of interest to faculty and students.

Credits: 3

HIS 4526: Mod Science Art Invention

Interactions among science, technology and art that have shaped modern culture since the industrial revolution of the late 18th century. Special attention to the sources, styles, and contexts of creativity in various fields.

Credits: 3

HIS 4527: Frankenstein to Artificial Lif

The origins of artificial life forms by modern science, the perspective of involved scientists, literary observers, politicians and businessmen, and society as a whole. Topics include cloning, transplanted organs, genetic engineering, and artificial intelligence.

Credits: 3

HIS 4528: Women in Mod Sci & Tech

Women in the development of modern (since 1600) science and technology, including gender issues shaping theories and research, the impact of innovation on women's lives, and women as professionals and as creative workers.

Credits: 3

HIS 4620: 20th Cent Military Hist

The major wars of the 20th century: World War I, World War II, Korea and Vietnam. Cold War, wars of liberation.

Credits: 3

HIS 4660: World at War, 1939-1945

Visions and experiences of a global war; Nazism and a culture of total war; war and civilians; racism and the Holocaust; the atomic bomb; historical commemoration and memory.

Credits: 3

HIS 4700: "War Lords" of WW II

Credits: 3

HIS 4701: The Cold War

The origins, conduct, and outcomes of the Cold War, and analysis of evolving interpretations of this conflict and its significance.

Credits: 3

HIS 4995: Topics Comparative Hist

Selected topics in non-Western and world history of interest to faculty and students.

Credits: 3

HIS 4996: Topics History of Gender

Selected themes in the history of gender examined in depth.

Credits: 3

HIS 4997: Topics in the History of Race

Selected themes in the history of race examined in depth.

Credits: 3

HIS 4998: Topics in Public History

Selected themes in public history examined in depth.

Credits: 3

HIS 5001: Junior Research Seminar

The junior research seminar introduces majors to research methods, sources, and historiography -- how historians have reconstructed, interpreted, and written about the past. By examining diverse interpretations and historical controversies, the seminars help students develop their abilities to critique historical arguments and develop their own arguments. The course prepares history majors for their Senior Research Methods course, HIS 5501.

Credits: 3

HIS 5501: Sem in Historical Methodology

Student research and reports. Seminar format. Written permission of chair required.

Credits: 3

Prerequisites:

Written permission of chair required.

HIS 5515: Independent Research

An intensive research project under individual direction. Written permission of chair required.

Credits: 3

Prerequisites:

Written permission of chair required.

Honors

HON 1000: Interdisc Humanities I:PHI

Major works and ideas from the classical Graeco-Roman and Christian traditions. Emphasis on philosophical ideas. Extensive reading and writing requirements. Team-taught.

Credits: 3

HON 1001: Interdisc Humanities I:LIT

Major works and ideas from the classical Graeco-Roman and Christian traditions. Emphasis on literature and drama. Extensive reading and writing requirements. Team-taught.

Credits: 3

HON 1003: Interdisc Humanities I:THL

Major works and ideas from the Graeco-Roman and Christian traditions. Emphasis on religious thought and development. Extensive reading and writing requirements. Team-taught.

Credits: 3

**HON 1005: Interdisc
Humanities I**

Honors seminar on major works and ideas from the classical Graeco-Roman world. Emphasis on literature, drama, and performance.

Credits: 1

Co-Requisites:

HON 1000

HON 1003

**HON 1006: Interdisc
Humanities II**

Honors seminar on major works and ideas from the medieval, Renaissance, and early modern periods.

Emphasis on literature, drama, and performance.

Credits: 1

Co-Requisites:

HON 1051

HON 1053

**HON 1007: Interdisc
Humanities III**

Honors seminar on major works and ideas from the modern and contemporary periods. Emphasis on literature, drama, and performance.

Credits: 1

Co-Requisites:

HON 2002

HON 2005

**HON 1050: Interdisc
Humanities II: PHI**

Credits: 3

**HON 1051: Interdisc
Humanities II:LIT**

Major works and ideas from the Medieval period to the French Revolution. Emphasis on the evolution in literature from medieval to modern. Extensive reading and writing requirements. Team Taught. (3 cr) Sem 2. Two coreq: HON 1050, 1052, 1053, 1054.

Credits: 3

Co-Requisites:

Two coreq: HON 1050, 1052, 1053, 1054.

**HON 1053: Interdisc
Humanities II:THL**

Major works and ideas from the Medieval period to the French Revolution. Emphasis on the evolution in religious thought and institutions from medieval to modern.

Credits: 3

**HON 2000: Interdisc
Humanities III: PHI**

Credits: 3

**HON 2001: Interdisc
Humanities III: LIT**

Credits: 3

**HON 2002: Interdisc
Humanities III: HIS**

Major works and ideas of the 19th and 20th centuries, with emphasis on historical developments. Extensive reading and writing requirements. Team-taught.

Credits: 3

**HON 2003: Interdisc
Humanities III: THL**

Major works and ideas of the 19th and 20th Centuries, with emphasis on religious thought. Extensive reading and writing requirements. Team taught.

Credits: 3

**HON 2005: Interdisc
Humanities III: ETH**

Major works and ideas of the 19th and 20th Centuries, with emphasis on ethical thought. Extensive reading and writing requirements. Team taught.

Credits: 3

**HON 2550: Humanities
Seminar**

Interdisciplinary study of distinctiveness of humanistic knowledge, humanist perspectives on the social and natural sciences, hermeneutics and interpretation, objectivism and relativism.

Credits: 3

**HON 2560: Social Science
Seminar**

Methodology of empirical and statistical analysis in the social sciences. Computer applications to data analysis, model designs and theory testing.

Credits: 3

**HON 2570: Natural Science
Seminar**

Methods and issues related to scientific research, including representation and evaluation of data, value questions, and the nature of scientific certainty.

Credits: 3

**HON 3000: Art and Art
History**

Credits: 3

**HON 3050: Art and Art
History**

Credits: 3

HON 3100: Classics

Credits: 3

HON 3300: Education

Credits: 3

HON 3350: Education

Credits: 3

HON 3400: Communication

Credits: 3

HON 3450: Communication

Credits: 3

HON 3600/3601: Literature

Credits: 3

HON 3601: Literature

Credits: 3

HON 3800: Geography

Credits: 3

HON 3850: Geography

Credits: 3

HON 4000/4001: History

Credits: 3

HON 4001: History

Credits: 3

HON 4075: Humanities

Honors Seminar. Topics will vary.

Credits: 3

HON 4090: Humanities

Honors Seminar. Topics will vary.

Credits: 3

HON 4100: Mathematics

Credits: 3

HON 4150: Mathematics

Credits: 3

HON 4200: Topic:**Criminology**

Credits: 3

HON 4201: Topic: Criminology

An evidence-based analysis of what works, what does not work, and what is promising for programs and policies designed to prevent crime and delinquency. An overview of criminological theories, in-depth coverage of school-based delinquency prevention, and analysis of prevention strategies in other settings such as families, communities, places, and labor markets.

Credits: 3

HON 4300/4301: Philosophy

Credits: 3

HON 4301: Philosophy

Credits: 3

HON 4400: Justice Seminar Abroad

Credits: 3

HON 4500: Political Science

Credits: 3

HON 4501: Political Science

Credits: 3

HON 4700: Psychology

Credits: 3

HON 4701: Psychology

Credits: 3

HON 4800/4801: Theology & Religious Studies

Credits: 3

HON 4801: Theology & Religious Studies

Credits: 3

HON 4900/4950: Sociology

Credits: 3

HON 4950: Sociology

Credits: 3

HON 5001: Shaping A College Life

Shaping a College Life aims at helping Honors students navigate successfully the transition of high school to college by inviting them into a co-curricular one-credit experience focused around several themes. This is a graded course that can be bundled with 2 other approved 1 credit courses for Honors credit.

Credits: 1

HON 5002: Shaping A College Life II

Shaping a College Life II continues the themes of Shaping a College Life and invites students to have a reflective experience that provides the opportunity to gain a deeper understanding of yourself, your peer group, and Villanova. This is a graded course that can be bundled with 2 other approved 1 credit courses for Honors credit.

Credits: 1

HON 5003: Shaping a Work Life

Professional development seminar focusing on the meaning of work and developing and achieving career goals. Course will combine in-class and out-of-class activities engaging students to explore career and calling.

Credits: 1

HON 5050: Biology

Advanced seminar in Biology; topics to be determined by the instructor of record.

Credits: 3

HON 5051: Biology

Credits: 4

HON 5100: Theatre Theory and Performance

Topics, genres, and practice in production, performance, and critical vocabulary with which to analyze and discuss what is seen and read; texts which engage critically with performance. Staging challenges and performance possibilities offered by stage scripts.

Credits: 3

HON 5300: Enrichment: Topics

Intensive experiential courses providing enrichment opportunities. Individual and group participation directed toward enhancing intellect and delight.

Credits: 1

HON 5305: Colloquium

Colloquium is a one-credit seminar for Honors students that is capable of being bundled into a 3-credit course. Course meets once a week. Discussion of books and readings selected by instructor. May be repeated.

Credits: 1

HON 5400: Performing Arts: Dance

Intensive experiential courses in performance, literary, and plastic arts. Individual and group participation directed toward reflexive understanding of one's self as engaged in the process of creativity.

Credits: 1

HON 5410: Performing Arts: Instrument

Intensive experiential courses in performance, literary, and plastic arts. Individual and group participation directed toward reflexive understanding of one's self as engaged in the process of creativity.

Credits: 1

HON 5420: Performing Arts: Theatre

Intensive experiential courses in performance, literary, and plastic arts. Individual and group participation directed toward reflexive understanding of one's self as engaged in the process of creativity.

Credits: 1

HON 5430: Performing Arts: Voice

Intensive experiential courses in performance, literary, and plastic arts. Individual and group participation directed toward reflexive understanding of one's self as engaged in the process of creativity.

Credits: 1

HON 5435: Music Theory

The art of music as an expansion of metaphoric language, including images from the visual arts, scientific and philosophic ideas.

Credits: 1

HON 5440: Literary Arts: Poetry

Intensive experiential courses in performance, literary, and plastic arts. Individual and group participation directed toward reflexive understanding of one's self as engaged in the process of creativity.

Credits: 1

HON 5450: Literary Arts: Prose

Intensive experiential courses in performance, literary, and plastic arts. Individual and group participation directed toward reflexive understanding of one's self as engaged in the process of creativity.

Credits: 1

HON 5460: Plastic Arts: Painting

Intensive experiential courses in performance, literary, and plastic arts. Individual and group participation directed toward reflexive understanding of one's self as engaged in the process of creativity.

Credits: 1

HON 5470: Plastic Arts: Sculpture

Credits: 1

HON 5480: American Sign Language

The structure and production of ASL, linguistic expression through face and body. Deaf culture and literature.

Credits: 1

HON 5490: Culture Leadership Workshop

Civic engagement skill set development in global events; cultural trends; intercultural communication; and discourse across academic disciplines.

Credits: 1

HON 5500: Ind Study & Research

Independent Study and Research

Credits: 3

HON 5501: Ind Study & Research

Independent Study and Research

Credits: 3

HON 5506: Ind Study & Res Science

Independent Study and Research in Science

Credits: 3

HON 5507: Ind Study & Res Science

Independent Study and Research in Science

Credits: 3

HON 5508: Ind Study: Topics in Intl Rsch

Directed Independent Research to include flexible components that allows a student to tailor the research to their own areas of interest and scholarship while enrolled in an approved VU study abroad program.

Credits: 3

HON 5509: Ind Study: Topics In Intl Rsch

Directed Independent Research to include flexible components that allows a student to tailor the research to their own areas of interest and scholarship while enrolled in an approved VU study abroad program.

Credits: 3

HON 5598: Teaching Practicum

Teaching Practicum.

Credits: 1

HON 5599: Teaching Practicum

Intern teaching under supervision of Practicum Coordinator.

Credits: 3

HON 5600: Seminar for Visiting Professor

Seminar topic to be determined by visiting professor.

Credits: 3

HON 5700: Colloquia

Credits: 3

HON 5701: Colloquia

Credits: 3

HON 5702: Colloquia**Credits:** 3**HON 5750: Colloquia****Credits:** 3**HON 6000: Senior Thesis I**

Major independent research project under the direction of a thesis advisor. The first semester includes a comprehensive proposal and bibliography, research design, detailed outline, and substantive writing sample.

Credits: 3**HON 6002: Senior Thesis II**

Major independent research project under the direction of a thesis advisor. In addition to completing the thesis, students must participate in the Senior Research Conference and thesis defense.

Credits: 3**HON 6003: Oral Exam Capstone**

Course will prepare students pursuing the Honors Degree through the non-thesis track for their oral examination.

Credits: 1

Human Services

HS 2000: Intro:Prin & Survey Prac

Course is Writing Enriched.

Credits: 3**HS 2100: Assessment and Referral****Credits:** 3**HS 2200: Research in Human Services**

An introduction to the basic principles, approaches, and methods of social science research as utilized in the field of Human Services. The integration and parallels between Human Service practice and research will be underscored.

Credits: 3**HS 3000: Lab Communication Skills****Credits:** 3**HS 3100: Lab in Group Process****Credits:** 3**HS 3400: Working w Diverse Populations**

This course explores historical and contemporary diversity issues related to providing competent cross-cultural human services. The impact of socio-identities (e.g., race, ethnicity, gender, religion, socioeconomic status, sexual orientation, and disability) will be examined considering individual, group, and macro-system functioning.

Credits: 3**HS 3500: Gerontology****Credits:** 3**HS 3600: Life Skills Planning**

Determination of personal and professional life goals from the perspective of one's own strengths and weaknesses. Helping others in the process of selecting career paths and developing self and peer helping skills. Recommended for undergraduate students interested in the decision-making factors in career selections.

Credits: 3**HS 3700: Human Service Systems**

Organizational structures, trends and influences that impact Human Services Systems. Special emphasis upon managed care and case management as well as Human Resource Development.

Credits: 3**HS 3900: Human Services Ind. Study**

Supervised research or field experience project and paper. Students may only register for this class once, and it cannot take the place of any Human Service course requirements.

Credits: 3**HS 4000: Seminar Human Services**

Integration of the theoretical and practical aspects of the student's program.

Credits: 3**Prerequisites:**

HS 2000 :D- and HS 2100 :D- and HS 3000 :D- and HS 3100 :D-

HS 4100: Pract Human Services

Application of human service skills gained in the program through volunteer service in a community organization and structured peer counseling. The on-campus seminar will focus on tapes and case study material.

Credits: 6

Humanities

HUM 1903: Internship**Credits:** 3**HUM 1906: Internship****Credits:** 3

HUM 1975: Epiphanies of Beauty

Exploration of literary arts as illuminating human condition and mystery of creation through several genres: novel, novella, drama, poetry, short story. T.S. Eliot, Claudel, G.M. Hopkins, J. Joyce, Flannery O'Connor, R.L. Stevenson, O. Wilde.

Credits: 3

HUM 2001: THL:God

What is religion, anyway? Do we need it anymore? What is the place of religion in the contemporary world? How revelation might illuminate God and creation in a way that transforms the world? Fulfills an upper level Theology in the Core Curriculum.

Credits: 3

HUM 2002: Human Person

What is human nature, human destiny? How does one become more deeply human? What does it mean to act for the human good? How can we discover meaning in primordial human experiences such as love, mortality, finitude, and suffering?

Credits: 3

HUM 2003: PHI:World

Modern science is a dominant way of interpreting the world, and so human life. How does modern science interpret the world? What are the effects of this interpretation on the way we view human beings? Fulfills an upper level Philosophy in the Core Curriculum.

Credits: 3

HUM 2004: PSC:Society

Political, economic, and family life dominate our concerns and yet we seem cynical about possibly finding meaning in them. How is our dependent, rational nature developed through marriage, family, work, markets, and government? Fulfills an upper level Political Science in the Core Curriculum.

Credits: 3

HUM 2100: HIS:The Goods & the Good Life

Explore issues in economic life through texts in theology, philosophy, history, anthropology, literature, and arts. Why do we work, what is the difference between work and toil? What does the production and consumption of things tell about the human person, world, and God?

Credits: 3

HUM 2200: HIS: Literature & Politics

How has literature affected political life and imagination? If writers can write about politics, should they enter politics and become acknowledged legislators? Students will read fiction and non-fiction. The focus will be on the political intelligence of literature. Fulfills an upper level History in the Core Curriculum.

Credits: 3

HUM 2300: PSC: What is Politics

Credits: 3

HUM 2500: HIS:Imperialism & Humanities

What have been the meanings of empire for imperialist and imperialized? How can different humanities complement, enrich, and contradict each other? Theme pursued through literature, history, philosophy, theology, art, music and film. Fulfills an upper level History in the Core Curriculum.

Credits: 3

HUM 2900: Topics

Specific topics vary each semester.

Credits: 3

HUM 2950: Vocation and Purpose

Reflection on Villanova college experience in guided seminar discussion and workshops designed to envision and shape post-graduate career and life paths. Restriction: Instructor Permission

Credits: 1

HUM 2993: Internship

Credits: 3

HUM 2996: Internship

Humanities majors must satisfy all requirements set by the Internship Office. Students must submit a 10-15 page essay to the Humanities Chair copying the Internship Office. See department web page for particulars.

Credits: 6

HUM 3000: ENG: The Catholic Imagination

Credits: 3

HUM 3001: ENG: Lewis Tolkien & Inklings

Explores the fictional, theological, and philosophic writing of C.S. Lewis, J.R.R. Tolkien, and the Inklings (Charles Williams, Dorothy L. Sayers, G.K. Chesterton, George MacDonald). Investigates the relationship between fantastic "otherworldly" fiction and human "wordly" experience. Fulfills an upper level Literature in the Core Curriculum.

Credits: 3

HUM 3002: Romantic Revolutions

Credits: 3

HUM 3050: The Poetry of Meditation

Study of philosophical and religious poetry: Dante, Herbert, Hopkins, Eliot, Pinkerton, and Hill.

Credits: 3

HUM 3140: PSC: Religion and Politics

Credits: 3

HUM 3150: PHI: Beauty & Human Existence

Significance of beauty for human life. Is beauty "subjective"? Students consider contemporary thinkers on art, culture, and survey philosophies of art and beauty from ancient to modern. Fulfills an upper level Philosophy in the Core Curriculum.

Credits: 3

HUM 3170: The Nature of Human Freedom

History of philosophy texts discussing meaning of freedom, (Plato, Aristotle, Augustine, Aquinas, Hobbes, Locke, Spinoza, Leibniz, Schiller, Schelling). Relationship of intellect and will, freedom and the good, free choice and determinism, and autonomy and respect for others.

Credits: 3

HUM 3180: PHI: Faith & Reason

Reflects on classical and contemporary texts dealing with relation between faith and reason. Discusses imaginative presentations of the christian worldview attempting to show how it's both reasonable and mysterious. Fulfills an upper level Philosophy in the Core Curriculum.

Credits: 3

HUM 3200: PSC: Politics & Human Nature

Our conception of human nature arises in part from our practice of politics and vice versa. What is the relationship between the way we think about the nature and meaning of human life and the practice of politics? Fulfills an upper level Political Science in the Core Curriculum.

Credits: 3

HUM 3500: PSC: Early Political Theories

Credits: 3

HUM 3600: Amer Architecture since 1865

Survey of architecture and town planning in the United States from 1865 to present. Themes of American exceptionalism, emergence of modern design, and continuity of traditional architecture. Major figures include Frank Lloyd Wright, Mies van der Rohe, Frank Gehry.

Credits: 3

HUM 3700: Political Thought of Rousseau

Understandings of the human person in Locke and Rousseau, and their consequences for political order, citizenship and education -- agreements and disagreements that almost define the terms of controversy in the modern view of humanity.

Credits: 3

HUM 4000: Jews, Christians, Muslims: Dialog

An overview of the context of radical pluralism within which contemporary discourse occurs. An examination of the challenges of this situation, an observation of Aquinas' interaction with other thinkers, and a proposal for this medieval model for inter-religious inquiry.

Credits: 3

HUM 4200: Forgiveness: Pers & Pol

This seminar mimes recent discussions that address these crucial questions: Does forgiveness abrogate justice? What is the place of anger and hate? May we forgive persons who will not repent? Is forgiveness a duty? Can forgiveness resolve political disputes and racial tensions?

Credits: 3

HUM 4350: PHI: Problem of Love

Reading a broad survey of philosophical discussions of love, from Plato to Derrida, we will address a variety of questions concerning the nature of love, the relationship between self-interest, self-love, and love of other, whether Christianity makes a difference to the meaning of love, and related issues. Fulfills an upper level Philosophy in the Core Curriculum.

Credits: 3

HUM 4900: Courtship and the Family

Credits: 3

HUM 5000: History, Mystery, Destiny

Credits: 3

HUM 5110: HIS: Utopia

Oscar Wilde once said that any map of the world that does not include Utopia is not even worth glancing at. Students will study the maps of Utopia drawn up by a variety of writers from antiquity to the present. Fulfills an upper level History in the Core Curriculum.

Credits: 3

HUM 5150: Literature & Politics

Exploration of the relationship between literature and politics through novels, poetry, theater, and journalism. Authors: Orwell, Conrad, Zola, Wilde, Silone, Baldwin, and others.

Credits: 3

HUM 5800: THL: Religion & Literature

Credits: 3

HUM 5900: HUM - International Context

Course integrates both academic and practical approaches exploring issues in service projects and voluntary organizations.

Credits: 3

HUM 5950: Citizenship & Globalization

Examination of the sweep of British History since 1327, with special attention to four periods: Medieval England; Early-Modern London and Reformation, Renaissance, and Revolution; Eighteenth and Nineteenth Century Britain and the growth of Empire; and Post-Colonial United Kingdom and the European Union. Consideration given to English Music, Art and Architecture, Literature, and Political Theory. To take place partly in London.

Credits: 3

HUM 5975: Pellegrinaggio: Augustine

Learn more about the life and works of St. Augustine of Hippo. Examination of the life and writings of St. Augustine in preparation for the pilgrimage to Italy, and on-site exploration of Augustine's historical context and legacy.

Credits: 3

HUM 6000: Great Thought Seminar

Focused engagement with great text, great thinker, great idea in the intellectual tradition. Examples include: Brothers Karamazov, Plato's Republic, Wordsworth, Frank Lloyd Wright, John Ruskin, Thomas Aquinas. Course explores basic human questions as illuminated by the thinker or text. Restriction: Must have completed 2 Gateway courses.

Credits: 3

Prerequisites:

HUM 2001 or HUM 2002 or HUM 2003 or HUM 2004

HUM 6500: Senior Seminar

The department's capstone is a seminar, meeting once a week, in which students read contemporary texts on issues they have engaged in their study of the humanities.

Credits: 3

HUM 6950: Ind Study & Research

Credits: 3

Italian

ITA 1111: Introductory Italian I

Groundwork in Italian, including oral proficiency, aural comprehension and reading for students with no prior knowledge of Italian. Supplementary language laboratory work and oral drills.

Credits: 4

ITA 1112: Introductory Italian II

Groundwork in Italian, including oral proficiency, aural comprehension and reading for students with no prior knowledge of Italian. Supplementary language laboratory work and oral drills.

Credits: 4

ITA 1121: Intermediate Italian I

Review of grammar, composition, reading and conversation. Students should have completed ITA 1111 and 1112 or the equivalent.

Credits: 3

ITA 1122: Intermediate Italian II

Review of grammar, composition, reading and conversation. Students should have completed ITA 1121 or the equivalent.

Credits: 3

ITA 1131: Conversation & Composition I

Intensive practice in conversation and composition with emphasis on developing advanced language skills in Italian.

Credits: 3

ITA 1132: Conversation & Composition II

Further practice in conversation and composition with focus on advanced proficiency in Italian. Students should have completed ITA 1131 or the equivalent.

Credits: 3

ITA 1138: Advanced Grammar

Intensive practice of spoken and written Italian.

Credits: 3

Prerequisites:

ITA 1131 :D-

ITA 1140: Writing & Stylistics in Ita.

Intensive practice in written expression and textual analysis. Compositions are modeled on selected Italian texts.

Credits: 3

ITA 1141: Italy in Business

An overview of contemporary Italy from the perspective of business (leading brands, productive sectors, marketing strategies, financial trends, law and politics).

Credits: 3

Prerequisites:

ITA 1131

ITA 1143: Readings in Italian Literature

Readings in fiction, verse and drama representing various literary currents and personalities from the Renaissance to modern times.

Credits: 3

Prerequisites:

ITA 1131

ITA 2220: Italian Lit and Culture I

Introduction to Italian literature and culture from the Middle Ages to the Renaissance. A required course for majors.

Credits: 3

Prerequisites:

ITA 1131 or authorization from instructor.

ITA 2221: Italian Lit. and Culture II

Introduction to Italian literature and culture from the Baroque to the 20th century. A required course for majors. Pre-requisite: ITA 1131 or authorization from instructor.

Credits: 3

Prerequisites:

ITA 1131

ITA 1131 or authorization from instructor.

ITA 2222: Italians and America

Introduction to the cinematographic and literary images of Italians and Italian-Americans, from the discovery of the new world to the present.

Credits: 3

Prerequisites:

ITA 1131

ITA 2225: Italian Music

The interaction of musical performance and poetry (from opera to contemporary songwriting) and the role of music in Italian society. Pre-requisite: ITA 1131 or authorization from instructor.

Credits: 3

Prerequisites:

ITA 1131

ITA 1131 or authorization from instructor.

ITA 2314: Italian Poetry

A selection of masterpieces of Italian poetry from the origins to the present. Pre-requisite: ITA 1131 or authorization from instructor.

Credits: 3

Prerequisites:

ITA 1131

ITA 1131 or authorization from instructor.

ITA 2324: Diversity, Gender, Race

The course addresses issues of identity related to diversity mainly gender, but also race in modern Italy. Pre-requisite: ITA 1131 or authorization from instructor.

Credits: 3

Prerequisites:

ITA 1131

ITA 1131 or authorization from instructor.

ITA 2993: Italian Internship Project

Students may receive up to 3 credits for an internship experience in an Italian business, non-profit, government agency, museum, or an Italian cultural association.

Credits: 3

Prerequisites:

Approval of the Italian Coordinator is required. ITA 1131 or authorization of instructor.

ITA 3064: Performing Comedy

Reading and staging of a theatrical piece in Italian. The course includes grammar review, critical interpretation and production of the text.

Credits: 3

Prerequisites:

Any ITA course at the 2000 level or authorization from instructor.

ITA 3074: Intro to Italian Cinema

A critical introduction to the masterpieces of the Italian cinema from DeSica and Fellini to Tornatore and Sorrentino.

Credits: 3

Prerequisites:

Any ITA course at the 2000 level or authorization from instructor.

ITA 3075: Visual History of Italy

A study of Italian history and culture with an emphasis on film, painting, and architecture. In Italian. Pre-requisite: Any SPA course at the 2000 level or authorization from instructor.

Credits: 3

Prerequisites:

Any SPA course at the 2000 level or authorization from instructor.

ITA 3285: Italy and Europe

The contribution and role of Italy in the European politics, economy, and culture, from its making as a nation to the present.

Credits: 3

Prerequisites:

Any SPA course at the 2000 level or authorization from instructor.

ITA 3365: The Italian Theatre

A selection of masterpieces of Italian theatre, from the Renaissance to modern times. Pre-requisite: Any ITA course at the 2000 level or authorization from instructor.

Credits: 3

Prerequisites:

ITA 1131

Any ITA course at the 2000 level or authorization from instructor.

ITA 3366: Italian Opera

Introduction to Italian opera from Monteverdi to Verdi and Puccini.

Credits: 3

Prerequisites:

Any ITA course at the 2000 level or authorization from instructor.

ITA 3412: Special Topics

Advanced study of topics of special interest in Italian literary and/or cultural studies. May be repeated for credit if topic changes. Pre-requisite: Any ITA course at the 2000 level or authorization from instructor.

Credits: 3

Prerequisites:

ITA 1131

Any ITA course at the 2000 level or authorization from instructor.

ITA 3413: Topics on Italy and Beauty

Advanced study of expressions of beauty as manifested in Italian Culture (Literature, Art, Philosophy, Design, and Commerce). Offered in Italian. Pre-requisite: Any ITA course at the 2000 level or authorization from instructor.

Credits: 3

Prerequisites:

Any ITA course at the 2000 level or authorization from instructor.

ITA 3455: Dante's Divine Comedy

Selected readings in Italian from Dante's masterpiece.

Credits: 3

Prerequisites:

Any ITA course at the 2000 level or authorization from instructor.

ITA 3545: Petrarca and Boccaccio

The major works of Francesco Petrarca and Giovanni Boccaccio.

Credits: 3

Prerequisites:

Any ITA course at the 2000 level or authorization from instructor.

ITA 3625: The Italian Renaissance

Writers, artists, intellectuals of the Humanistic age and of the Renaissance. Pre-requisite: Any ITA course at the 2000 level or authorization from instructor.

Credits: 3

Prerequisites:

ITA 1131

Any ITA course at the 2000 level or authorization from instructor.

ITA 3725: The Italian Baroque

An introduction to the poetics and the main artists of the Italian Baroque. Caravaggio, Bernini, Galileo, Marino, Vico, commedia dell'arte, opera.

Credits: 3

Prerequisites:

Any ITA course at the 2000 level or authorization from instructor.

ITA 3824: Classics and Romantics

An overview of Italy's culture in the 18th and 19th centuries: neo-Classicism, Romanticism (Foscolo, Leopardi, Manzoni) and Risorgimento.

Credits: 3

Prerequisites:

Any ITA course at the 2000 level or authorization from instructor.

ITA 3925: Italian Modernism

Literature and art of the 20th century. Futurism, avant-gardes, Pirandello, De Chirico, Calvino and postmodernism.

Credits: 3

Prerequisites:

Any ITA course at the 2000 level or authorization from instructor.

ITA 3970: Research Seminar

Concentrated study on one aspect of Italian literature chosen by the instructor. Immersion in primary and secondary materials and introduction to principles and techniques of literary research and bibliography ultimately leading to the writing of the research paper. Required for majors. Open to all advanced students. Pre-requisite: Any ITA course at the 2000 level or authorization from instructor.

Credits: 3**Prerequisites:**

ITA 1131

Any ITA course at the 2000 level or authorization from instructor.

ITA 3971: Directed Research in Italian

Directed semester-long research project that satisfies the College research requirement, taken in conjunction with another upper-level ITA content course. Pre-requisite: ITA 2220, ITA 2221 or approval from the ITA coordinator.

Credits: 1**Prerequisites:**

ITA 2220 and ITA 2221

ITA 5900: Independent Study**Credits:** 3**Prerequisites:**

ITA 1131

Japanese Language

JPN 1111: Introductory Japanese I

Functional use of Japanese for students with no prior knowledge of Japanese. Communication skills (speaking and listening), reading and writing skills. Supplementary practice with computer. JPN 1111 or equivalent or permission of instructor.

Credits: 6**JPN 1112: Introductory Japanese II**

Functional use of Japanese for students with no prior knowledge of Japanese. Communication skills (speaking and listening), reading and writing skills. Supplementary practice with computer. JPN 1112 or equivalent or permission of instructor.

Credits: 6**JPN 1121: Intermediate Japanese I**

Further practice of communication skills (speaking and listening), reading and writing skills. Supplementary practice with computer.

Credits: 5**JPN 1122: Intermediate Japanese II**

Further practice of communication skills (speaking and listening), reading and writing skills. Supplementary practice with computer. JPN 1121 or equivalent or permission of instructor.

Credits: 5**JPN 1131: Advanced Japanese I**

Advanced practice of communication skills - oral, speech and discussion skills, reading and writing skills. Supplementary practice with computer. JPN 1122 or equivalent or permission of instructor.

Credits: 3**JPN 1132: Advanced Japanese II**

Advanced practice of communication skills - oral, speech and discussion skills, reading and writing skills. Supplementary practice with computer. JPN 1131 or equivalent or permission of instructor.

Credits: 3**JPN 1133: Advanced Japanese III**

Advanced practice of communication skills including reading, discussing topics on current events and speech. Supplementary practice with computer. JPN 1132 or equivalent or permission of instructor.

Credits: 3**Prerequisites:**

JPN 1132

JPN 1134: Advanced Japanese IV

Advanced practice of communication skills including reading, discussing topics on current events and speech. Supplementary practice with computer. JPN 1133 or equivalent or permission of instructor.

Credits: 3**Prerequisites:**

JPN 1133

JPN 2100: Japanese Lit Eng Trans

The masterpieces of Japanese literature with a component on women writers. Conducted in English.

Credits: 3

JPN 2102: Japanese Film

Introduction to Japanese film to those who are interested in but not necessarily exposed to Asian culture and language. Fulfills requirements for minor in Japanese.

Credits: 3

JPN 2143: Japanese Animation

Explores how anime is a reflection of Japanese society, art & culture. Introduction to rich & varied world of Japanese animated films by considering anime as medium, art, culture, & industry. Introduction to history, theory, aesthetics & cultural aspects of anime, with emphasis on 'the art of communication' with the medium. Fulfills requirement for Japanese minor.

Credits: 3

JPN 2144: Japanese Culinary Culture

General introduction to Japanese culinary culture, relationship to Japanese society & culture in general, & historical & cultural reasons it has developed as it has. Familiarizes students with historical & modern Japanese cuisine. Discusses historical, geographical & religious background as well as foreign influences. Fulfills requirement for Japanese minor.

Credits: 3

JPN 2215: Women in Asia

Credits: 3

JPN 3412: Special Topics

Advanced study of topics of special interest in Japanese literary and/or cultural studies. May be repeated for credit if topic changes. Fulfills requirements for Japanese minor and concentration in East Asian Studies. Taught in English.

Credits: 3

JPN 5900: JPN:Independent Study

Supervised study, activity or research. May be taken more than once. Prior approval of chair and instructor.

Credits: 3

Latin

LAT 1111: Introductory Latin I

Basic forms, syntax and vocabulary; selected Latin prose in second semester.

Credits: 3

LAT 1112: Introductory Latin II

Basic forms, syntax and vocabulary; selected Latin prose in second semester.

Credits: 3

LAT 1113: Intensive Introductory Latin

Credits: 3

LAT 1121: Intermediate Latin I

Review of Latin syntax; selected readings from prose and poetry.

Credits: 3

LAT 1122: Intermediate Latin II

Review of Latin syntax; selected readings from prose.

Credits: 3

LAT 2031: Intermediate Latin I

Credits: 3

LAT 3001: Readings in Authors

Selected readings from a variety of Latin authors.

Credits: 3

LAT 3050: Prose Composition

Credits: 3

LAT 3150: Latin Language

Credits: 3

LAT 4051: Cicero

Credits: 3

LAT 4150: Caesar

Credits: 3

LAT 4350: Livy

Credits: 3

LAT 4450: Tacitus

Credits: 3

LAT 4550: Suetonius

Credits: 3

LAT 5050: Plautus & Terence

Credits: 3

LAT 5250: Vergil

Credits: 3

LAT 5350: Ovid

Ovid as an epic poet of the Augustan age.

Credits: 3

LAT 5450: Horace

Credits: 3

LAT 5900: Latin: Independent Study

Supervised study, activity or research. May be taken more than once. Prior approval of chair and instructor.

Credits: 3

LAT 6001: Senior Latin Capstone

A reading, research, and conference course on selected topics of Roman literature and history; introduction to research in classical studies. Fulfills advanced literature requirements.

Credits: 3

LAT 7101: Intensive Latin

Intensive study of Latin grammar, morphology and vocabulary.

Credits: 3

LAT 7150: Prose Composition

Credits: 3

LAT 7250: Hist Latin Literature

Credits: 3

LAT 7290: Rome 133 Bc to 31 Bc

Credits: 3

LAT 7300: Teaching Latin**Credits:** 3

Latin American Studies

LAS 3412: Special Topics

Study of topics of special interest in Latin American Studies. Topics to be arranged.

Credits: 3**LAS 3950: Latin American Studies Seminar****Credits:** 3**LAS 5000: Internship**

Global, cross-cultural experience. Six weeks of summer practicum at a major economic, political, or cultural institution in Chile.

Credits: 3**LAS 6000: Independent Study & Research**

Independent research on a topic relevant to Latin America. Cross-disciplinary. Required integration of theory and data.

Credits: 3

Leadership

LDR 2000: Foundations of Leadership

Introduction to the concepts of and approaches to leadership. Historical and contemporary leadership theories.

Credits: 3**LDR 2010: Strategic Planning for Leaders**

The strategic planning process in organizations. Mission, values, goals, alignment and accountability in the development and execution of a strategic plan.

Credits: 3**LDR 2020: Leadership & Community**

Leadership in the public sector. A study of leaders in politics, civil rights, academics/research and corporations. Evaluation of effective/ineffective leadership styles.

Credits: 3**LDR 2030: Leading with a Digital Mindset**

Analysis of the implications of technology on leadership. The strategic role of technology in organizations. Information systems, e-commerce and their value to leaders.

Credits: 3**LDR 2040: Ethics & Leadership**

The nature of ethical leadership. How the leader's values and beliefs affect decision making. The concepts of organizational and social responsibility.

Credits: 3**LDR 2050: History of Leadership**

This course evaluates the history of leadership and leaders from both the theoretical and practical perspective. Historical aspects examined will include war, peace, severe economic conditions, technology advances, societal changes, and the evolution of organizations. Students will develop a leadership philosophy and approach and examine this approach and its place in the grander context of the history of leadership.

Credits: 3**LDR 2060: Global Strategic Leadership**

The course focuses on the problems confronting the world's disadvantaged majority. Students in this course will develop transformational leadership skills by examining the interconnectedness of educational, economic, and socio-cultural issues in the US and abroad.

Credits: 3**LDR 2070: Strategy Driven Talent Mgmt**

Develop a personal talent management philosophy and plan. Improve ability to reflectively lead talent management efforts. Develop the capacity to analyze and assess talent management practices. Sharpen decision making and problem solving techniques. Research, develop and present a talent management project.

Credits: 3**LDR 2080: Leadership Communication****Credits:** 3**LDR 3400: Leadership Internship Practicum**

Approved semester project involving supervised practical application of previously learned knowledge. Supervision by faculty member and staff.

Credits: 3**Prerequisites:**

Permission of Dean required

LDR 5000: Leadership Capstone Course

Utilizes integration and analysis of leadership principles. Case studies and team-based project covering major topics in the leadership curriculum.

Credits: 3**LDR 5100: Leadership Topics-Prof Ed****Credits:** 1

LDR 5940: Leadership Topics

Presentation of selected topics in leadership. May be repeated for credit if topics are different.

Credits: 3

Prerequisites:

Pre-requisites may be imposed depending on the topics.

LDR 5950: Special Topics in Leadership

Intensive workshops or seminars in selected areas of leadership that focus on professional development and applied knowledge. May be repeated for credit if topics are different.

Credits: 1

Prerequisites:

Pre-requisites may be imposed depending on the topics.

LDR 5993: Leadership Topics

Reading, research and/or projects in a selected area of leadership under the direction of a member of the staff. May be repeated for credit.

Credits: 3

Liberal Arts

CLA 6001: Research

A reading, research, and conference course on selected topics of classical culture and history; introduction to research in classical studies.

Credits: 3

LA 1903: Internship Elective

Permission of Program Director required. Rising sophomore standing (minimum 30 credits completed) with a 3.0 overall GPA for fall or spring internship; 2.7 overall GPA for summer internship.

Credits: 3

Prerequisites:

Permission of Program Director.

LA 1904: Global Internship

Global internship course. Must secure approval of Office for Undergraduate Students (OUS) Internship Office.

Credits: 3

LA 1906: Internship Elective

Permission of Program Director. Rising sophomore standing (minimum 30 credits completed) with a 3.0 overall GPA for fall or spring internship; 2.7 overall GPA for summer internship

Credits: 6

LA 1909: Internship Elective

Permission of Program Director. Rising sophomore standing (minimum 30 credits completed) with a 3.0 overall GPA for fall or spring internship. 2.7 overall GPA for summer internship.

Credits: 9

LA 2993: Internship

Credits may be applied to requirements for the major in Liberal Arts in the required Liberal Arts elective slots. Permission of Program Director. Rising sophomore standing (minimum 30 credits completed) with a 3.0 overall GPA for fall or spring internship; 2.7 overall GPA for summer internship.

Credits: 3

LA 2996: Internship

Credits may be applied to requirements for the major in Liberal Arts in the required Liberal Arts elective slots. Permission of Program director. Rising sophomore standing (minimum 30 credits completed) with a 3.0 overall GPA for fall or spring internship; 2.7 overall GPA for summer internship.

Credits: 6

LA 5001: Liberal Arts Seminar

Credits: 3

Management

MGT 1102: Management Essentials

Introduction to organizational structures and functions; management processes and behavior of individuals and groups in organizations.

Credits: 3

Prerequisites:

(ECO 1001 or SBI 2005) and ECO 1002 and ACC 1101

MGT 2153: Intro Human Resources

Role of Human Resources Management in corporate strategy and success. Staffing, compensation, work design, performance measurement, individual and career development, safety, health, and separation. Focus on HR as critical success factor in organizations. Junior or senior standing, or permission of instructor.

Credits: 3

Prerequisites:

(VSB 2020 and VSB 2009 or VSB 2010 :Y or VSB 2030 :Y and VSB 2040 :Y) or MGT 1102

MGT 2155: Organizational Behavior

Human behavior in organizations; research and theoretical writing on organizational behavior; case discussions. Junior or senior standing.

Credits: 3

Prerequisites:

(VSB 2020 and VSB 2009 :Y or VSB 2010 :Y or VSB 2030 :Y and VSB 2040 :Y) or MGT 1102

MGT 2206: Management Practice

Application of management theory to problem identification and solutions. Motivation, leadership, discipline and shaping organizational cultures. Junior or senior standing.

Credits: 3

Prerequisites:

(VSB 2020 and VSB 2009 :Y or VSB 2010 :Y or VSB 2030 :Y and VSB 2040 :Y) or MGT 1102

MGT 2208: International Topics

Examination of a specific international management topic, which may vary from semester to semester, as reflected in the course title (e.g., Internatl Top: Mgt in Europe). Can be used toward the elective course requirement for the VSB IB Co-Major and IB Minor and as an management elective. Junior or senior standing.

Credits: 3

Prerequisites:

(VSB 2020 and VSB 2009 :Y or VSB 2010 :Y or VSB 2030 :Y and VSB 2040 :Y) or MGT 1102

MGT 2210: Small Business Mgt

Credits: 3

MGT 2212: Leadership

Credits: 3

MGT 2250: Global Corp Responsibility

Credits: 3

MGT 2350: Global Business Management

An elective topic dealing with the cross-cultural aspects of management. Student cases will address how politics, religion, social customs, and history shape and influence management practices. Junior or senior standing.

Credits: 3

Prerequisites:

(VSB 2020 and VSB 2009 :Y or VSB 2010 :Y or VSB 2030 :Y and VSB 2040 :Y) or MGT 1102

MGT 2352: Business in Emerging Markets

Focuses on management and strategy in "big emerging markets," like Argentina, Brazil, China, India, Malaysia, Mexico, Poland, South Africa, Taiwan, and Turkey. Examines social, political, economic, cultural, and financial conditions challenging businesses exporting to or investing in these countries.

Credits: 3

Prerequisites:

(VSB 2020 and VSB 2009 :Y or VSB 2010 :Y or VSB 2030 :Y and VSB 2040 :Y) or MGT 1102

MGT 2360: Global Leadership

Help students gain insights about the nature of culture, the nature of leadership, and their intersection. Provide students with an increased understanding of, (1) existing theory and research on different leadership and culture topics and, (2) themselves with respect to leadership development and cultural intelligence.

Credits: 3

Prerequisites:

(VSB 2020 and VSB 2009 :Y or VSB 2010 :Y or VSB 2030 :Y and VSB 2040 :Y) or MGT 1102

MGT 2370: Global Business Ethics

Interactive study of business ethics within a global economy. Alternative ethical theories across and within different cultures are presented. Both Western and non-Western traditions are explored to develop a framework useful to address ethical challenges as they arise globally.

Credits: 3

Prerequisites:

(VSB 2020 and VSB 2009 :Y or VSB 2010 :Y or VSB 2030 :Y and VSB 2040 :Y) or MGT 1102

MGT 2400: Mgt of Creativity & Innovation

Develops students' awareness and confidence to innovate. Value of creativity tools and techniques for individual and group innovation. Students develop their own preferred creativity process and apply to individual and group challenges. Study innovation processes at organizational system level.

Credits: 3

MGT 3160: Business Decision Making

Integration of behavioral science and quantitative approaches to decision-making; descriptive and prescriptive models in individual, group and organizational settings, expected value, utility theory, the analytic hierarchy process, risk analysis, and computer simulation of business problems especially in business technology management.

Credits: 3

Prerequisites:

(VSB 2020 and VSB 2009 :Y or VSB 2010 :Y or VSB 2030 :Y and VSB 2040 :Y) or MGT 1102

MGT 3170: Data Mining

The process of exploring and modeling large amounts of data to uncover previously unknown patterns. Using data mining techniques, managers can exploit large databases, identifying useful patterns to help make business decisions. Applications to marketing, finance and other business disciplines. VSB 2005 Business Statistics or equivalent or instructor permission.

Credits: 3**Prerequisites:**

(VSB 2020 and VSB 2008 and VSB 2009 :Y or VSB 2010 :Y or VSB 2030 :Y and VSB 2040 :Y) or MGT 1102

MGT 3300: Business Analytics Internship

Employment with approved business firm where business analytics experience is gained through appropriate training, instruction, and supervision. Department chair approval required.

Credits: 3**Prerequisites:**

Department chair approval required.

MGT 3305: International Study Practicum

Class work, enrichment activities, and projects at a selected international academic institution, including visits to businesses in the surrounding region. Three-week requirements include a comprehensive research paper worthy of publication.

Credits: 3**MGT 3310: B.A. Internship**

Employment with approved business firms where various meaningful assignments are performed with appropriate training, instruction, and supervision. Department chair approval required.

Credits: 3**Prerequisites:**

Department chair approval required.

MGT 3320: Ind Study - Management

Study with faculty member's guidance and approval in area of special interest to student. Department chair approval required.

Credits: 3**Prerequisites:**

(VSB 2020 and VSB 2009 :Y or VSB 2010 :Y or VSB 2030 :Y and VSB 2040 :Y) or MGT 1102

MGT 3340: Ind Study-Internat'l Busn

Study with faculty member's guidance and approval in area of special interest to student. Department chair approval required.

Credits: 3**Prerequisites:**

(VSB 2020 and VSB 2009 :Y or VSB 2010 :Y or VSB 2030 :Y and VSB 2040 :Y) or MGT 1102

MGT 3350: Ind Study Small Business

This independent study will help students understand the environment and significance of small business in the economy. Problems in starting a small business and factors that contribute to success or failures. Department chair approval required.

Credits: 3**Prerequisites:**

(VSB 2020 and VSB 2009 :Y or VSB 2010 :Y or VSB 2030 :Y and VSB 2040 :Y) or MGT 1102

MGT 3360: Ind Top: Entrepreneurial Exp**Credits:** 3**MGT 4132: Seminar in Management**

Study of selected topics in Management including discussion and lecture materials prepared and presented by individual students. Topics to be announced each semester, when seminar is offered.

Credits: 3**MGT 4170: Advanced Analytics**

Covers how managers use advanced business analytics tools to support tactical and strategic business decisions. Covers applications of advanced business analytics techniques that support cross-functional decision making using software packages (for example: @Risk, Extend, Tableau, Hadoop, and aText) to help support the analytics process.

Credits: 3**Prerequisites:**

MGT 3170 :Y

Marketing

MKT 1137: Principles of Marketing

Description and evaluation of the ways in which goods and services are developed to meet customer and consumer needs and distributed for domestic and international consumption; economic, government, social, and other environmental forces in relation to the marketing function.

Credits: 3**Prerequisites:**

ECO 1001 or SBI 2005

MKT 2120: Buyer Behavior

Development and attainment of organizational goals within the framework of human behavior and its relationship to marketing. Theory from psychology, sociology, and social psychology, with emphasis on application to marketing problems in consumer and industrial environments.

Credits: 3

Prerequisites:

VSF 2020 or MKT 1137 or SBI 3006

MKT 2197: Marketing Research

The principal internal and external procedures used in collecting, processing, and evaluating both quantitative and qualitative data; research design; management of information for decision making.

Credits: 3

Prerequisites:

(VSF 2008 :Y and VSF 2020 or MKT 1137 or SBI 3006) and (MAT 1235 :Y or MAT 1430 :Y or STAT 1235 :Y or STAT 1430 :Y)

MKT 2220: Integrated Marketing Communication

Management of marketing communications within organizations; role of marketing communication for branding; understanding environments for marketing communications; development of messaging and media channels; assessment of the impact of the integrated marketing communications on consumer behavior and society as a whole.

Credits: 3

Prerequisites:

VSF 2020 or MKT 1137 or SBI 3006

MKT 2224: Professional Selling

Stresses skills and professionalism required in intensely competitive selling environments in global markets. This course concentrates on complex consultative selling processes required in business-to-business relationships.

Credits: 3

Prerequisites:

VSF 2020 or MKT 1137 or SBI 3006

MKT 2225: Business Development Leadership

Policies and procedures for managing a business development organization; the role and characteristics of the business development function; techniques for selecting, training, supervising, and evaluating business development personnel including ethical and legal considerations.

Credits: 3

Prerequisites:

VSF 2020 or MKT 1137 or SBI 3006

MKT 2230: Marketing of Services

Application of marketing principles to service organizations; differences between goods and services marketing and how these differences influence marketing strategy and the tactical design of the marketing mix variables.

Credits: 3

Prerequisites:

VSF 2020 or MKT 1137 or SBI 3006

MKT 2235: Sports Marketing

Essentials of effective, innovative sports marketing practices, activities, techniques. Lectures, readings, guest speakers, trade publications, field experience.

Credits: 3

Prerequisites:

VSF 2020 or MKT 1137 or SBI 3006

MKT 2240: Marketing Analytics

Covers analytics skills necessary for marketing decision making; adds experience with SAS JMP, Google Analytics and Adwords (certifications earned in course), advanced Excel functionality, and other analytical techniques to reflect marketplace changes.

Credits: 3

Prerequisites:

VSF 2020 and VSF 2006 and VSF 2008

MKT 2280: Global Marketing

The world market and its implications for global marketing; the relationships of imports and exports to policies; impacts of major national cultures on foreign marketing communications and business development programs will be researched through multiple sources.

Credits: 3

Prerequisites:

VSF 2020 or MKT 1137 or SBI 3006

MKT 2285: Social Media Marketing

Understand social media interactions, examine the various social media channels available to marketers, learn how to build social marketing strategies, and practice how to track their effectiveness.

Credits: 3

Prerequisites:

VSF 2020 or MKT 1137 or SBI 3006

MKT 2290: Digital Marketing

Covers digital marketing skills: search engine optimization (SEO), search engine marketing (SEM), e-mail, Social Media, and Mobile marketing. Uses on-line simulation to develop SEM skills.

Credits: 3**Prerequisites:**

VSB 2020 or MKT 1137 or SBI 3006

MKT 2349: Cont. Topics in Marketing

Contemporary issues and topics which affect a firm's marketing strategies.

Credits: 3**Prerequisites:**

VSB 2020 or MKT 1137 or SBI 3006

MKT 2375: Marketing Management

Analytic procedures to understand and integrate effective policies applied to demand, product research, channel selection and development, promotion, and pricing on both domestic and international levels; concentration on decision making.

Credits: 3**Prerequisites:**

VSB 2008 and VSB 2020 and VSB 3006

MKT 3350: Independent Study - Marketing

Independent study under faculty guidance in an area of student's special interest.

Credits: 3**Prerequisites:**

(VSB 2008 and VSB 3006 and VSB 2020)

MKT 3450: Internship Marketing

Employment with approved firm where varied Marketing experience is gained with appropriate training, instruction and supervision. Junior/senior standing and GPA GE 2.5.

Credits: 3**MKT 3470: Marketing Co-Op**

Full-time employment with an approved firm in the area of marketing, where experience is gained through appropriate training, instruction, and supervision. Does not fulfill requirement for major. Minimum gpa will vary.

Credits: 6**MKT 4132: Seminar in Marketing**

Study of elected topics in Marketing including discussion and lecture materials prepared and presented by individual students. Topics to be announced each semester, when seminar is offered.

Credits: 3**Prerequisites:**

VSB 2020 or MKT 1137 or SBI 3006

Mathematics and Statistics

MAT 0140: Geometry in Art**Credits:** 3**MAT 1000: Mathematical Communities**

Understanding the role of creative thinking, problem solving, and collaboration in mathematics; exploration of research and careers in the mathematical sciences; building community with fellow mathematics majors.

Credits: 1**MAT 1210: Mathematical Concepts**

Topics selected from logic, number theory, finance, set theory, geometry, applied linear algebra, calculus. Not open to students who have completed MAT 1505.

Credits: 3**MAT 1220: Discrete Math Social Sci**

Discrete mathematics for the Liberal Arts student: voting methods, weighted voting, fair division, apportionment, circuits, network, trees, directed graphs, planning and scheduling, linear programming, growth and symmetry. Not open to students who have completed MAT 1505.

Credits: 3**MAT 1280: Mathematics of Fairness**

Examining fairness in our personal lives and in society: Voting systems and power indices, strategic political positioning spatial models, fair division, congressional district apportionment, game theory, the GINI index of economic inequality, gerrymandering.

Credits: 3**MAT 1290: Topics in Core Mathematics**

Course in an area of pure or applied mathematics or statistics. May be repeated for credit if areas of topical focus are different. Designed specifically to satisfy the core requirement in mathematics and statistics, for students in the humanities and social sciences.

Credits: 3

MAT 1312: Biocalculus

Discrete and continuous dynamics of biological systems: discrete dynamical systems, sequences, functions, discrete and continuous limits, the derivative, the integral, methods and applications of differentiation and integration, Taylor polynomials, modeling with differential equations, Euler's method, applications to Biology.

Credits: 4

MAT 1314: Modeling for the Life Sciences

Mathematical and statistical modeling in the Life Sciences. Topics selected from: dynamical systems, diffusion, Markov, Bayesian, connectionist, and information theory models, applied to epidemiology, ecology, neuroscience and neuron signaling, cell and molecular biology, genetics, physiology, psychology, and other areas. Pre-requisites MAT 1312 or Equivalent

Credits: 3

Prerequisites:

MAT 1310 or MAT 1312 or MAT 1320 or MAT 1400 or MAT 1500

MAT 1320: Calculus I for Liberal Arts

Calculus for Liberal Arts students: polynomial, rational and transcendental functions, the derivative, numerical and graphical introduction to integration.

Credits: 3

MAT 1325: Calculus II for Liberal Arts

Techniques of differentiation and integration, applications and further developments of calculus.

Credits: 3

Prerequisites:

(MAT 1320 :D- or MAT 1500 :D-)

MAT 1340: Single Var Optim for Soc. Sci.

Credits: 3

MAT 1345: Multivar Optim for Soc. Sci.

Credits: 3

MAT 1400: Business Calculus

Functions, limits, and basic definitions of differential and integral calculus. Techniques of differentiation and integration. The Fundamental Theorem of Calculus. Applications in various areas of business and economics.

Credits: 4

MAT 1500: Calculus I

Limits, transcendental functions (logarithms, exponential functions, inverse trigonometric functions), differentiation (definition, tangent lines, rates of change, techniques, implicit differentiation, related rates), applications of differentiation (graphing, optimization), indeterminate forms and L'Hopital's Rule. Use of a computer algebra system, eg. MAPLE.

Credits: 4

MAT 1505: Calculus II

Integration (indefinite, definite), applications of integration (area, volume, applications to physics and economics, etc.), methods of integration, approximate integration (trapezoidal and Simpson's rules), improper integrals, differential equations, infinite sequences and series. Continued use of a computer algebra system.

Credits: 4

Prerequisites:

MAT 1500 :D-

MAT 1903: Internship Elective

Internship Elective

Credits: 3

MAT 1906: Internship Elective

Internship Elective

Credits: 6

MAT 1909: Internship Elective

Internship Elective

Credits: 9

MAT 2100: Theory of Interest

Credits: 3

MAT 2500: Calculus III

Parametric equations; polar, cylindrical, and spherical coordinates; vectors and the geometry of space; vector functions (derivatives, integrals, curvature, etc.); partial derivatives; optimization; multiple integration and its applications; vector calculus (line integrals, vector analysis). Continued use of a computer algebra system.

Credits: 4

Prerequisites:

MAT 1505 :D-

MAT 2600: Foundation of Math I

Topics selected from natural numbers, mathematical induction, irrational and transcendental real numbers, complex numbers, Fundamental Theorem of Algebra, infinite cardinals, symbolic logic, functions and relations, iterated functions, mathematical chaos.

Credits: 3

Prerequisites:

MAT 1500 :D-

MAT 2705: Diff Equation with Linear Alg

First order and linear second order differential equations, matrices and linear equation systems, eigenvalues and eigenvectors, and linear systems of differential equations.

Credits: 4

Prerequisites:

MAT 1505 :D-

MAT 2993: Internship

Internship

Credits: 3**MAT 2996: Internship**

Internship

Credits: 6**MAT 3001: Topics in Mathematics & Stats****Credits:** 1**MAT 3011: Problem Solving Seminar****Credits:** 1**MAT 3100: Applied Linear Algebra**

Vectors, matrices, transpose and inverse of a matrix, systems of linear equations, the four fundamental subspaces, eigenvalues and eigenvectors, symmetric matrices, matrix factorizations, applications such as information retrieval, ranking web pages, graphs and networks, least squares, and data compression.

Credits: 3**Prerequisites:**

MAT 1312 or MAT 1320 or MAT 1400 or MAT 1500

MAT 3300: Advanced Calculus

Real numbers, sequences, convergence, supremum and infimum, completeness of the reals, continuous functions, Intermediate Value Theorem, differentiable functions, Mean Value Theorem, Riemann integral, Fundamental Theorem of Calculus, Taylor's Theorem.

Credits: 3**Prerequisites:**

MAT 2500 :D- and (MAT 2600 :D- or HON 4151 :D-)

MAT 3305: Topics in Analysis

Advanced topics selected from real analysis, complex analysis, or higher analysis.

Credits: 3**Prerequisites:**

MAT 3300 :D-

MAT 3400: Linear Algebra

Vector spaces, linear transformations, basis and dimension, orthogonal transformations, least squares, eigenvalues and eigenvectors, similarity, diagonalization, symmetric, applications.

Credits: 3**Prerequisites:**

MAT 2705 :D-

MAT 3500: Modern Algebra I

Topics selected from groups and subgroups, cyclic groups, permutation groups, isomorphisms, direct products, cosets and Lagrange's Theorem, normal subgroups and factor groups, group homomorphisms, the Fundamental Theorem of Finite Abelian Groups, rings, fields.

Credits: 3**Prerequisites:**

MAT 2600 :D- and MAT 2705 :D-

MAT 3505: Modern Algebra II**Credits:** 3**MAT 3930: History of Mathematics**

Development of mathematics from ancient times to the birth of calculus in the seventeenth century.

Credits: 3**Prerequisites:**

MAT 1505 :D- and MAT 2600 :D-

MAT 4110: Combinatorics

Induction, permutations and combinations, general counting methods, generating functions, recurrence relations, principle of inclusion-exclusion, graph theory, trees, planarity, crossing numbers, Hamiltonian cycles, Eulerian tours.

Credits: 3**Prerequisites:**

MAT 1505 :D-

MAT 4270: Numerical Analysis

Numerical and computational aspects of root-finding methods, interpolation and polynomial approximation, numerical differentiation and integration, approximation theory.

Credits: 3**Prerequisites:**

MAT 1505 :D-

MAT 4410: Math Modeling**Credits:** 3**MAT 4550: Math of Financial Derivatives**

Basic tools of financial markets; options; asset price random walks; estimation of parameters; arbitrage put-call parity; Black-Scholes Model; implied volatility; portfolio optimization; hedging.

Credits: 3**Prerequisites:**

MAT 2705 :D-

MAT 4600: Deterministic Oper Res

Deterministic methods: mathematical optimization, linear programming, formulation and solution techniques, duality, integer linear programming, transportation problem, assignment problem, network flows, dynamic programming.

Credits: 3**Prerequisites:**

MAT 2705 :D-

MAT 4610: Stochastic Oper Research**Credits:** 3**MAT 5110: Topics in Geometry**

Topics selected from affine, hyperbolic, spherical, elliptic, Euclidean or projective geometry.

Credits: 3**Prerequisites:**

MAT 2600 :D-

MAT 5200: Theory of Numbers

Congruences, quadratic reciprocity, Diophantine equations; applications.

Credits: 3

Prerequisites:

MAT 2600 :D-

MAT 5400: Complex Analysis

Algebra of complex numbers, analytic functions, Cauchy-Riemann equation, Laplace equations, conformal mapping, integrals of complex functions, Cauchy's theorem, power series, Taylor's theorem, Laurent's theorem, residues, entire functions.

Credits: 3

Prerequisites:

(MAT 2500 :D- and MAT 2600 :D-)

MAT 5500: Topology

Topological equivalence, connectedness, compactness, topology of subsets of \mathbb{R}^n , manifolds, topological embeddings, topological spaces.

Credits: 3

Prerequisites:

MAT 3300 :Y

MAT 5600: Differential Geometry

Geometry of curves and surfaces, curvature, first and second fundamental forms, minimal surfaces, use of MAPLE.

Credits: 3

Prerequisites:

MAT 2500 :D-

MAT 5900: Seminar in Mathematics

Supervised study of selected topics or problems in mathematics, student presentations. May be repeated for credit if content is different.

Credits: 3

Prerequisites:

MAT 3300 :D- or MAT 3500 :D-

MAT 5920: Topics in Applied Mathematics

Lecture course in an area of applied mathematics. May be repeated for credit if topics are different.

Credits: 3

MAT 5930: Topics in Pure Mathematics

Lecture course in an area of pure mathematics. May be repeated for credit if topics are different.

Credits: 3

MAT 5991: Independent Study

Reading in a selected branch of mathematics under the direction of a member of the staff. May be repeated for credit.

Credits: 1

Prerequisites:

MAT 1505 :D-

MAT 5992: Independent Study

Reading in a selected branch of mathematics under the direction of a member of the staff. May be repeated for credit.

Credits: 2

Prerequisites:

MAT 1505 :D-

MAT 5993: Independent Study

Reading in a selected branch of mathematics under the direction of a member of the staff. May be repeated for credit.

Credits: 3

Prerequisites:

MAT 1505 :D-

MAT 7101: Grad Studies Internship

Internship in a professional setting related to the course of study in either Mathematics or Applied Statistics.

Credits: 1

MAT 7290: Geometry

Topics selected from affine, finite, hyperbolic, spherical, elliptic, Euclidean or projective geometry.

Credits: 3

MAT 7300: History of Math

The development of mathematics from ancient times to the birth of calculus in the seventeenth century. Independent work on a topic in the history of mathematics since 1700.

Credits: 3

MAT 7305: Technology in Teaching of Math

Applications of technology to topics selected from algebra, geometry, calculus, statistics and programming.

Technologies used may include computer algebra systems, e.g., Maple, geometry software, e.g., Sketchpad, and statistics software, e.g., Fathom.

Credits: 3

MAT 7310: Topics in the Teaching of Math

Selected topics of interest to teachers of secondary school mathematics.

Credits: 3

MAT 7600: Advanced Calculus

Real numbers, completeness, sequences, limits, continuous functions, the derivative, sequences of functions, pointwise and uniform convergence, power series.

Credits: 3

MAT 7605: Topics in Analysis

Advanced topics selected from real analysis, complex analysis, or higher analysis. Prerequisite: Determined by instructor.

Credits: 3

Prerequisites:

MAT 7600 :C

MAT 7610: Complex Analysis

Complex numbers, analytic functions, Cauchy-Riemann equations, complex integration, Cauchy integral theorem and Cauchy integral formulae, power series, Taylor and Laurent series, singularities, residue theorem, harmonic functions.

Credits: 3

MAT 7660: Linear Algebra

Vector spaces, linear transformations, eigenvalues and eigenvectors, invariant subspaces, decomposition theorem, Jordan forms, bilinear forms, selfadjoint operators, functions of operators, differential systems.

Credits: 3

MAT 7670: Mathematical Logic

The sentential calculus, truth functions, analytic tableaux, natural deduction, first order logic, models, consistency, completeness. Applications to computer science including the P-NP problem.

Credits: 3

MAT 7750: Numerical Analysis I

Error generation and propagation, root finding, approximation of functions by polynomials and cubic splines, direct and iterative solutions of linear systems, operations count, numerical differentiation and integration.

Credits: 3

MAT 7770: Number Theory

Divisibility; Euclidean algorithm; prime numbers; Fundamental Theorem of Arithmetic; congruences; arithmetic functions; Diophantine equations, additional topics, which may vary by semester, include cryptography, law of quadratic reciprocity, continued fractions.

Credits: 3

MAT 7780: Financial Mathematics

Basic tools of financial markets; annuities; options; asset price random walks; estimation of parameters; Black-Scholes Model; implied volatility; portfolio-engineering; hedging; discrete models.

Credits: 3

MAT 7790: Dynamical Systems & Chaos

Topics selected from: iteration of real and complex functions, population models, qualitative theory of differential equations, fractals and dimension, topological and metric properties of systems, and applications.

Credits: 3

Meteorology

MET 1221: Severe & Hazardous Weather

This introductory meteorology course covers the fundamentals of meteorology with emphasis on severe and hazardous weather and effects of these on human life, environment and the economy. Severe storms that include tropical cyclones (hurricanes), extratropical cyclones, "Nor-easters", thunderstorms, lightning, tornados, and blizzards are featured. Floods, droughts, cold waves and heat waves are covered and their effects on health, agriculture and commerce are discussed. Also included are causes and effects of climate change with emphasis on the recent global warming trends over the last century. The consequences of global warming on the global economy will be stressed.

Credits: 3

MET 1222: Climate Change: Past & Present

Earth's climate and climate changes. Past climates (Paleoclimatology), major Ice Ages over the last billion years, methods for reconstructing past climates, including radio isotopic techniques. Fossil, geological, sedimentary, flora and fauna and documentary records. Physical causes of climate changes, recent warming trends in global climate (both natural and anthropogenic), future global climate (short- and long- term) and climate models. Possible effects of global climate change on our environment and resulting economic and geopolitical consequences.

Credits: 3

Prerequisites:

MAT 1310 or MAT 1320 or MAT 1330 or MAT 1500 or MAT 1400

Naval Science (Navy ROTC)

NS 1000: Intro to Naval Science

Course is an introduction to the naval profession and to the concepts of seapower. The mission, organization, and warfare components of the Navy and Marine Corps, including an overview of officer and enlisted ranks, rates, and career patterns; naval courtesy and customs, military justice, leadership, and nomenclature are discussed. Normally taken by freshmen.

Credits: 2

NS 1100: Seapower and Maritime Affairs

Naval history from the beginnings of the age of sail through the twentieth century. The works and influence of Alfred Thayer Mahan as they relate to current and past fleet doctrine. The impact of foreign nations' maritime activities on world seapower. Normally taken by freshmen.

Credits: 3

NS 2100: Naval Ships Systems I

Construction and propulsion of naval ships, including design, stability, control of damage. Propulsion systems including steam, diesel, gas turbine, nuclear power plants; shipboard electrical power generation and distribution; and shipboard auxiliary systems including refrigeration, fresh water distilling plants and air compressors. Normally taken by sophomores.

Credits: 3

NS 2200: Naval Ships Systems II

Introduction to naval weapons systems including basics of radar, sonar, and gyroscopes; weapons systems analysis stressing the fire control problem, information flow, the servo principle, and use of computers; general operation, safety and maintenance of shipboard weapons systems. Normally taken by seniors.

Credits: 3

NS 3100: Navigation

The theory and technique of piloting and celestial navigation. Normally taken by juniors.

Credits: 3

NS 3200: Naval Operations

The maneuvering board, tactical communications, rules of the road, and seamanship. juniors.

Credits: 3

NS 3500: Evolution of Warfare

The evolution of weapons, tactics, and military organization applicable to land operations; the classic principles and variables of land operations.

Credits: 3

NS 3600: Fundamentals of Maneuver Warfare

Introduces the student to the foundational concepts and history of the USMC as the premier Maneuver Warfighting Organization. Develops an individual who is both a critical thinker and scholar in the profession of arms.

Credits: 3

Prerequisites:

NS 1000

NS 4100: Leadership and Management

Fundamentals of leadership and management of an organization; emphasis on the Naval officer as leader and manager, concentrating on areas such as professional ethics, organizational theory, and the characteristics and roles of successful leaders. Normally taken by sophomores.

Credits: 3

NS 4200: Leadership and Ethics

Applications of the principles of leadership and management with a focus and emphasis on the military arena. Ethical and moral responsibility examined with emphasis on the interrelationship of authority, responsibility and accountability in an organization. Discussion intensive with oral presentations. Draws upon the experiences of a number of guest speakers, both military and civilian.

Credits: 3

Organizational Development Management

ODM 1000: Foundation of Organiz Behavior

Overview of the key principles and research of organizational behavior. Examines individual human behavior in the workplace as influenced by personality, values, perceptions, and motivations, and group behavior as related to collaboration, communication, politics, and negotiation.

Credits: 3

ODM 1100: Foundations of Strategic Mgmt

Overview of key principles and practices of strategic management. Examines topics such as establishing mission, vision, and direction, evaluating environmental influences, assessing industry and market trends, building organizational culture, leading effective teams, managing and leading change. Emphasizes the development and implementation of strategy across industries.

Credits: 3

ODM 2000: Essentials of Finance & Acct

Introduction to basic standards and concepts underlying finance and accounting. Topics include balance sheets, income statements, cash flow statements, budgets, forecasts, and reporting.

Credits: 3

ODM 2010: Foundations of Marketing

Introduction to key concepts, terms, and strategies used in the marketing function of an organization. Focus is on understanding how firms and consumers behave and developing a tool kit of strategies and tactics to be used in promoting an organization's marketing strategy.

Credits: 3

ODM 2020: Ethics, Regulations & Soc Resp

Credits: 3

ODM 2030: Organizational Decision Making

Credits: 3

ODM 2040: Strategic Oper & Process Impro

Introduces key components of operations management and strategy. Overview and analysis of tools, techniques, and methodologies of process improvement.

Credits: 3

ODM 2050: Innovation & Creative Thinking

The cultivation of innovation and creative thinking are essential to an organization's success in the 21st Century Global context. This course will examine how innovation and creativity can be facilitated, managed and sustained in a work setting. Students will learn about the theories behind and the practical applications of these key concepts.

Credits: 3

ODM 5000: Organiz Devlp & Mgmt Capstone

Integrates strategic management and organizational development tools and practices from throughout the curriculum to topics such as change management and entrepreneurship.

Credits: 3

Peace and Justice

PJ 2200: Caring for the Earth

Credits: 3

PJ 2250: Violence & Justice in the Wrld

Examines root causes of violence, pathways to building a more peaceful and just world. Basic issues include, peace, justice, power dynamics, violence, nonviolence, restorative justice peacemaking, peacekeeping, and peace building.

Credits: 3

PJ 2500: Education & Social Justice

American education's contribution to class, gender, and "race" inequality; political bias in school curricula: unequal treatment of students by teachers and administrators based on "race", ethnicity, class, and gender; unequal allocation of resources among public schools; the public - private school debate; possible political influences in universities; the mass media as an important component of education.

Credits: 3

PJ 2600: Catholic Social Teaching

Credits: 3

PJ 2700: Peacemakers & Peacemaking

Classical and contemporary examples and approaches to peacemaking in response to injustice and social conflict. Issues to be considered include the nature and significance of nonviolent struggle, political reconciliation, and the role of religion in shaping moral action for social change.

Credits: 3

PJ 2800: Race, Class, & Gender

A critical examination of the social constructions of race, class, gender, and sexuality in U.S. culture and the injustices and inequalities that arise from them. Strategies, policies, and procedures for change are also examined.

Credits: 3

PJ 2900: Ethical Issues in P & J

Introduction to contemporary complex moral issues. Examines economic, political, and social roots. Brings the Catholic Christian ethical tradition to bear to understanding their moral significance and responsibility to address them. Issues include: poverty, environmental justice, conflict, refugees, migration, genocide, and others.

Credits: 3

PJ 2993: Internship

Internship

Credits: 3

PJ 2996: Internship

Internship.

Credits: 6

PJ 3000: Selected Topics

Violence in families and society, the traditions of Just War theory, and the critiques of war from the perspective of pacifism and non-violence. The importance and role of the peacemakers of the world, the values of conflict resolution, and strategies that aid the creation of a peaceful world order.

Credits: 1

PJ 3100: Amer. Indian Thought & Culture

Credits: 3

PJ 3200: Justice and Sports

Credits: 3

PJ 3400: War and Morality

Three traditions of moral reflection on war: "Just War" theory; Pacifism; and, the historical experience of women. Discussions focus on concrete cases (e.g., the modern world wars, Vietnam, the Persian Gulf War, Bosnia).

Credits: 3

PJ 3500: Making Peace Work

Credits: 3

PJ 4000: Selected Topics

The history of the struggle for justice and human rights in geographical locations, such as the Middle East, Ireland, Africa, and Central America, focusing on such issues as world hunger and apartheid, and culminating in an attempt to articulate systemic questions of justice.

Credits: 3

PJ 4600: Global Poverty & Justice

Credits: 3

PJ 4650: Service Learning Practicum

Integrating the participation requirement for field experience with the academic requirements (reading, research paper, project, etc.) set by the instructor.

Permission of the instructor.

Credits: 1

PJ 5000: Selected Topics

Justice & discrimination in U.S. society from social, economic, political & ethical perspectives. Strategies for the just elimination of discrimination.

Topics include civil rights, gender issues of justice, etc.

Credits: 3

PJ 5100: Discrimination, Justice & Law

Development of discrimination and civil rights law in the United States through case materials in areas of racial discrimination, gender-based discrimination, reverse discrimination, sexual preference-based discrimination, and age discrimination, if time permits.

Credits: 3

PJ 5200: Perspectives on US Poverty

Credits: 3

PJ 5400: Ethics, Justice and the Family

The moral meaning of marriage; justice, gender, and the domestic division of labor; the legal protection of marriage and the parties to it; marriage, reproductive technology, and the commodification of children; the moral meaning of "having children"; the responsibilities of parents to their children; the responsibilities of children to their parents, with special reference to care for the aged; distributive justice and the family; society's responsibilities to serving the needs of its children. Course readings will be taken from a number of disciplines, including Christian ethics, law and legal history, philosophy, and sociology.

Credits: 3

PJ 5500: Politics of Whiteness

Examination of scholarship addressing the structure, function, & manifestations of "whiteness," primarily in U.S. culture, & its relationship to issues of diversity. Topics also include white supremacy, white identity, & the future of critical white studies.

Credits: 3

PJ 5600: Independent Study

Independent Study

Credits: 3

PJ 5700: The Meanings of Justice

Credits: 3

Philosophy

PHI 1000: Knowledge, Reality, Self

Philosophical responses to the questions of how we can know, what is real, and what is the nature of human existence that explore the dialogue between Catholic, Christian, secular and skeptical perspectives on these questions.

Credits: 3

PHI 2010: Logic & Critical Thinking

The study of logic and critical thinking. Topics include: argument identification and analysis; formal and informal logic; fallacies; inductive argument; the role of argumentative structures in various philosophical traditions.

Credits: 3

PHI 2020: Symbolic Logic

Propositional and first-order predicate logic; logical structure of arguments; symbolic languages; correct and incorrect inferences; fallacies; truth-tables; natural deduction.

Credits: 3

PHI 2115: Ethics for Health Care Prof

Rights and duties of the patient/client and the members of the health care team, death and dying, genetic engineering and manipulation.

Credits: 3

PHI 2117: The Good Doctor

The art and science, learning and dispositional attitudes necessary for the moral practice of medicine by a good doctor. Themes for the course drawn from philosophical resources, sociological theory, data and first-person medical narratives.

Credits: 3

PHI 2121: Environmental Ethics

The relation of the physical and biological environment to ethical values. Priorities among environmental, economic and political values as a basis for ethical decisions.

Credits: 3

PHI 2130: Business Ethics

Social justice and charity as principles of order in economic life and relationships: topics include consumer rights, corporate social responsibility, and ecology.

Credits: 3

PHI 2140: Phil of Criminal Justice

Philosophical dimensions of criminal justice; law and morality, criminal versus civil disobedience, philosophical presuppositions of the insanity defense, philosophical problems in controlling and correcting criminal and delinquent behavior.

Credits: 3

PHI 2155: Engineering Ethics

Engineering ethics through case studies focusing on professional responsibility, the role of technology in society and a holistic evaluation of the purpose of science and engineering.

Credits: 3

PHI 2160: The Ethics of War

Just war theory, total war, nuclear deterrence and nuclear war, disarmament, genocide, war crimes and atrocities, terrorism, non-violent resistance, and pacifism.

Credits: 3

PHI 2170: Mass Media Ethics

The impact of the changing communications technologies on the human person and society; freedom of the press, violence; pornography and censorship, confidentiality of sources, advertising ethics and codes of ethics and standards of practice.

Credits: 3

PHI 2180: Computer Ethics

Codes of professional ethics, unauthorized access, ownership of software, and the social responsibility of computing professionals.

Credits: 3

PHI 2190: Freedom

Human freedom analyzed from a metaphysical and political perspective; readings from classical and contemporary sources on such topics as determinism, slavery, rights, authority and dissent.

Credits: 3

PHI 2300: Philosophy of Law

The nature and function of law, relation of law to ethics, the judicial process, the role of constitutions, the rights of citizens, law and international relations.

Credits: 3

PHI 2400: Social & Political Phil

Social and political philosophers and the influence of their theories on the philosophical foundation of modern culture and society; emphasis on such conceptions as society, the state, justice and equality, and the social and political nature of persons.

Credits: 3

PHI 2410: Philosophy of Sex & Love

Embodiment, the nature of sexuality, the types of love, sexual ethics, marriage, sexual differences, and sexual discrimination.

Credits: 3

PHI 2420: Philosophy of Women

Nature and status of women from ancient times to the present, with consideration of the more general context of self-identity; contemporary feminist theories; feminism as a political movement.

Credits: 3

PHI 2430: Eco-Feminism

Basic positions in eco-feminism as they relate to the philosophical and religious traditions of the West.

Credits: 3

PHI 2440: Amer Indian Thought & Culture

Religious and philosophical concepts of personhood community, and nature; contrast of European and Euro-American Indian philosophies.

Credits: 3

PHI 2450: Catholic Social Thought

Catholic Social Thought from Rerum Navarum to the present. Its Aristotelean-Thomistic grounding. The Church's challenge to analyses of contemporary social, political, and economic systems.

Credits: 3

PHI 2460: Globalization

Philosophical issues of globalization including: international law and human rights, immigration and migration, human trafficking, cyber solidarity, fair trade, poverty tourism, protest in the global civic sphere, and religious dialogue across borders.

Credits: 3

PHI 2470: Irish Thought and Literature

An examination of main thinkers in the Irish tradition; the relation of reason (science) and religion; the importance of poetry; themes to be explored include (e)migrant thought, exile and home, English as colonizers, language and voice, laughter and comedy.

Credits: 3

PHI 2480: Africana Philosophy

Survey of theoretical writings and discourses by authors from Africa and the African diaspora at large, especially African-American and West-Indian authors.

Credits: 3

PHI 2500: Philosophy of Exchange

Monetary exchange in philosophical perspective: money as a means and as an end; higher and lower forms of exchange; sacrificial economies; the politics of scarcity; sacred economics.

Credits: 3

PHI 2550: Technology & Society

Case studies of specific technologies (such as television, automobiles, health technology) and critical examination of ethical Philosophical and policy issues that these technologies raise.

Credits: 3

PHI 2650: Philosophy of Sport

Nature of play, sport and game with special emphasis on the role of sport in modern society.

Credits: 3

PHI 2700: Philosophy of Science

Credits: 3

PHI 2710: Information Knowledge Inquiry

The nature of human knowledge; sources of knowledge; justification of belief; conduct of inquiry; information; scientific reasoning; testimony; ecological rationality; and technologically extended knowledge.

Credits: 3

PHI 2750: Philosophy of Art

Credits: 3

PHI 2760: Philosophy & Literature

Philosophical ideas in selected literary works; examination of the relation of literature to philosophy; fiction and truth, modes of communication.

Credits: 3

PHI 2800: Philosophy of History

Theories concerning the nature of history, the idea of progress, historical inevitability, the role of the "great man".

Credits: 3

PHI 2900: Philosophy of Religion

The meaning of God, the experience of the Divine, nature of revelation, negative theology, the absence of God.

Credits: 3

PHI 2910: Mysticism & Philosophy

The metaphysical interpretation of God, humans and the world implicit in the writings of selected mystics; epistemological issues such as mysticism and logic, the value of mystical experience, mysticism and psychedelic experience, mysticism and ethics.

Credits: 3

PHI 2920: Asian Philosophies

Sources of Eastern philosophies; aspects of Hinduism, Jainism, Buddhism, Confucianism, Taoism, and/or Sufism.

Credits: 3

PHI 2930: Indian Philosophy

Introduction to basic traditions of Indian philosophy; exploration of debates between these traditions on fundamental issues of epistemology metaphysics, and philosophy of religion.

Credits: 3

PHI 2940: Indian & Tibetan Buddhist Phil

An exploration of fundamental problems, traditions, and themes in Buddhist philosophy as developed in India and Tibet.

Credits: 3

PHI 2990: Topics in Philosophy

Credits: 3

PHI 2993: Internship

Departmentally related and academically creditable field work experience. See department chair for more information. Permission of Department Chair required.

Credits: 3

Prerequisites:

Permission of Department Chair required.

PHI 2996: Internship

Departmentally related and academically creditable field work experience. See department chair for more information.

Credits: 6

PHI 3020: History of Ancient Philosophy

Plato, Aristotle and selected pre-Socratic and Hellenistic philosophers in the context of ancient and classical Greek civilization.

Credits: 3

PHI 3030: History of Medieval Philosophy

Philosophical movements from the early Middle Ages to the rise of modern philosophy; the influence of later Medieval speculation upon thinkers of the modern period; readings from Augustine, Aquinas, Bonaventure, and others.

Credits: 3

PHI 3040: Hist of Early Mod Philosophy

The systems of Descartes, Spinoza, Leibniz, and the empiricists - Locke, Berkeley, and Hume; Kant; selections read and evaluated.

Credits: 3

PHI 3050: Kant & 19th Cent Philosophy

Credits: 3

PHI 3100: Augustine & Antiquity

Life and thought of Saint Augustine; the problem of certitude, the problem of evil, the nature of history, human knowledge and God, the soul-body relations, and political philosophy.

Credits: 3

PHI 3120: Augustine & Modernity

Credits: 3

PHI 3160: History of Islamic Phil

Islamic thought, concentrating particularly on Islamic medieval theology and philosophy.

Credits: 3

PHI 3410: Thomas Aquinas

Credits: 3

PHI 3720: Marx & Marxism

Marx on the theories of human nature, freedom and history; related developments in Marxist thought.

Credits: 3

PHI 3730: American Philosophy

Credits: 3

PHI 3990: Topics in Hist of Philosophy

Credits: 3

PHI 3991: Philosophy for Theology I

Historical and contemporary approaches to philosophical problems of theological relevance; philosophical methods for use in ministry; influence of Augustine on Western thought. Restricted to students in the Augustinian Novitiate Program.

Credits: 1

PHI 3992: Philosophy for Theology II

The relationships that exist between modern and contemporary philosophy and Christian theology; philosophical methods for use in ministry. Restricted to students in the Augustinian Novitiate Program.

Credits: 2

Prerequisites:

PHI 3991

PHI 4100: Plato & Aristotle

Credits: 3

PHI 4110: Metaphysics

Credits: 3

PHI 4120: Philosophy of Biology

Credits: 3

PHI 4125: Bioethics

Advanced issues in clinical and research ethics: neuro-enhancement, radical life-extension, phase 1 trials on the non-consenting, ethics of life and death, and ethics of pandemics.

Credits: 3

PHI 4140: Phil of Contemporary Music

Critical listening to rock pop, jazz, rap, funk, punk, dance, and ambient music; relation of music to noise; theories of Hanslick, Nietzsche, Adorno, Barthes, Foucault, Deleuze, and Cage.

Credits: 3

PHI 4150: Philosophy & Film

Analysis of selected classics and current films from the perspective of basic philosophical concepts and questions.

Credits: 3

PHI 4200: Philosophy of Language

Major classical and contemporary philosophical theories concerning language, including the relationship of language to thought, experience and reality; theories of meaning, communication, linguistics, translation, poetic and religious language.

Credits: 3

PHI 4210: Environmental Philosophy

Credits: 3

PHI 4600: Psychoanalysis & Philosophy

Philosophical implications of Freudian theory as it relates to the individual and culture; the role of the unconscious; interpretation, structure of the ego, human sexuality and the foundations of civilization.

Credits: 3

PHI 4610: Philosophy of Mind

The nature of mind, soul, consciousness; the mind-brain relationship; classical and contemporary philosophical approaches; the nature of person identity and moral responsibility.

Credits: 3

PHI 4825: Existentialism

The active, feeling and living human being as the starting point for thinking about existence as more than brute facts and rational truths. Alienation, absurdity, emptiness and dread but also the freedom, authenticity, commitment and creativity as human responses to the apparent meaninglessness of life.

Credits: 3

PHI 4900: Feminist Theories

Credits: 3

PHI 4990: Independent Study & Research

Topic chosen by the student and approved by the professor and the chair.

Credits: 3

PHI 5000: Adv Sem for Phil Majors

Special topic in philosophy or current interest to faculty and students. Course is open to Philosophy majors and minors and graduate students with the approval of the Director of Graduate Studies in Philosophy.

Credits: 3

PHI 6000: Research Seminar

Inquiry in depth into one major philosophical problem or into the thought of one major philosopher; practice in the use of research and bibliographical techniques.

Credits: 3

PHI 7120: Plato: Middle Dialogues

Reading and discussion of The Republic, Symposium, and Timaeus.

Credits: 3

PHI 7230: Aristotle: Practical Phi

An examination of Aristotle's practical philosophy based on selections from the Nicomachean Ethics, Politics, Rhetoric, and Poetics.

Credits: 3

PHI 7300: Roman Philosophy

The focus of this seminar is on the Romanization of Greek philosophy. the scope is late republic to waning empire, and the figures covered generally include (but are not limited to) Plotinus and Augustine. Of special concern is the nature and fate of autarkic virtue -- the dominant ideal of philosophical self-sufficiency -- under Stoic, skeptical, Platonic, and Epicurean regimes. Counts for distribution credit in ancient philosophy.

Credits: 3

PHI 7330: Medieval Philosophy

A study of selected texts from Christian, Jewish, and Islamic thinkers. This course will also include reference to the origins medieval philosophy in ancient philosophy and/or the anticipation of modern philosophical concerns.

Credits: 3

PHI 7340: Topics in Hist Philosophy

A number of important topics, e.g., space and time or the eternity of the world, are best considered both in immediate historical settings and across traditional historical divisions. Such topics will be considered as they are defined and redefined in ancient, medieval, and modern terms.

Credits: 3

PHI 7610: Topics: Early Mod Phil

Selected texts and themes from the early modern period. The readings will be taken from major philosophical figures of the period such as: Descartes, Locke, Malebranche, Leibniz, Spinoza, Berkeley, Hume, Reid.
Credits: 3

PHI 7640: Spinoza

A study of such major works as the Ethics or Theologico-Political Treatise in their historical context and with respect to contemporary problems.
Credits: 3

PHI 7710: Kant's First Critique

Textual and philosophical analysis of the Critique of Pure Reason; the historical framework of the Critique.
Credits: 3

PHI 7720: Kant's Practical Phil

The principle themes of Kant's practical philosophy. Selected readings from the Critique of Practical Reason, the Groundwork of the Metaphysics of Morals, the Critique of Judgement, The Metaphysical Elements of Justice, and other writings.
Credits: 3

PHI 7730: Kant's Third Critique

A close reading of the third critique along with some of the contemporary responses to it by Lyotard, Gadamer, Derrida, Arendt, Deleuze.
Credits: 3

PHI 7910: Hegel's Phenom of Spirit

A detailed reading of Hegel's 1806 Phenomenology of Spirit with particular emphasis upon its anticipation of Hegel's later works.
Credits: 3

PHI 7920: Hegel's Logic

A detailed reading of both Hegel's 1812 Science of Logic and the 1830 Encyclopedia of the Philosophical Sciences. A study of Hegel's dialectical treatment of the logical categories, initiating with the famous triad "Being-Nothingness-Becoming."
Credits: 3

Physics

PHY 1020: Great Ideas in Physics I

General physics at a primarily conceptual level (algebra only). History and Philosophy of science, especially physics and astronomy. Topics include mechanics, optics, and relativity. Personalities include Aristotle, Galileo, Newton, and Einstein. Recommended for Arts majors.
Credits: 3

PHY 1021: Great Ideas in Physics Lab I

Experiments designed to complement the topics in PHY 1020. Recommended for Arts majors.
Credits: 1

PHY 1022: Great Ideas in Phy II

A continuation of Great Ideas in Physics I. Thermodynamics, earth science, electricity and magnetism, and modern theories of physics. Personalities include Joule, Maxwell, Faraday, Bohr, and Feynman. Recommended for Arts majors.
Credits: 3
Prerequisites: (PHY 1020 :D- and PHY 1021 :D-)
Co-Requisites: PHY 1023

PHY 1023: Great Ideas in Physics Lab II

Experiments designed to complement the topics in PHY 1022. Recommended for Arts majors.
Credits: 1
Prerequisites: (PHY 1020 :D- and PHY 1021 :D-)
Co-Requisites: PHY 1022

PHY 1100: General Physics I

Mechanics, heat and sound. Recommended for Biology majors.
Credits: 3
Prerequisites: (MAT 1310 :Y :D- or MAT 1312 :Y :D- or MAT 1320 :Y :D- or MAT 1400 :Y :D- or MAT 1500 :Y :D-)

PHY 1101: General Physics I Lab

Selected experiments in mechanics, heat and sound. Recommended for Biology majors.
Credits: 1

PHY 1102: General Physics II

A continuation of PHY 1100; light, electricity and modern physics. Recommended for Biology majors.
Credits: 3
Prerequisites: PHY 1100 :D- and (MAT 1312 :D- or MAT 1320 :D- or MAT 1400 :D- or MAT 1500 :D-)

PHY 1103: General Physics II Lab

Selected experiments in light and electricity. Recommended for Biology majors.
Credits: 1
Prerequisites: PHY 1101 :D-

PHY 1500: The Concept of Light

Historical and analytical survey of the concept of light from classical to modern view points. Open to VSB and Arts majors (fulfills Arts core science requirement when taken with PHY 1501).

Credits: 3

PHY 1502: Gravity

Gravitational force and the laws governing the motion of objects; Newton and Einstein's theories; role in the evolution of the universe; interaction with other forces of nature. Non-calculus based. For VSB and Arts majors (fulfills Arts core science requirement when taken with PHY 1503).

Credits: 3

PHY 2400: Physics I Mechanics

Introduction to Mechanics. Designed for students in the College of Engineering.

Credits: 3

Prerequisites:

MAT 1500 :Y :D-

PHY 2402: Physics II Elec & Magnet

Electrostatics, DC Circuits, magnetism, and AC circuits. Designed for students in the College of Engineering.

Credits: 3

Prerequisites:

MAT 1505 :Y :D- and (PHY 2400 :D- or PHY 2410 :D-)

PHY 2403: Phy Lab for Engineering

Selected experiments illustrating the principles of Mechanics and Electricity and Magnetism. Designed for students in the College of Engineering.

Credits: 1

Prerequisites:

PHY 2402 :Y :D-

PHY 2410: University Phy:Mechanics

Vectors, kinematics, and dynamics of particles, rigid bodies, and fluids. Recommended for Science majors.

Credits: 3

Prerequisites:

MAT 1500 :Y :D-

PHY 2411: Lab: Mechanics

Selected experiments demonstrating the fundamental principles of Mechanics and Waves with emphasis on techniques of measurements and data analysis. Recommended for Science majors.

Credits: 1

Co-Requisites:

PHY 2410

PHY 2412: Univ Physics:Elec & Mag

Electrostatics, DC circuits, magnetism, and AC circuits. Recommended for Science majors.

Credits: 3

Prerequisites:

(PHY 2410 :D- or PHY 2400 :D-) and MAT 1505 :Y :D-

PHY 2413: Lab:Elec & Magnetism

Recommended for Science majors.

Credits: 1

Co-Requisites:

PHY 2412

PHY 2414: Univ Physics: Thermo

Heat, kinetic theory of gases, first and second laws of thermodynamics, wave motion acoustics, geometrical and physical optics. Recommended for Science majors.

Credits: 3

Prerequisites:

(MAT 2500 :Y :D- and PHY 2410 :D-)

PHY 2415: Lab: Thermodynamics

Selected experiments in heat, waves and optics. Recommended for Science majors.

Credits: 1

Co-Requisites:

PHY 2414

PHY 2416: Modern Physics

Special theory of relativity, atomic theory, quantum physics, the Schrodinger equation, solid-state physics, nuclear physics, elementary particles and cosmology. Recommended for Science majors.

Credits: 3

Prerequisites:

(PHY 2410 :D- and PHY 2412 :D- and PHY 2414 :D-) and (MAT 2500 :Y :D- or MAT 2705 :Y :D-)

PHY 2417: Lab:Modern Physics

Interference; Franck Hertz experiment; Photoelectric effect; Michelson interferometry; Millikan oil drop experiment; Electron Spin Resonance (ESR); Ferroelectricity; Superconductivity; Low Temperature physics experiments. Recommended for Science majors.

Credits: 1

Prerequisites:

PHY 2416 :Y :D-

PHY 2601: Computational Phy Lab I

Computer applications, data analysis and presentation, algorithms and programming, numerical methods, and basic graphics for Physics and Astronomy majors.

Prerequisite:Any Intro Physics course (may be taken concurrently).

Credits: 1

Prerequisites:

Any Intro Physics course (may be taken concurrently).

PHY 2603: Computational Phy Lab II

Continuation of Computational Physics I.

Credits: 1

Prerequisites:

PHY 2601 :D-

PHY 3310: Electronics

DC and AC analysis including network theorems, power, resonance, filters, bridge circuits, amplifiers, integrated circuits, active devices, digital logic circuits and applications.

Credits: 3

Co-Requisites:

PHY 3311

PHY 3311: Electronics Lab

Laboratory experiments are chosen to supplement the Physics 3310 lectures and to give experience with sophisticated electronic equipment.

Credits: 1

Co-Requisites:

PHY 3310

PHY 4000: Elec & Magnetism I

Electrostatics, Coulomb's and Gauss' Laws, Maxwell's first two equations, Laplace's equation and boundary value problems, dielectrics, currents in conductors.

Credits: 3

Prerequisites:

(PHY 2414 :D- and PHY 4200 :D-)

PHY 4001: Elec & Magnetism I Lab

Selected experiments in the field.

Credits: 1

Prerequisites:

(PHY 2414 :D- and PHY 4200 :D-)

Co-Requisites:

PHY 4000

PHY 4002: Elec & Magnetism II

Magnetism, Biot-Savart's law, Faraday's law, Maxwell's third and fourth equations, electromagnetic wave equation, radiation.

Credits: 3

Prerequisites:

PHY 4000 :D-

Co-Requisites:

PHY 4003

PHY 4003: Elec & Magnetism II Lab

Selected experiments in the field.

Credits: 1

Prerequisites:

(PHY 4000 :D- and PHY 4001 :D-)

Co-Requisites:

PHY 4002

PHY 4100: Mechanics I

Newtonian Mechanics, oscillations (simple, non-linear and driven), Lagrangian and Hamiltonian dynamics, central force motion and scattering, special theory of relativity.

Credits: 3

Prerequisites:

PHY 2414 :D-

PHY 4102: Mechanics II

Dynamics of rigid bodies, coupled oscillations, wave phenomena, fluid mechanics (steady and turbulent flow, the equations of Euler and Navier-Stokes).

Credits: 3

Prerequisites:

PHY 4100 :D-

PHY 4200: Mathematical Physics I

Vector and tensor analysis, matrices and determinants, infinite series, functions of a complex variable.

Credits: 3

Prerequisites:

(PHY 2414 :D- and MAT 2500 :D-)

PHY 4202: Mathematical Physics II

A continuation of PHY 4200; second order differential equations, orthogonal functions, integral transforms, integral equations.

Credits: 3

Prerequisites:

PHY 4200 :D-

PHY 4301: Experimental Methods I

Introduction to experimental methods in Physics.

Applications of spectroscopic techniques in nuclear, solid-state, and materials Physic. Detection of particle and electromagnetic radiation, signal processing, spectral analysis and interpretation.

Credits: 2

PHY 4303: Experimental Methods II

Introduction to experimental methods in Physics continued: X-Ray and Mossbauer Spectroscopy; interaction of electromagnetic radiation with matter; resonant versus non-resonant scattering cross-sections; hyperfine interactions in solids, crystal field splittings and dynamic magnetic relaxation phenomena in nonoscale systems; introduction to nanotechnology. Course is Writing Intensive.

Credits: 2

PHY 5100: Quantum Mechanics

Operators, Schrodinger Equation, one dimensional problems, harmonic oscillator, angular momentum, hydrogen atom, scattering theory.

Credits: 3

Prerequisites:

PHY 4100 :D- and PHY 4200 :D-

PHY 5200: Thermo/Statistical Mech

Statistical methods, statistical thermodynamics, Ensembles, Partition functions. Quantum statistics. Kinetic theory of transport processes.

Credits: 3

PHY 5300: Subatomic Physics

Structure of subatomic particles and nuclei, symmetries and conservation laws, interactions and nuclear models, radioactivity and passage of radiation through matter. A writing intensive course.

Credits: 3

PHY 5500: Solid State Physics I

Description of crystal structure, diffraction of X-rays, classification of solids, thermal properties of solids, dielectric properties, diamagnetism and paramagnetism, free electron theory of metals, band theory of solids.

Credits: 3

Prerequisites:

PHY 2416

PHY 6000: Advanced Optics

Topics in geometrical and physical optics.

Credits: 3

PHY 6400: General Relativity

Introduction to Einstein's Theory of General Relativity. Differential geometry, equivalence principle, geodesics, and the Einstein equations. Applications to black holes, gravitational waves, and cosmology.

Credits: 3

Prerequisites:

(PHY 4100 :D- and PHY 4200 :D-)

PHY 6450: Supervised Study in Physics

Reading and/or laboratory work in a selected branch of physics under the direction of a member of the staff. Restricted to the Permission of the Instructor.

Credits: 1

PHY 6500: Supervised Study in Physics

Reading and/or laboratory work in a selected branch of physics under the direction of a member of the staff.

Credits: 2

PHY 6600: Supervised Study in Physics

Same as PHY 6500 with increased number of hours.

Credits: 3

PHY 6700: Supervised Study Physics

Credits: 4

PHY 6900: Topics in Physics

Lecture course in an area of Physics. May be repeated for credit if topics are different.

Credits: 3

Political Science

PSC 1100: American Government

Constitutional development; national institutions, federalism, civil rights and liberties; instruments of popular control. Pre-requisite for 2100 and 5100-level courses and PSC 6900.

Credits: 3

PSC 1200: International Relations

Theories and concepts in the study of international relations; important and enduring questions in world affairs; trends and changes in the post-Cold War and post-9/11 world. Prerequisite for 2200 and 5200-level courses and PSC 6900.

Credits: 3

PSC 1300: Comparative Politics

Political dynamics of various countries and regions. Regime types and political institutions. Politics of inclusion and exclusion. Sources of political change and continuity. Prerequisite for 2300 and 5300-level courses and PSC 6900.

Credits: 3

PSC 1400: Political Theory

A survey of early and modern political thought and its relevance to contemporary politics. Prerequisite for 2400 and 5400-level courses and PSC 6900.

Credits: 3

PSC 1900: Research Seminar

Covers elements required for writing research paper on a problem in political science, including using the library, evaluating and properly citing sources, understanding appropriate research methods, and writing and redrafting a research paper. Prerequisite for PSC 6900.

Credits: 3

PSC 2110: U.S. State & Local Government

Constitutions, institutions, instruments of popular control, and intergovernmental relations.

Credits: 3

Prerequisites:

PSC 1100

PSC 2120: U.S. Congress

Congressional functions, structures, and procedures; distribution of power; elections, representation, parties, committees, and the legislative process. Relations with the President, executive bureaucracy, judiciary, and interest groups. Congress's role in the economy, budgeting, domestic policy, and national security policy.

Credits: 3**Prerequisites:**

PSC 1100

PSC 2125: U.S. Presidency

The nature, functions, and development of the American presidency, including relations between the president and other Washington actors, the public and the press.

Credits: 3**Prerequisites:**

PSC 1100

PSC 2130: U.S. Judiciary

Historical overview of the Supreme Court; competing perspectives on judicial behavior; and patterns in the relationship between the Court and other branches of the federal government.

Credits: 3**Prerequisites:**

PSC 1100

PSC 2140: US Con Law I: Powers&Struct

Major Supreme Court cases concerning the powers of Congress and the president, federalism, commerce taxing, and voting.

Credits: 3**Prerequisites:**

PSC 1100

PSC 2145: US Con Law II:Rights&Lib

Major Supreme Court decisions, 1789 to the present, concerning provisions of the Bill of Rights and the Fourteenth Amendment; emphasis on constitutional "literacy," or the ability to read Court decisions and write about them.

Credits: 3**Prerequisites:**

PSC 1100

PSC 2150: U.S. Pol. Parties & Elections

The place of parties in national politics; the nature, organization, and functions of political parties; suffrage requirements and election methods; the activities of organized interests.

Credits: 3**Prerequisites:**

PSC 1100

PSC 2180: U.S. National Security Policy

Development of strategic thought in the United States, arms control and disarmament, intelligence, technology, alliance policy, role of civilian and military branches of government, and related topics.

Credits: 3**Prerequisites:**

PSC 1100

PSC 2190: U.S. Pub Opinion & Polit Behav

The normative and empirical roles of public opinion and civic involvement in American democracy; conceptual and measurement issues, individual-level and societal factors influencing public opinion and political behavior.

Credits: 3**Prerequisites:**

PSC 1100

PSC 2210: Globalization

Transformation of international politics through diffusion of ideas, technology, migration, capital and markets. Globalization, diffusion, and interactions of ideas, technology and capital. Effects on domestic and international politics, economics, society.

Credits: 3**Prerequisites:**

PSC 1200

PSC 2220: International Law

The rules and principles of international law based on a study of treaties, diplomatic practice, and cases dealt with by international and national courts.

Credits: 3**Prerequisites:**

PSC 1200

PSC 2230: International Organization

The development of international organization, the U.N., its principles, structure, and accomplishments; regional organizations; prospects for the future.

Credits: 3**Prerequisites:**

PSC 1200

PSC 2240: Internat'l Political Economy

Interactions between domestic, comparative and international politics and economics. Institutions, ideas and power dynamics in trade, finance, and development. The movement of labor, goods, services, and capital across national boundaries.

Credits: 3**Prerequisites:**

PSC 1200

PSC 2260: War and Conflict

Causes of interstate war, laws and norms of war, nuclear proliferation and deterrence, terrorism, civil war, territorial disputes, religion and conflict, and humanitarian and military intervention and peacekeeping.

Credits: 3

Prerequisites:

PSC 1200

PSC 2310: Nationalism

National identity and consciousness, origin and development of nations and states. Role and effects of nationalism in modern politics, culture, society, and economy.

Credits: 3

PSC 2330: East Asian Politics

Northeast Asian countries' political and economic development after World War II.

Credits: 3

Prerequisites:

PSC 1300

PSC 2340: Politics of the Arab World

Political change in the principal Arab States with emphasis on the diverse forms of rule and political movements. The impact of colonial rule and socioeconomic changes on political life, leadership, social structure, political culture, and modernization.

Credits: 3

Prerequisites:

PSC 1300

PSC 2350: African Politics

Politics and societies of contemporary Africa. Colonialism and its legacies. Postcolonial regimes; authoritarianism, neo-patrimonialism and "big man" rule; political reform and democratization. Theories of conflict and conflict resolution. Economic development: International and domestic explanations of poverty and underdevelopment; the HIV crisis, foreign aid, debt and debt relief, and economic reform and renewed growth.

Credits: 3

Prerequisites:

PSC 1300

PSC 2360: Latin American Politics

Politics and societies of contemporary Latin America. Legacies of social revolution and authoritarian rule; democratic transition and consolidation; market reforms and their consequences. Democratic representation; the resurgence of the political left; identity politics (race/ethnicity, inclusion and exclusion). US-Latin American relations: immigration, trade, energy, and security policies.

Credits: 3

Prerequisites:

PSC 1300

PSC 2370: Third World Politics

Political systems of the developing world, including ideologies, the role of the military, nation building, gender issues, religion, ethnic conflict and additional topics.

Credits: 3

Prerequisites:

PSC 1300

PSC 2380: European Politics

European political institutions, changes in party systems, and impact of European integration/globalization on domestic economies.

Credits: 3

Prerequisites:

PSC 1300

PSC 2390: Indian & South Asian Politics

The historical development of India and Pakistan; their contemporary problems and conduct of foreign relations with the great powers.

Credits: 3

Prerequisites:

PSC 1300

PSC 2410: Early Political Theories

The relevance of the classics of political thought for understanding modern politics from the Greeks to the modern era.

Credits: 3

PSC 2420: Modern Political Theories

The structure of modern political thought and developments of twentieth century political thought as an aid to understanding our age.

Credits: 3

PSC 3110: Politics of Immigration (U.S.)

This course explores the varied perspectives of public, private, and nonprofit leaders on the nature of American citizenship from the founding era to the 21st century. It examines how the meaning of American citizenship continues to shape political life in multiple ways - from legislation, to advocacy, to social service provision in the United States.

Credits: 3

PSC 3120: Political Communication (U.S.)

The role, behavior and influence of communications in American politics.

Credits: 3

PSC 3130: Women and Politics in the U.S.

Why women traditionally have been marginal to political life; the efforts of women in the past and today to change that fact; the problems that must be solved before women can translate their numerical strength into political power.

Credits: 3

PSC 3140: Race, Ethnicity & Pol. in U.S.

The importance of race and ethnicity in American politics, and the politics (historical, legal, attitudinal, and behavioral) of four of the United States' principal racial and ethnic minority groups—blacks (African-Americans), Latinos, Asians, and Native Americans.

Credits: 3

PSC 3150: Political Psychology

The interplay between politics and psychology; principles, terminology, and methods of psychological theories to understand how people think and feel about politics and how politics affects their thinking.

Credits: 3

PSC 3210: American Foreign Policy

The institutions, processes, and ideas which shape contemporary American foreign policy; the major problem areas.

Credits: 3

PSC 3220: Middle East International Rels

Intra-regional and international problems facing the Middle East: the struggle for independence; the impact of the Cold War; the protracted conflict between Israelis and Arabs; and the tensions in the oil-rich Persian Gulf.

Credits: 3

PSC 3230: Development and Aid

Development and the role of official development assistance. Includes aid effectiveness, modalities, impact of globalization, conflation of aid with strategic purpose, and rising influence of non-traditional donors, such as China and oil-exporting countries.

Credits: 3

PSC 3240: East Asia Political Economy

Interactions between domestic and international actors in Asia; role of political regimes, institutions and firms; dynamic processes of trade and financial sector liberalization and economic crisis.

Credits: 3

Prerequisites:

PSC 1200 or junior standing.

PSC 3250: Genocide and Mass Killing

Definitions of genocide and mass killing, causes of genocide and mass killing, contexts in which violence occurs, dynamics of violence, variations in violence, individual motivations of perpetrators, rescue and resistance, obstacles and opportunities for intervention and prevention, tribunals and truth commissions.

Credits: 3

PSC 3320: Russian Politics

The contemporary Russian political system; political transformation from the Communist system which preceded it.

Credits: 3

PSC 3330: British Politics

Development of the British state; the powers of Parliament and other institutions; the British welfare state, public opinion, and policing; questions of union and devolution; major current topics in British politics.

Credits: 3

PSC 3340: Irish Conflict and Peace

Foundations of the Irish state; political system and party system development; conflict in Northern Ireland; relations within the divided island and between the Irish Republic and Britain; Irish social, political cultural and economic development; gender in Irish society and politics; Ireland in the international political system.

Credits: 3

PSC 3410: Theories of War and Peace

The relevance of the classics of political thought for understanding modern politics from the Greeks to the modern era.

Credits: 3

PSC 3420: American Political Thought

The founding of the American Republic; nature of the federal union, factions, popular sovereignty, the extended republic, representation, separation of powers, and checks and balances. Subsequent issues and controversies about these and related matters.

Credits: 3

PSC 3440: Politics and Religion

The nature of religious and political identity; the possibility and desirability of keeping them apart; the relationship between religion and politics in a free society; religious pluralism, its requirements and consequences; the prospects for "civil religion."

Credits: 3

PSC 4175: Topics in Am Gov & Politics

Topical courses in American Government and Politics offered on occasional basis.

Credits: 3

PSC 4275: Topics in Internat'l Relations

Topical courses in International Relations offered on occasional basis.

Credits: 3

PSC 4375: Topics in Comparative Politics

Topical courses in comparative politics offered on occasional basis.

Credits: 3

PSC 4475: Topics in Political Theory

Topical courses in political theory offered on an occasional basis.

Credits: 3

PSC 5110: Ind Study in Am Gov & Politics

Readings, research, and writing on topics in American government and politics under faculty supervision. Pre-requisite: permission of instructor and department chair.

Credits: 3

Prerequisites:

PSC 1100

permission of instructor and department chair.

PSC 5210: Ind Study in Intern'l Rel

Readings, research, and writing on topics in international relations under faculty supervision. Pre-requisite: permission of instructor and department chair.

Credits: 3

Prerequisites:

PSC 1200

permission of instructor and department chair.

PSC 5310: Ind Study in Comparative Pol

Readings, research, and writing on topics in comparative politics under faculty supervision. Pre-requisite: permission of instructor and department chair.

Credits: 3

Prerequisites:

PSC 1300

permission of instructor and department chair.

PSC 5410: Ind Study in Political Theory

Readings, research, and writing on topics in political theory under faculty supervision. Pre-requisite: permission of instructor and department chair.

Credits: 3

Prerequisites:

PSC 1400

permission of instructor and department chair.

PSC 6160: Washington Minimester

A three-week program of seminars in Washington, D.C. with public officials, staff members, party leaders, and interest group representatives. Held annually in mid-May. Enrolls the previous fall. Limit: 15 students. Permission of instructor required.

Credits: 3

Prerequisites:

Permission of instructor required.

PSC 6503: Internship Elective

Internship.

Credits: 3

PSC 6900: Political Sci Seminar

Capstone seminar on specialized topics in political science.

Credits: 3

Prerequisites:

PSC 1100 and PSC 1200 and PSC 1300 and PSC 1400 and PSC 1900

PSC 7000: Research Concepts & Approaches

Tools needed to think critically about questions of political science; various research methods employed by political scientists; skills necessary to write cogent essays and conduct original research. .

Credits: 3

PSC 7175: Topics in American Government

Topics of special interest in American Government.

Credits: 3

PSC 7275: Topics in Int'l Relations

Topics of special interest in International Relations.

Credits: 3

PSC 7375: Topics in Comparative Politics

Topics of special interest in Comparative Politics.

Credits: 3

PSC 7475: Topics in Political Theory

Topics of special interest in Political Theory.

Credits: 3

Psychological and Brain Sciences

PSY 1000: General Psychology

Introductory examination of the fundamental concepts of psychology, with particular emphasis on the description of normal human behavior and those factors that underlie it. Prerequisite to all other courses in psychology.

Credits: 3

PSY 1001: Intro to Brain and Behavior

Examination of fundamental concepts in psychology with special emphasis on underlying neural mechanisms. Satisfies same pre-requisite requirements as PSY 1000 and is the preferred introductory psychology course for CBN majors. Cannot receive credit for both PSY 1000 and PSY 1001.

Credits: 3

PSY 2000: Intro Statistics

Basic concepts, assumptions, and applications of descriptive statistics and inferential statistics.

Credits: 3

Prerequisites:

PSY 1000 :D- or PSY 1001 :D- or HON 1811 :D-

PSY 2050: Research Methods in Psy.

Introduction to the reading, design, and reporting of psychological research. Writing intensive.

Credits: 3

Prerequisites:

PSY 1000 :D- or PSY 1001 :D- or HON 1811 :D-

PSY 2100: Sem Professional Development

Overview of ethical and professional issues in psychology.

Credits: 1

Prerequisites:

PSY 1000 :D- or PSY 1001 :D- or HON 1811 :D-

PSY 2150: Undergrad Research Experience

Supervised research experience. Students may register for PSY 2150 more than once.

Credits: 1

Prerequisites:

PSY 1000 or PSY 1001 or HON 1811

PSY 2400: Cross-Cultural Psychology

Theory and research on cultural influences on human diversity in behavior and psychological processes.

Credits: 3

Prerequisites:

PSY 1000 :D- or PSY 1001 :D- or HON 1811 :D-

PSY 2450: Psychology of Gender

Sexism in psychological research & theory; gender stereotyping & discrimination; psychological theories of gender; women's physical & mental health, female sexuality & lifespan development; sexual orientation; victimization of women; biological influences on women's experiences.

Credits: 3

Prerequisites:

PSY 1000 :D- or PSY 1001 :D- or HON 1811 :D-

PSY 2700: Industrial/Organizational Psy

Applications of psychological data, theories, research methods, and testing procedures to individuals in organizational settings.

Credits: 3

Prerequisites:

PSY 1000 :D- or PSY 1001 :D- or HON 1811 :D-

PSY 2800: Human Factors

Application of theories of human performance (perception, cognition, and motor control) to the design of products and systems.

Credits: 3

Prerequisites:

PSY 1000 :D- or PSY 1001 :D- or HON 1811 :D-

PSY 2900: Special Topics

An intensive examination of selected topical areas within psychology.

Credits: 3

Prerequisites:

PSY 1000 :D- or PSY 1001 :D- or HON 1811 :D-

PSY 2901: Special Topics Laboratory

Credits: 1

PSY 2905: Special Topics Seminar

Selected topics in memory improvement, time management, stress management, interpersonal communication, etc. Open to all Majors. Only three 1-credit seminars may be applied toward graduation. Cannot be used to fulfill Psychology electives.

Credits: 1

PSY 2993: Psychology Internship

Supervised work experience in agency, hospital, school, or company. Minimum 3.0 G.P.A., Psychology major. Permission of instructor. Apply in Psychology Department office. Cannot be used to fulfill Psychology electives. Graded S/U.

Credits: 3

Prerequisites:

PSY 1000 :D- or PSY 1001 :D- or HON 1811 :D-

PSY 2996: Psychology Internship

Credits: 6

PSY 3200: Human Development

Theory and research on social/personality, physical, and cognitive/intellectual changes from infancy through old age.

Credits: 3

Prerequisites:

PSY 1000 :D- or PSY 1001 :D- or HON 1811 :D-

PSY 3300: Perception

Theory and application of sensory and perceptual processes such as distance perception, color vision, illusions and deafness.

Credits: 3

Prerequisites:

PSY 1000 :D- or PSY 1001 :D- or HON 1811 :D-

PSY 3500: Psych of Personality

Theories, dynamics, and structure of personality. Students cannot receive credit for this course and PSY 4700.

Credits: 3

Prerequisites:

PSY 1000 :D- or PSY 1001 :D- or HON 1811 :D-

PSY 3600: Social Psychology

Survey of theory and research on altruism, attraction, social cognition, the self, attitudes and attitude change, social influence, affiliation, personal control, and aggression.

Credits: 3

Prerequisites:

PSY 1000 :D- or PSY 1001 :D- or HON 1811 :D-

PSY 3700: Abnormal Psychology

Classification, etiology, and treatment of mental and behavioral disorders with emphasis on contemporary theory and research.

Credits: 3

Prerequisites:

(PSY 1000 :D- or PSY 1001 :D- or HON 1811 :D-) and PSY 2050 :D-

PSY 3800: Clinical Psychology

Fundamental concepts, basic areas of professional functioning, and contemporary issues in the mental health field.

Credits: 3

Prerequisites:

(PSY 1000 :D- or PSY 1001 :D- or HON 1811 :D-) and PSY 2050 :D-

PSY 4200: Biopsychology

Theoretical and laboratory examination of basic neural and hormonal processes underlying behavior.

Credits: 3

Prerequisites:

(PSY 1000 :D- or PSY 1001 :D- or HON 1811 :D-) and (PSY 2000 :Y :D- and PSY 2050 :D-) or (PSY 2000 :D- and PSY 2050 :Y :D-)

PSY 4500: Cognitive Psychology

Theory and research on human learning, memory, and cognitive processes. Writing intensive.

Credits: 3

Prerequisites:

(PSY 2000 :Y :D- or PSY 4000 :D-) and PSY 2050 :D- or PSY 2000 :D- and PSY 2050 :Y :D-

PSY 4600: Animal Learning & Cognition

Cognitive mechanisms responsible for simple behavior and behavioral change as they have been studied using animal subjects.

Credits: 3

Prerequisites:

(PSY 1000 :D- or PSY 1001 :D- or HON 1811 :D-) and PSY 2050 :D-

PSY 4700: Personality Theory & Research

Credits: 3

PSY 4800: Psychological Measurement

Credits: 3

PSY 5150: Foundations of Modern Psych

Overview of the major concepts and theories of psychology presented in a historical context.

Credits: 3

Prerequisites:

(PSY 1000 :D- or PSY 1001 :D- or HON 1811 :D-) and PSY 2000 :D- and PSY 2050 :D-

PSY 5250: Contemp Research Issues in Psy

Recent and emerging topics, issues, and methods in psychological science.

Credits: 3

Prerequisites:

(PSY 1000 :D- or PSY 1001 :D- or HON 1811 :D-) and PSY 2000 :D- and PSY 2050 :D-

PSY 5900: Independent Research Project

Supervised research project and report. Student may register for PSY 5900 more than once; however, only 3 hours of research can be applied toward the degree requirements in psychology.

Credits: 3

Prerequisites:

PSY 1000 :D- or PSY 1001 :D- or HON 1811 :D-

Public Administration

PA 1050: Public Administration

Administrative politics, law, and ethics, organizational theory and technical fields, such as budgeting, planning, and personnel.

Credits: 3

PA 2000: Public Policy

Theories of public policy making, national public policies, and contemporary issues.

Credits: 3

PA 2100: City and Suburb

Politics and problems in metropolitan areas of the United States.

Credits: 3

PA 3000: Overview of Non-Profit Sector

Examination of the size, scope, central activities, and public impact of the nonprofit sector in the U.S. and abroad. Exploration of current trends and career opportunities in the nonprofit sector.

Credits: 3

PA 4100: Public Budgeting

How government and nonprofits raise revenue, engage in the budgeting process, and use budgets to manage in the public sector.

Credits: 3

PA 4200: Organizational Development

Evaluation of human capital initiatives, marketing and communication strategies, and service delivery in government and nonprofit organizations.

Credits: 3

PA 5000: Special Topics

Special topics in public administration.

Credits: 3

PA 5100: Independent Study

Individual students with specific interests in public administration work on a tutorial basis with an appropriate professor.

Credits: 3

PA 6000: Vocation of Public Service

The exploration of the concept of public service as a "vocation," envisioning public service as a means of self-expression through which citizen-servants discover meaning and purpose in their lives by promoting the common good and developing the bonds of community.

Credits: 3

PA 6100: PSA Internship

Supervised work opportunity to explore public service professional interests and gain experience in the public or nonprofit sector. Prerequisite: Approval from the Chair of the Department of Public Administration.

Credits: 3

Prerequisites:

PA 1050 :Y or PA 2000 :Y

Russian Studies

RUS 1111: Introductory Russian I

Functional use of Russian for students with no prior knowledge of Russian. Recitations, readings and oral drills. Supplementary language laboratory work.

Credits: 6

RUS 1112: Introductory Russian II

Functional use of Russian for students with no prior knowledge of Russian. Recitations, readings and oral drills. Supplementary language laboratory work. RUS 1111 or equivalent or permission of instructor.

Credits: 6

RUS 1123: Intermediate Russian I

Review of Introductory Russian, followed by further development of reading, speaking, writing, and translation skills.

Credits: 3

Prerequisites:

RUS 1111 :D-

RUS 1124: Intermediate Russian II

Continued development of skills employed in Intermediate Russian I.

Credits: 3

Prerequisites:

RUS 1123 :D-

RUS 1125: Intermediate Russian III

Credits: 3

RUS 1131: Conversation Composition

Advanced communication skills including reading and discussing topics on current events.

Credits: 3

RUS 1132: Advanced Convers & Comp

A continuation of RUS 1131.

Credits: 3

RUS 3412: Russian Culture in Context

Advanced study of topics of special interest in Russian language, literary and/or cultural studies. May be repeated for credit if topic changes.

Credits: 3

RUS 4110: Russian Film

Understanding of Russian life and culture today by focusing on basic historical, ideological, economic, religious and cultural developments. Each student chooses one aspect of social development for further research. Conducted in English.

Credits: 3

RUS 4120: The Russian Short Story

Representative Russian short stories from Pushkin to Pasternak. Conducted in English.

Credits: 3

RUS 4130: Russian Novel

Credits: 3

RUS 5900:**Russian:Independent Study**

Supervised study, activity or research. May be taken more than once. Prior approval of chair and instructor.

Credits: 3

Sociology

SOC 1000: Intro to Sociology

Introduction to the analysis of social behavior, emphasis on socialization, collective and group behavior.

Credits: 3

SOC 1500: Social Problems

Significant problems of American society; the sociocultural basis of social problems, the conditions facilitating their incidence, and approaches to therapeutic intervention.

Credits: 3

SOC 1903: Internship Elective

Credits: 3

SOC 1906: Internship Elective

Credits: 6

SOC 1909: Internship Elective

Credits: 9

SOC 2100: Cultural Anthropology

Principles of cultural anthropology; ethnological variations in language, techniques, customs and values; problems of cultural development and change.

Credits: 3

SOC 2200: Sociology of Deviance

A sociological examination of rule-breaking behavior; causal theories of deviance; types of deviance and their distribution in contemporary society.

Credits: 3

SOC 2300: Sociology of the Family

Institutional organization of mate selection, courtship, and marriage relationships in American society; family relationships and functions; family disorganization and change.

Credits: 3

SOC 2400: Sociology of Social Work

History and development of social welfare; basic issues in social welfare planning and administration. The major methods of social work, practice; social casework, group work and community organization, in such areas as child welfare, family service and counseling, probation and corrections.

Credits: 3

SOC 2600: Sociology of Religion

The interaction between society and religion; religion and scientific claims; investigation of human nature as social and the concept of oneness in religion.

Credits: 3

SOC 2700: Business and Society

The structure of complex organizations and their relationship to other social institutions. Emphasis on the modern corporation, how corporations interact with labor and government, and how corporations and organizations affect our everyday lives.

Credits: 3

SOC 2800: Sociology of Occupations

Influence of the social milieu upon internal organizations of occupations and professional modes of selection, entrance, and training; occupational mobility and career patterns; occupational influences upon individual behavior.

Credits: 3

SOC 2900: Politics, Economy and Society

Relationships between state and society from a comparative perspective. Focuses primarily on the United States, with frequent references to the experiences of other developed nations as well as those of third world countries.

Credits: 3

SOC 2950: Perspectives on US Poverty

Poverty in the United States, emphasizing the experience of the past thirty years (measurement, causes, and policies to combat poverty). Emphasis on the special problems of urban poverty and poverty among children.

Credits: 3

SOC 2993: Internship

Internship

Credits: 3

SOC 2996: Internship

Internship

Credits: 6

SOC 3300: Sociology of Law

The meaning, origin, and impact of law viewed from several sociological perspectives; the law in action and the social context of legal professions.

Credits: 3

SOC 3400: Health, Medicine & Society

This course explores the social dimensions of health, disease and illness, focusing especially on the social determinants of disease, the social experience of illness, and the role and meaning of medicine and public health in modern U.S. society. The class examines how we define health problems and their solutions, and it considers the ways in which factors such as race, gender and class, and social connections affect health.

Credits: 3

SOC 3450: Social Psychiatry

Cultural and social patterns in the causation, incidence and treatment of mental health problems; emphasis upon current approaches to mental illness and the relation of mental illness to criminal, antisocial and deviant behavior.

Credits: 3

SOC 3500: Sociology of Gender

Sex roles examined from a social learning and developmental perspective; recent changes in related attitudes and behaviors, consequences for interpersonal relationships and societal organization.

Credits: 3

SOC 3600: Sociology of Race & Racism

Development of race and ethnic relationships in America; the impact of power-conflict relations on race and ethnic patterns; particular attention given to development from early 1950's to present.

Credits: 3

SOC 3700: Urban Sociology

The nature of the city; history of urban settlement; urban form; institutions, organizational structures and processes; major problems of living in urban America.

Credits: 3

SOC 3750: Human Populations

Credits: 3

SOC 3800: Social Movements

The sociological study of social movements, including mobilization, participation, tactics, goals and ideology; the social contexts in which movements arise and develop; the nature and influence of historical and contemporary movements and activism.

Credits: 3

SOC 3900: Social Inequality

Development and influence of class structures; emphasis upon modern stratification systems and their relation to community and societal power structures.

Credits: 3

SOC 4000: Special Topics

Topics addressing special or emerging interests, chosen for their current importance and the specific expertise of an instructor.

Credits: 3

SOC 4200: Sports and Society

Sports as both a unifying and divisive social force. The corporatization and commodification of organized sports.

Credits: 3

SOC 5000: Nature & His of Soc Thry

The nature of sociological theory and the major theoretical developments which have shaped the field of sociology.

Credits: 3

SOC 5050: Soc Theory & Public Policy

Influence of sociological ideas on social policies. Students will be expected to design a theoretically driven empirical study which impacts on some public policy.

Credits: 3

Prerequisites:

SOC 1000

SOC 5100: Contemp Thry & Research

Significant contemporary contributions to sociology theory and research.

Credits: 3

Prerequisites:

SOC 1000

SOC 5300: Data Analysis-Social Scientist

Credits: 3

SOC 5400: Applied Research in Soc

The development of real-world research skills through the application of sociological methods and statistics. Special emphasis is given to sampling, measurement, applied statistics, data management and evaluative research.

Credits: 3

SOC 6000: Sociology Independent Study

Supervised project or research culminating in research report or major paper.

Credits: 3

SOC 6500: Seminar

Advanced course for seniors focusing on particular substantive area; topics rotate.

Credits: 3

Prerequisites:

(SOC 5300 and SOC 5400) and (SOC 5000 or SOC 5050 or SOC 5100)

Spanish Studies

SPA 1111: Introductory Spanish I

Groundwork Spanish, including oral proficiency, aural comprehension, and reading; for students with no prior knowledge of Spanish. Supplementary language laboratory work and oral drills.

Credits: 4

SPA 1112: Introductory Spanish II

Groundwork Spanish, including oral proficiency, aural comprehension, and reading; for students with no prior knowledge of Spanish. Supplementary language laboratory work and oral drills.

Credits: 4

SPA 1121: Intermediate Spanish I

Review of grammar, composition, reading and conversation. conversation. Students should have completed SPA 1111 and 1112 or the equivalent.

Credits: 3

SPA 1122: Intermediate Spanish II

Review of grammar, composition, reading and conversation. conversation. Students should have completed SPA 1121 or the equivalent.

Credits: 3

SPA 1130: Span. for Heritage Speakers I

Combination of reading and writing in addition to speaking. Work is individualized for needs of students. Objective is to prepare students for a more advanced course. Restricted to student with Hispanic background who have been exposed to Spanish at home, at all levels.

Credits: 3

SPA 1131: Conversation & Composition I

Regular practice in conversation and composition with review of grammar and continuing work on language skills in Spanish. Students should have completed SPA 1122 or the equivalent.

Credits: 3

SPA 1132: Conversation & Composition II

Spanish 1132 is the continuation of a two-course sequence. Intensive practice in conversation and composition with review of grammar as well as an introduction to the analysis of literary and cultural texts. As a result, students will develop their vocabulary and improve their grammatical skills, allowing them to express themselves in a sophisticated way. Students should have completed SPA 1131 or the equivalent. Uses literary and cultural readings (poetry, essays, theater, web-based media and narrative). Spanish 1132 is not recommended for Spanish Heritage Speakers.

Credits: 3

SPA 1135: Span for Heritage Speakers II

Practice in conversation and composition with focus on advanced proficiency in Spanish. Course conducted in Spanish. Restricted to students with Hispanic background who have been exposed to Spanish at home.

Credits: 3

SPA 1138: Advanced Grammar

Intensive grammar review with special attention to literary style. Students should have completed 1132 or the equivalent.

Credits: 3

SPA 1140: Writing & Stylistics in Span.

Intensive practice in written expression and textual analysis for heritage and non-heritage speakers. Compositions are modeled on selected Spanish texts.

Credits: 3

SPA 2012: Special Topics Abroad

The course will serve to transfer study abroad courses at the 2000 level whose description is relevant to the program but do not have an exact equivalent in our curriculum. Pre-requisite SPA 1132 or authorization from instructor.

Credits: 3

Prerequisites:

SPA 1132

SPA 1132 or authorization from instructor.

SPA 2044: Latin American Novel

Reading and interpretation of Spanish-American novels from the modernist period to the present. Students should have completed 1132 or the equivalent. Pre-requisite SPA 1132 or authorization from instructor.

Credits: 3

Prerequisites:

SPA 1132

SPA 1132 or authorization from instructor.

SPA 2124: Creative Writing in Spanish

Designed specifically to develop the creativity and talent of the students at the same time of improving their spoken and written Spanish through daily writing practice in and out of the classroom. Pre-requisite SPA 1132 or authorization from instructor.

Credits: 3

Prerequisites:

SPA 1132

SPA 1132 or authorization from instructor.

SPA 2220: Literature & Culture of Spain

The foremost works of Spanish literature from the beginnings to present day. A required course for majors. Students should have completed 1132 or the equivalent. Pre-requisite SPA 1132 or authorization from instructor.

Credits: 3

Prerequisites:

SPA 1132

SPA 1132 or authorization from instructor.

SPA 2221: Lit. & Cult. of Latin America

Spanish-American literature from colonial times to the present. A required course for majors. Students should have completed 1132 or the equivalent. Pre-requisite SPA 1132 or authorization from instructor.

Credits: 3

Prerequisites:

SPA 1132

SPA 1132 or authorization from instructor.

SPA 2424: Saints in Spain

This course will study the evolution of the idea of sainthood between the 8th and 13th centuries. Drawing on Arabic and Latin texts in Spanish translation as well as Spanish texts, we will study issues like shared saint veneration, social norms and collective memory in Medieval Spain. Pre-requisite SPA 1132 or authorization from instructor.

Credits: 3

Prerequisites:

SPA 1132

SPA 1132 or authorization from instructor.

SPA 2993: Community Interpre. Internship

A community-based experience helping lawyers translate & interpret for the Philadelphia Hispanic community. Pre-requisite SPA 1132 or authorization from instructor.

Credits: 3

Prerequisites:

SPA 1132

SPA 1132 or authorization from instructor.

SPA 3025: Faces of Modernity

Study of artistic trends in twentieth century Spain. Pre-requisite: Any SPA course at the 2000 level or authorization from the instructor.

Credits: 3

Prerequisites:

Any SPA course at the 2000 level or authorization from the instructor.

SPA 3044: Tales of an Unstable World

Representative trends in 20th century Spanish novels. Pre-requisite: any SPA course at the 2000 level or authorization from instructor.

Credits: 3

Prerequisites:

any SPA course at the 2000 level or authorization from instructor.

SPA 3045: Chilean Folklore

Examines the short fiction in all its forms in the Hispanic literary tradition. Any SPA course at the 2000 level or authorization from instructor.

Credits: 3

SPA 3046: Latin America Now

The contemporary novel and short story Borges, Cartazar, Asturias, Fuentes, Machado de Assis, Rulfo, Garcia Marquez.

Credits: 3

Prerequisites:

any SPA course at the 2000 level or authorization from instructor.

SPA 3054: Latin American Poetry

The development of Spanish-American poetry from colonial times to the present. Pre-requisites: any SPA course at the 2000 level or authorization from instructor.

Credits: 3

Prerequisites:

any SPA course at the 2000 level or authorization from instructor.

SPA 3064: Spanish Theatre of 20 & 21 c.

A critical analysis of representative dramatic works of Spain from Jacinto Benavente to present day, with special emphasis on women dramatists and gender issues of the twentieth and twenty-first centuries within the historical and socio-cultural evolution of contemporary Spain. Pre-requisite: Any SPA course at the 2000 level or authorization from instructor.

Credits: 3

Prerequisites:

Any SPA course at the 2000 level or authorization from instructor.

SPA 3074: Hispanic Cinema

Spanish films based on literary works as a medium will be used to better understand contemporary Spanish culture and civilization. Pre-requisite: any SPA course at the 2000 level or authorization from instructor.

Credits: 3

Prerequisites:

any SPA course at the 2000 level or authorization from instructor.

SPA 3200: Intro to Spanish Translation

Hands-on introduction to written Spanish-English translation. The emphasis is on Spanish to English translation of a variety of different texts from the fields of business, law, literature, tourism, and science. Basic theory principles and translation procedures considered a vital component in the formal training of a translator.

Credits: 3

Prerequisites:

SPA 1138

SPA 3214: Intro to Spanish Linguistics

The structure of Spanish. Methods, findings, and theory of linguistic research on the sound system and the structures of present-day Spanish. The basics of abstract linguistic analysis. Hands-on introduction to the major subdisciplines of linguistics: morphology, phonetics, phonology, semantics, and syntax. Pre-requisite: Any SPA course at the 2000 level or authorization from instructor.

Credits: 3

Prerequisites:

Any SPA course at the 2000 level or authorization from instructor.

SPA 3254: Spanish Lyric Tradition

Examines the major themes and evolution of Spanish lyrical verse from its beginnings to present day.

Credits: 3

Prerequisites:

Any SPA course at the 2000 level or authorization from instructor.

SPA 3412: Special Topics

Advanced study of topics of special interest in Spanish literary and/or cultural studies. May be repeated for credit if topic changes. Pre-requisite: Any SPA course at the 2000 level or authorization from instructor.

Credits: 3

Prerequisites:

Any SPA course at the 2000 level or authorization from instructor.

SPA 3484: Medieval Cultures

The Cid and other major works of the Spanish Middle Ages: early lyric, epic, ballad, prose. Pre-requisite: Any SPA course at the 2000 level or authorization from instructor.

Credits: 3

Prerequisites:

Any SPA course at the 2000 level or authorization from instructor.

SPA 3485: Nature in Medieval Culture

La naturaleza en la culture medieval explores issues through literature: the perception of the world, the intersection between nature and religion, the relation between literature and visual arts, the importance and meaning of nature in political discourse.

Credits: 3

Prerequisites:

Any SPA course at the 2000 level or authorization from instructor.

SPA 3654: Early Modern Poetry

Traces the political and socio-cultural milieu of Spain's Early Modern era as reflected in the works of representative poets of Spain's renaissance period at the beginning of Europe's 16th century through Spain's baroque ending with the close of the 17th century. Pre-requisite: Any SPA course at the 2000 level or authorization from instructor.

Credits: 3**Prerequisites:**

Any SPA course at the 2000 level or authorization from instructor.

SPA 3744: Cervantes

An interdisciplinary approach to Cervantes's work. Pre-requisite: Any SPA course at the 2000 level or authorization from instructor.

Credits: 3**Prerequisites:**

Any SPA course at the 2000 level or authorization from instructor.

SPA 3764: Drama of Golden Age

The representation of the monarch, women, minority groups, etc. in Golden Age society through its drama.

Credits: 3**Prerequisites:**

Any SPA course at the 2000 level or authorization from instructor.

SPA 3944: Hispanic Pop Culture

This course discusses the influence of popular culture expressions such as music, cinema, literature, sports and food in the nation building projects in Latin America.

Credits: 3**Prerequisites:**

Any SPA course at the 2000 level or authorization from instructor.

SPA 3970: Research Seminar

Principles and techniques of literary research. Overview of major Spanish and Spanish-American authors and representative works. Pre-requisite: Any SPA course at the 2000 level or authorization from instructor.

Credits: 3**Prerequisites:**

Any SPA course at the 2000 level or authorization from instructor.

SPA 5900: Independent Study in Spanish

Supervised study, activity or research. May be taken more than once. Pre-requisite: Intermediate Spanish or above. Prior approval of chair and instructor.

Credits: 3**Prerequisites:**

SPA 1132 :Y

SPA 7400: Approach to Teaching Spa Lang**Credits: 3****SPA 7410: Latin American Poetry****Credits: 3****SPA 7420: Literary and Cultural Theories**

Critical approaches to literature with the necessary theoretical background designed to familiarize students with various methods for analyzing literary texts.

Credits: 3**SPA 7440: Special Topics****Credits: 3****SPA 7451: Cervantine Spain**

An interdisciplinary approach to Cervantes' Spain

Credits: 3**SPA 7470: Poetics in Early Modern Spain^**

Examines the socio-humanist and theo-philosophical revolution of Spanish society of the 16th and 17th centuries through its foremost poets.

Credits: 3**SPA 7491: Contemporary Spanish Stage**

Examines the dichotomy between socio-political repression and conformity and protest in Spain of XX and XXI centuries through representative dramatists.

Credits: 3**SPA 7492: Readings Spanish Modernism**

A study of Spanish modernism, showing how imported images and pessimistic ideologies from Europe helped shape the Spanish culture of the first part of the twentieth century.

Credits: 3**SPA 7493: Poetic Voices of Spa-20 & 21 C**

Lyric poetry of Spain from the beginning of the twentieth-century to present day against the background of European historical, socio-cultural, philosophical and artistic consciousness.

Credits: 3

Statistics

STAT 1230: Intro Statistics I

Displaying and summarizing data, basic probability concepts, normal distributions, sampling distributions, estimation for a single population parameter, regression and correlation. Not open to students who have completed MAT 1505.

Credits: 3**STAT 1235: Intro Statistics II****Credits: 3**

STAT 1250: Stats in Health Care Research

Descriptive and inferential statistics: graphical displays, estimation, & hypothesis testing. Restricted to nursing students; others by special permission only.

Credits: 3

STAT 1260: Elementary Statistics

Credits: 3

STAT 1313: Statistics for Life Sciences

Statistical concepts and methods with applications in biological and life sciences; data visualization, descriptive statistics, probability distributions, interval estimation and hypothesis testing for one and two variables, statistical software.

Credits: 3

STAT 1430: Business Statistics

Statistical concepts and methods useful in analyzing problems in all areas of business. Descriptive statistics, probability, sampling distributions, confidence intervals, hypothesis testing, regression analysis, and time series. Applications in various areas of business and economics.

Credits: 4

STAT 4210: Bayesian Statistical Analysis

Application of Bayesian statistical procedures. Implementation using the programming language R. Bayes's Theorem. Bayesian statistical inference. Various types of prior distributions. Computer-intensive methods. Assessing the prior. Robustness analysis. Writing Bayesian statistical reports.

Credits: 3

Prerequisites:

MAT 4310 or STAT 4310

STAT 4310: Stat Methods

Data displays and summarization, probability distributions, point and interval estimation, hypothesis testing, categorical data analysis, regression and correlation.

Credits: 3

Prerequisites:

MAT 1505 :Y

STAT 4315: Applied Statistical Models

Simple and multiple linear regression, including prediction, correlation, model building, multicollinearity, influential observations, and model fit; ANOVA for designed experiments, including completely randomized, randomized block and factorial designs; Time Series including linear time series models, moving averages, autoregressive and ARIMA models, estimation and forecasting.

Credits: 3

Prerequisites:

MAT 1505 and (MAT 1430 or STAT 1430 or MAT 4310 or STAT 4310)

STAT 4380: Data Science

Combining and summarizing real-world data to inform decision-making and predictions; data wrangling, visualization, text mining, ethics; uses R programming language. Some programming experience recommended.

Credits: 3

Prerequisites:

MAT 1230 or STAT 1230 or MAT 1250 or STAT 1250 or MAT 1313 or STAT 1313 or MAT 1430 or STAT 1430 or MAT 4310 or STAT 4310

STAT 4416: Design of Experiments

Credits: 3

STAT 4450: Regression for Biostatistics

Credits: 3

STAT 4452: Nonparametric Statistics

Credits: 3

STAT 4480: Data Mining

Credits: 3

STAT 5700: Math Statistics I

Probability, random variables, joint distributions, expected values, limit theorems, distributions derived from the normal distribution.

Credits: 3

Prerequisites:

MAT 2500

STAT 5705: Math Statistics II

Survey sampling, parameter estimation, hypothesis testing, two sample tests, analysis of variance, analysis of categorical data, linear least squares.

Credits: 3

STAT 5905: Seminar in Statistics

Credits: 3

STAT 5910: Topics in Statistics

Lecture course in an area of statistics. May be repeated for credit if topics are different. Prerequisites: Dependent on Topic.

Credits: 3

STAT 7404: Statistical Methods

Data summarization and display, distributions; binomial, Poisson, normal, t, chi-square and F, estimation, hypothesis testing, linear regression, correlation, statistical software packages.

Credits: 3

STAT 7500: Statistical Programming

Use SAS and R for data manipulation, presentation, and summarization. Topics include inputting/importing/exporting data cleaning and manipulation, and numerical and graphical summaries/analyses. Students will be introduced to simulations, SAS macro programming, and R functions.

Credits: 3**Prerequisites:**

MAT 4310 :Y or STAT 4310 :Y or MAT 7404 :Y or STAT 7404 :Y

STAT 8400: Statistical Theory I

Probability, random variables, univariate and multivariate distributions, mathematical expectation, Central Limit Theorem, Law of Large Numbers.

This is a graduate course that requires permission of the Department Chair to enroll.

Theatre

THE 2019: The Theatrical Experience

The variety of arts and crafts that combine to create theatre. Through hands-on experience, discussion, and performance, the interrelations among dramatic idea, stage direction, acting, design and technical elements that harmonize in a theatrical production are discovered.

Credits: 3**THE 2021: Theatre in Philadelphia****Credits: 3****THE 2025: Improvisational Theatre**

Improvisation to explore non-verbal communication strategies and the study of theatre as a communication medium. Readings in non-verbal communication and modern theatre theory.

Credits: 3**Prerequisites:**

THE 2029 :D-

THE 2029: Fund Princ of Acting

Traditional acting theories and basic techniques: games, improvisation, sensory awareness exercises and beginning work on scenes.

Credits: 3**THE 2030: Advan Princ of Acting**

Creation of an original piece of theater. Self-selected scenes used to deepen individual growth.

Credits: 3**THE 2032: Elements of Dance**

The broad range of dance styles, dance theory, vocabulary, and body placement.

Credits: 3**THE 2033: Advanced Elements of Dance**

Expanded study of dance styles, dance theory, vocabulary, and body placement.

Credits: 3**Prerequisites:**

THE 2032 :D-

THE 2034: Musical Theatre

Explores the conventions of musical theatre. Practical work in the application of musical performance theory to specific song, movement and stylized acting techniques.

Credits: 3**THE 2040: Theatre Practicum**

Significant and responsible participation in the department's production program.

Credits: 0**THE 2051: Creativity**

Students from all disciplines experiment with creativity in their major and their work, utilizing theatre-based approaches to creating performances, stories, ads, business plans, films, and/or projects that nurture innovation, originality, and collaboration.

Credits: 3**THE 3006: Shakespeare on Stage**

Applies the acting and design techniques of Shakespeare's theatre - architecture, lighting, special effects, and rehearsal practices - to the contemporary stage. Choose to act, direct, or design for the final project, a series of site-specific performances on campus. No experience necessary

Credits: 3**THE 3007: Playwriting****Credits: 3****THE 3008: Theatre of the Afr. Diaspora**

Theatre of the African Diaspora explores the effects of the cultural landscape on dramatic literature throughout the diaspora and vice-versa. We will examine plays, essays, articles and other media that deal with issues of race and class, beauty aesthetics, masculinity, power, feminism, queer identity and post-colonialism with the goal of finding their contemporary resonance.

Credits: 3

THE 3010: Mindfulness in Action

An investigation of classic forms of mindfulness meditation and contemplation - from calm abiding to insight awareness to transformation - through studying traditional techniques and experiencing traditional practices. All in the interest of exploring and expanding creativity in everyday life.

Credits: 3

THE 3011: Asian Theatre

To understand Asian artistic style and practice through viewing performances, examining aesthetics, and studying plays.

Credits: 3

THE 3020: Teaching of Acting

Credits: 3

THE 3030: Spec Topics in Theatre

A specialized area of theatre studies (e.g., avant-garde, feminist, Asian, Melodrama), combining elements of theatre history, dramatic literature and criticism, as well as performance and production aspects of live theatre.

Credits: 3

THE 4010: Scenography

Credits: 3

THE 4011: Directing the Play

Fundamentals of directing: script analysis, approaches to working with the actor, movement and blocking, visualization, design, and rhythm.

Credits: 3

THE 4014: Women and Theatre

Credits: 3

THE 4020: Directed Studies in Theatre

Reading and practical work in a specialized area of theatrical production or scholarship under the direction of a faculty artist or scholar.

Credits: 3

THE 7100: Principles of Acting

Fundamental training in the Stanislavsky System as applied to performing realistic plays, including exercises, improvisation, & scene work. Restricted to graduate students & qualified undergraduates.

Credits: 3

THE 7110: Script Analysis

Examination of the sociological, psychological and ideological circumstances of modern and contemporary American plays through a line-by-line breakdown of text to reveal the connection of action and characterization to theme. Restricted to Graduate students and qualified Undergraduates

Credits: 3

THE 7120: Dramaturgy-Classic

Introduction to production dramaturgy, examining dramatic literature and exploring theatrical practices from the fourth century B.C.E. to the beginning of the nineteenth century.

Development of research skills necessary for dramaturgical work. Restricted to Graduate students and qualified Undergraduates.

Credits: 3

THE 7130: Dramaturgy-Modern

Further studies in production dramaturgy, examining dramatic literature and exploring late-nineteenth- and twentieth-century theatrical practices (Eastern and Western). Development of research skills necessary to prepare dramaturgical materials designed to support production. Restricted to Graduate students and qualified Undergraduates.

Credits: 3

THE 7140: Dramtc Vis & Frm Classic

Study of the radical juxtaposition of contrasting plays from different countries (Eastern and Western) and different eras (classic orientation) in the context of dramatic theory and criticism.

Credits: 3

Prerequisites:

(THE 7110 or THE 8039) and (THE 7120 or THE 8504) and (THE 7130 or THE 8501)

THE 7150: Dramtc Vis & Frm Modern

Study of the radical juxtaposition of contrasting plays from different countries (Eastern and Western) and different eras (modern orientation) in the context of dramatic theory and criticism.

Credits: 3

Prerequisites:

(THE 7110 or THE 8039) and (THE 7120 or THE 8504) and (THE 7130 or THE 8501)

THE 7200: Production Practicum I

Significant & responsible participation in the department production program.

THE 7210: Production Practicum II

Significant & responsible participation in the department production program.

THE 7220: Production Practicum III

Significant & responsible participation in the department production program.

Theology and Religious Studies

THL 1000: Faith, Reason, and Culture

Study of Christianity with a particular focus on Roman Catholicism, animated by Augustine's concern to relate Christian faith, reason and human culture, using various disciplinary approaches within the fields of theology and religious studies.

Credits: 3

THL 1500: Spirituality & Healing Arts

Discovery of practical spirituality through engaging select contemplative practices; deepening of individual spirituality and the discovery of the presence of God in practicing healing arts; exploration of connections with self, and patient, care; particular attention given to Christian contemplative traditions.

Credits: 3

THL 2050: Old Testament Survey

Critical analysis of Old Testament texts. Historical and archaeological focus with attention to theory and practice of exegesis (text, source, form, redaction, literary, narrative, rhetorical methods). Emphasis on the structure, historical development continuing vitality of texts and their contribution to the Old Testament teaching concerning Creation, Covenant, Ten Commandments, Exodus, Conquest, Prophets, apocalyptic literature, etc.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1850 :D- or HON 1827 :D-

THL 2100: Genesis to Judges

Critical analysis of Genesis through Judges. Historical and archaeological focus with topics including Creation, Flood, Abraham and Sarah, Isaac and Rebekah, Moses, Exodus, Covenant, Joshua, the judge Deborah, Samson and Delilah and others with social, political and religious life situations of these.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1850 :D- or HON 1827 :D-

THL 2200: Hebrew Prophets

Isaiah, Jeremiah, Ezekiel and "the 12"; the meaningfulness of the Prophets in today's world; Hebrew Wisdom Literature; influence of Egyptian and Greek culture. Prerequisite: Introductory bible course or permission of instructor

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1850 :D- or HON 1827 :D-

THL 2300: New Testament Survey

Critical analysis of New Testament texts; structure, meaning historical development, continuing vitality and application; introduction to transmission of traditions, formation of New Testament canon, use of textual, source, form, redaction, and literary methods.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 2310: Synoptic Gospels

Critical analysis of Matthew, Mark and Luke; structure, meaning, historical development, continuing vitality and application; use of textual, source, form, redaction and literary methods

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1850 :D- or HON 1827 :D-

THL 2420: Women in the Bible

Analysis of stories about women in the Bible: traditional and feminist readings examined; use of textual, source, form, redaction and literary methods.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 2460: Bible and Environment

Exploration of biblical perspectives on the environment through a variety of key characters and their relation to the land and other creatures. Attention to historical treatment of the ecology in Christian and Jewish theology and engagement of contemporary ecological issues.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1825 :D- or HON 1827 :D- or HON 1850 :D-

THL 2470: New Testament Ethics

Exploration of New Testament ethical traditions.

Credits: 3

THL 2480: New Testament Spirituality

Study of New Testament spiritual writers and traditions.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 2490: Themes in Biblical Studies

Interdisciplinary approach to biblical texts. Critical exegesis of biblical texts.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 2500: Themes Ancient Christianity

Credits: 3

THL 2525: Themes Medieval Christianity

Credits: 3

THL 2550: Themes Modern Christianity

Modern Christian writings, controversies, and events.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 2590: Themes Historical Theology

Selected topics in historical theology.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 2750: Augustine: Then and Now

Exploration of connections between our time and culture and Augustine's time and culture; study of select sermons and letters of St. Augustine; comparison and contrast of 'snapshots' of moments in Augustine's experience with 'snapshots' from the 3rd millennium.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 2760: Augustine's Influence & Legacy

Exploration of Augustine's influence on western theology - the nature of the human being, the existence of human freewill, the nature of human sexuality, the nature of grace, the role of Christ as Savior, the extent of God's salvific will for humanity.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 2780: Christianity in History

The emergence, growth and transformation of Christianity from its origins in the eastern Mediterranean to its worldwide expansion. Role of Christian doctrinal and institutional developments in the emergence of Western societies. Ways in which Christian symbolism and ritual have shaped the lives of ordinary Christians.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1825 :D- or HON 1827 :D- or HON 1850 :D-

THL 2900: Themes U.S. Catholicism

Specialized treatment of particular topics in this field; see announcement on Department website @ www1.villanova.edu/villanova/artsci/theology/undergrad.html

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 2910: Themes Global Catholicism

Specialized treatment of particular topics in this field; see announcement on Department website @ www1.villanova.edu/villanova/artsci/theology/undergrad.html

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1825 :D- or HON 1827 :D- or HON 1850 :D-

THL 3100: Christian Anthropology

The relationship between God and the human person from a variety of view points: human origins; the purpose of life; the problem of evil and the human condition; salvation as divinization - insights and approaches of recent writers.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 3200: Understanding Jesus

The historical Jesus and questions of method; christologies of the early Christian sources and councils; the later tradition of Christological reflection; contemporary trajectories.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 3250: Problem of Evil

Formulations of the problem and historical attempts to solve it.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1825 :D- or HON 1827 :D- or HON 1850 :D-

THL 3310: Christian Practices of Beauty

Exploration of Christian practices of beauty as prophetic resistance to dominating consumeristic and technocratic tendencies of trans-Atlantic culture. Investigation of theology of the icon in the Eastern Orthodox tradition; liberative-aesthetic praxis of Latin American liberation theology; and emergent ecological theology.

Credits: 3

THL 3400: Sacraments

History of Christian sacraments; sacraments as celebrations of life in God; theology of worship as fulfillment of being human; present and future shapes of Christian liturgy; applications to particular sacraments, e.g., baptism, reconciliation, eucharist.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 3450: Pastoral Care of the Sick

Treatment of theological understanding of the sacrament, anointing of the sick. Examination of primary texts on pastoral care from the Roman Catholic Church, and of the spirituality of caregivers. Pastoral-theological exploration of entire range of care provided to the ill and dying.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 3510: Marriage in the Christian Trad

Christian marriage in the third millennium; scriptural, historical, legal, sacramental, and moral issues.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1825 :D- or HON 1827 :D- or HON 1850 :D-

THL 3550: Presence and Absence of God

Thesism and the atheistic critiques of the nineteenth and twentieth centuries; the problem of God in western culture; contemporary retrieval of the doctrine of God as Trinity.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1825 :D- or HON 1850 :D-

THL 3600: Liturgy, Cultures, and Justice

Study of historical development of Christian worship and prayer, from its roots in Jewish and early Church thought and practice to liturgical reforms of the twentieth century. Attention to cultural influences on liturgy and Christian understanding of connection between worship and justice.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 3740: Liberation Theologies

Theologies emerging from specific struggles for liberation in Latin American, Africa, Asia, and North America; their context, content, and critique.

Credits: 3

Prerequisites:

THL 1051 :D- or THL 1000 :D- or THL 1050 :D- or HON 1827 :D- or HON 1053 :D- or HON 1003 :D- or HON 1850 :D- or HON 1825 :D-

THL 3760: Faith, Identity, and Calling

Systematic reflection on "big questions" about discovering life as journey and "work" as calling in conversation with writings in the Western traditions - ancient Greek poetry, Christian wisdom, contemporary fiction, memoirs. Requires sharing faith experiences - or their absence and doubt.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 3790: Themes Theological Studies

Exploration of issues of theological nature.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 3850: Theology of Ministry

Historical, theological and biblical foundations of Christian ministry. Exploration of the meaning of "call" or "vocation". A practicum component will enhance the academic exploration of ministry.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1825 :D- or HON 1827 :D- or HON 1850 :D-

THL 3900: Leadership for Ministry

Exploration of scriptural foundations for ministry, leadership styles and the spirituality of ministry. Geared toward students who either are presently working in ministerial settings on campus or those who desire to do so in the future. Includes supervised practicum.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 4100: Catholic Ethics

Development of post-Vatican II Catholic ethics. Focus on topics of contraception, economic justice, natural law theory, the Magisterium's teaching authority; also on the ethics of Jesus, environmentalism, technology, and agriculture.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 4200: Ethics of Life and Death

Explorations of selected issues in biomedical ethics (e.g., abortion, euthanasia).

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 4250: Global Poverty and Justice

Promoting equitable, sustainable development: Challenges and choices; Colonialism, trade, aid, investment, population, consumption, militarism, race and gender equality, ecology.

Credits: 3

Prerequisites:

THL 1000 :D- or THL 1050 :D- or THL 1051 :D- or HON 1003 :D- or HON 1053 :D- or HON 1825 :D- or HON 1827 :D- or HON 1850 :D-

THL 4320: Markets and Morality

Analysis of market economies - do they promote or stifle human welfare, freedom, and the common good? What does Christian discipleship require in the marketplace? Use of sources in Christian ethics, Catholic social thought, economics, and other disciplines to answer these questions.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 4330: Christian Environmental Ethics

Examine foundational theological issues and major christian thinkers on the environment; in-depth study of synthetic chemical, agriculture, and treatment of animals; and weekly class discussions on various practical topics in environmental ethics.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or THL 1051 :D- or HON 1003 :D- or HON 1053 :D- or HON 1825 :D- or HON 1850 :D- or HON 1827 :D-

THL 4360: Option for the Poor

Study of preferential option for the poor as defined in Catholic Social Teaching. Case studies of individuals and movements engaged in struggle for justice and rooted in Christian Tradition. Illumination of structural and systemic nature of poverty and inequality.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1825 :D- or HON 1827 :D- or HON 1850 :D-

THL 4480: Introduction Biomedical Ethics

Development of tools for critical analysis of biomedical ethical issues. Reflection on ethical issues in society and personal lives. Focus on a distinctively Catholic Christian approach to these matters.

Credits: 3

Prerequisites:

THL 1050 or THL 1000 or HON 1825 or HON 1003 or HON 1053 or THL 1051 or HON 1827 or HON 1850

THL 4490: Themes Christian Ethics

Select topics in Christian ethics.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1825 :D- or HON 1827 :D- or HON 1850 :D-

THL 4500: Augustinian Spirituality

Study of spirituality of Augustine and of Augustinian spiritual writers and traditions.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 4550: The Contemplative Tradition

Exploration of classical Christian teachings on silent prayer and meditation. Focus on both the theoretical understanding of the ancient practice of contemplation and its practice in daily life. Interdisciplinary approach through reading ancient Christian and contemporary authors.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 4700: Spirituality and Technology

Reflection on living in a "technologized" world. Consideration of the ways in which Christian theology and spirituality might serve as a resource for society. Of particular importance are Christian ideas about God, creation and the spiritual practice of "detachment."

Credits: 3

THL 4990: Themes in Spirituality Studies

Study of Christian and/or non-Christian spiritual voices, movements, traditions or themes (western or non-western, local or global) in ancient, medieval, early modern, modern, or contemporary times. Exploration of relationship to theology, faith, culture, and practice.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1825 :D- or HON 1827 :D- or HON 1850 :D-

THL 5000: Themes in Religion

Exploration of the evolution and development of some central themes or concepts in the academic study of religion such as Religion and Visual Culture; Religion, Violence and Conflict; Religion and Politics; Religion and Law; Study of myth and/or ritual; interreligious dialogue.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 5100: Heritage of Judaism

Development of the religious tradition of the Jewish people; the Torah, the Talmud and other commentaries; Jewish ideals in ethnic literature.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 5150:**Islam:History,Thought,Culture**

Islam: history and development; beliefs and rituals; sects and intellectual movement.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 5160: Islamic Mysticism

Islamic Mysticism: sources; development and principles; contribution and influence.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 5170: Islamic Philosophy & Theology

Islamic relationalism and the crisis of moderate and conservative Muslim theologians; the dialectical struggle between Islamic philosophy and theology.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1850 :D- or HON 1827 :D-

THL 5180: Islamic Political Thought

Integration of Islamic philosophy, religion, political science and history; the state in pre-Islamic Arabia, the Qur'anic concept of the state, the crisis of succession, Muslim theorists, revival and reform.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 5200: Religion in Russia

The history, mind, spirit and life of Russia Orthodoxy; its influence in its adherents in the modern, complex and pluralistic world.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1825 :D- or HON 1827 :D- or HON 1850 :D-

THL 5270: Religion in India and SE Asia

The doctrinal and social history of the religious traditions of India and Southeast Asia: Hinduism, Buddhism, Jainism, Islam and Sikhism; the role of these religious in contemporary Indian and Southeast Asian societies.

Credits: 3

Prerequisites:

HON 1825 :D- or THL 1000 :D- or THL 1050 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 5280: Religion in China and Japan

The doctrinal and social history of the religious traditions of East Asia: Confucianism, Taoism, Shinto, Buddhism; popular religion and state cults; the role of these religions in contemporary Asian societies.

Credits: 3

Prerequisites:

HON 1825 :D- or THL 1000 :D- or THL 1050 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 5285: Buddhist Tradition

The doctrinal and social history of Buddhism: its origins in India, its current forms in Central, East and Southeast Asia; the role of Buddhism in contemporary Asian societies.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 5290: Hindus and Christians in India

A multi-disciplinary examination of the two-thousand-year history of encounter between Christians and Hindus, highlighting areas of commonality, difference, exchange, interaction and identity formation. Exploration of historical modes of engagement: antagonism and distrust, reciprocity and mutual benefit, dialog, fulfillment, and hybridity.

Credits: 3

THL 5400: Science & Religion

The interaction of science and religion from Galileo to the contemporary period. Theological implications of recent developments in the natural sciences.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1850 :D- or HON 1827 :D-

THL 5410: Theology and Film

Exploration of connection between theology and film and of the ways that filmmakers "do" theology. Survey of the literature on the subject and analysis of films and filmmakers that have demonstrated theological sensitivity and/or interest in theological questions and themes.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1825 :D- or HON 1827 :D- or HON 1850 :D-

THL 5420: Modernity and Crisis of Faith

Analysis of so-called "New Atheism" through the lens of Soren Kierkegaard. Exploration of Kierkegaard's diagnosis of this "crisis of faith" and his understanding of the religious life.

Credits: 3

THL 5450: Religion, Art, and Science

Study of religion, art, and science as aspects of persons and cultures. Exploration of theology and ritual as they relate to societies, cultures or persons; and the artistic (or aesthetic) dimension of religion, the scientific, and the personal.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 5800: Religion and Literature

Religious attitudes and experience in contemporary literature.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 5820: Themes Religion in America

Specialized treatment of particular topics in this field; see announcement on Department website @ www1.villanova.edu/villanova/artsci/theology/undergrad.html

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 5850: Women in Rel & Society

Examination of women's experiences in religious traditions with special emphasis on Christianity.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 5990: THM: Ecum & Interrel Studies

Courses in ecumenical and interreligious or interfaith studies. Examination of principles and practices of academic and non-academic forms of dialogue between religions and between Christians.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 5999: Themes Faith and Culture

Select topics on issues concerning the intersection of religion, society, and culture.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1825 :D- or HON 1827 :D- or HON 1850 :D-

THL 6000: Topics in Theology or Religion

Course work in theological or religious studies topics.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or HON 1825 :D- or HON 1003 :D- or HON 1053 :D- or THL 1051 :D- or HON 1827 :D- or HON 1850 :D-

THL 6001: Themes in Religious Studies

Themes in religious studies taken by Villanova students studying overseas.

Credits: 3

THL 6050: Internship

Supervised experience in an approved context (e.g., social service, teaching, etc).

Credits: 3

THL 6051: Internship

Supervised experience in an approved context (e.g., social service, teaching, etc).

Credits: 6

THL 6100: Service Learning Charity

Integration of action and critical reflection; U.S. poverty, hunger, and homelessness: its victims, roots, and remedies; Christian moral imperative to love the neighbor; service, advocacy and solidarity (15 hours of service required).

Credits: 3

Prerequisites:

Permission of instructor.

THL 6200: Service Learning Practicum

Credits: 1

THL 6300: Research Seminar

Research intensive seminar that satisfies a CLAS requirement for the Major. Introduction to research in THL/RST disciplines.

Credits: 3

THL 6400: Independent Study

Credits: 3

Prerequisites:

Permission of chairperson required.

THL 6500: Advanced Seminar

Special topic in theology that includes a research paper that critically integrates the student's study of the discipline of theology. Course is open to Theology Majors and Minors and Graduate students with the approval of the Director of Graduate Studies in Theology.

Credits: 3

Prerequisites:

THL 1050 :D- or THL 1000 :D- or THL 1051 :D- or HON 1053 :D- or HON 1825 :D- or HON 1827 :D- or HON 1003 :D- or HON 1850 :D-