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Introduction

MISSION STATEMENT

In an environment that fosters the free exchange of ideas, Lafayette College seeks to nurture the inquiring mind and to integrate intellectual, social, and personal growth. The College strives to develop students' skills of critical thinking, verbal communication, and quantitative reasoning and their capacity for creative endeavor; it encourages students to examine the traditions of their own culture and those of others, to develop systems of values that include an understanding of personal, social, and professional responsibility, and to regard education as an indispensable, life-long process.

PROFILE

Lafayette College was founded in 1826 by citizens of Easton, Pennsylvania, as an all-male liberal arts institution. Throughout its history, the College has continually shaped itself in ways that best serve its educational purpose, remaining supportive of the tradition of liberal art education while being responsive to changes and challenges of society and the times. For example, in 1838, it became one of the first colleges to implement a teacher-training program, thus recognizing the connections within education at all levels. In 1854, the College formed a mutually supportive association with the Presbyterian Church. In 1866, as industrialism was changing the Western world, it established courses in engineering, chemistry, and mining. At a local level, it acknowledged the educational needs of the Easton area by introducing a part-time evening degree program in 1953. More recently, as the role of women in society underwent redefinition, in 1970 the College, began coeducation to prepare both men and women to lead the nation into a new century. Today, Lafayette is an independent, coeducational, residential, undergraduate institution with a faculty of distinction and 2,400 full-time men and women students of high intellectual promise and diverse backgrounds. The student body is 50 percent men and 50 percent women.

The College's curriculum is distinguished by the rare combination, on an undergraduate campus, of degree programs in the liberal arts and in engineering. Students who come to Lafayette may choose among a range of disciplinary and interdisciplinary courses and pursue the Bachelor of Arts degree in 31 fields or the Bachelor of Science degree in nine fields of science and four fields of engineering. Those who pursue professional career preparation do so within programs rooted in and enriched by the liberal arts. Lafayette alumni/ae remain unusually active and supportive of the College and its goals.

Effective and challenging teaching is the first priority of the faculty both in the classroom and in a variety of independent and collaborative learning experiences. Easton's proximity to New York City and Philadelphia helps students extend their learning experiences, as do Lafayette's full co-curricular intellectual, cultural, athletic, and social programs. Faculty research and scholarship are encouraged and supported in the belief that such professional involvement extends the individual faculty member's intellectual resources, strengthens and complements teaching effectiveness, facilitates student/faculty research, and contributes to the scholarly and professional communities outside the College.

In addition to a campus of great beauty, Lafayette offers a well-equipped physical plant. Its programs are supported by a library with more than 500,000 volumes and an extensive array of electronic resources; modern computer facilities and laboratories accessible to students; a thriving Center for the Arts; a large College Center for dining and other communal activities; an athletic complex compatible with its intercollegiate Patriot League commitment and its extensive intramural and recreational program; two chapels serving a variety of religious commitments; and a diversity of living situations. Lafayette's endowment per student is in the top 2 percent of all institutions in the country.

VISION

In the coming decade, Lafayette expects to strengthen its position among liberal arts colleges and engineering programs of the first rank; through judicious commitment of its considerable resources, it seeks to advance the quality of its students, its faculty, and its programs. Lafayette will continue to enroll students who show evidence not only of academic achievement but of intellectual curiosity, and who show promise of becoming engaged citizens within and beyond the College community. It will continue to recruit and support a faculty of teachers / scholars of high quality who see undergraduate teaching as their primary goal and who are committed to scholarship and to an active professional life. Lafayette will continue to shape its academic program with the goal of assuring that a clear, consistent, and demanding curriculum is in place for all students, requiring study in the arts, the sciences, and technology, and encouraging such study beyond the introductory level. In addition, it will continue to work toward greater integration of A.B. and B.S. programs so that all students may be the beneficiaries not only of specialized inquiry but of connected, interdisciplinary inquiry as well. And it will continue to develop a curriculum that furthers the traditional values of a liberal education while remaining responsive to emerging societal needs. As part of its commitment, Lafayette will seek ways to assure that ethical studies are a regular component of each student's course of study.

The College will strengthen its honors and independent study programs, with the goal of engaging more students in scholarly projects and involving more faculty and students in collaborative learning. Individual attention to students and faculty-student interaction outside the classroom, always goals of the College, will be encouraged through an increasingly favorable student-faculty ratio and small class size. At the same time, the College, understanding the value of exposure to other cultures, will continue to increase opportunities for students to study abroad and will continue to work in other ways to internationalize the campus.

Because Lafayette knows the potential for learning and growth outside the academic program, it will continue to nurture a campus environment that stimulates and nourishes students both as individuals and as members of a community. With the Farinon College Center and the Williams Center for the Arts as hubs of activity, the College will foster an atmosphere characterized by a diversity of opportunities for participation, volunteer service, and student leadership. It will offer an expanding array of living options that encourage healthy relations between women and men and provide an environment that encourages personal growth. It will also continue to increase opportunities for students of color and to work to achieve greater racial and ethnic diversity among students, faculty, and staff.

Members of the Lafayette community have always believed in working together to create a College that they and others value;

their collective commitment for the coming years is to extend and enhance the value of the Lafayette experience and the prestige of the Lafayette College degree.

HISTORY

On Christmas Eve 1824, the Easton Centinel carried a notice calling upon residents of Northampton County "friendly to the establishment of a COLLEGE at Easton" to meet three days later at White's Hotel on Center Square. Led by James Madison Porter, a prominent local lawyer; Joel Jones, another lawyer and graduate of Yale; and Jacob Wagener, a local miller's son notable for his interest in mineralogy and botany, the assembled citizens worked out a plan for a college "combining a course of practical Military Science with the course of Literature and General Science pursued in the Colleges of our Country." Because the country was then in a fever over the farewell tour of the aged Marquis de Lafayette, whom Porter had met in Philadelphia the previous August, the founders voted to name their new college for the French hero of the Revolution as "a testimony of respect for (his) talents, virtues, and signal services… the great cause of freedom."

The governor of Pennsylvania signed the new college's charter on March 9, 1826, but getting the charter proved to be considerably easier than launching the College. In 1832, the Rev. George Junkin, a Presbyterian minister, agreed to move the curriculum and student body of the Manual Labor Academy of Pennsylvania from Germantown to Easton and to take up the Lafayette College charter. On May 9, 1832, classes in mathematics and the classics began in a rented farmhouse on the south bank of the Lehigh River, where the 43 students labored in the fields and workshops to earn money in support of the educational program.

In their original petition, the planners of the College had cited mathematics as an example of their educational philosophy. "Such branches will be selected and so pursued, as will not only discipline the mind, and induce habits of patient investigation, but also directly subserve the purposes of life." That sound principle animated much of the subsequent curricular development at Lafayette as, indeed, it does today.

The founders noted in 1824 that "the language most neglected in our seminaries of learning is the English." In 1857 Lafayette became the first American college to establish a chair for the study of the English language and literature, with emphasis on philology. Francis A. March, its first incumbent, achieved international fame for his work in establishing English as a pivotal subject in the liberal arts curriculum.

Similarly, the founders complained that "civil engineering has of late become a very prominent branch of education, and what is remarkable, not a College in our country (if we are correctly informed) has made it a part of their course." In 1866 Lafayette secured funds from Ario Pardee, a mining magnate and industrialist, to establish a new course in science and engineering, one of the first in any liberal arts college. The resulting union of arts, sciences, and engineering remains perhaps the most unusual feature of the Lafayette curriculum.

In 1832 the College acquired nine acres of land on an eminence across Bushkill Creek from Easton. Formally named "Mt. Lafayette," the elevation soon became more familiarly known as "College Hill." On its summit in 1834 rose the first of the College's own buildings, on a site now incorporated into South College. Today the campus comprises about 100 acres of land and more than 50 buildings, as well as various outlying properties and structures on College Hill and elsewhere.

Like the physical plant, enrollment grew steadily. By the turn of the century it stood at about 300, passed the 500 mark in 1910, and reached 1,000 during the 1920s. It more than doubled again as returning veterans swamped the College after World War II. As the GI tide ebbed, the enrollment dropped back to about 1,500 men.

The addition of women to the student population - they now make up about 50 percent of the student body - raised the total enrollment to about 2,100. Today, Lafayette enrolls about 2,400 students.

LAFAYETTE TODAY

Lafayette College focuses exclusively on undergraduate programs. It grants the Bachelor of Arts degree in 31 established major fields and the Bachelor of Science in nine fields of science and four of engineering. Interdisciplinary majors have been established in Africana Studies, American Studies, Biochemistry, International Affairs, A.B. International Studies/B.S. Engineering, Mathematics and Economics, Neuroscience, and Russian and East European Studies. In addition, a number of departments have joined others in offering coordinate majors. Many departments also permit a minor in the field. A five-year, two-degree plan is also available.

The Board of Trustees is the governing body of the College, and it holds title to the College's properties, manages and allocates its funds, determines the broad policies under which programs are offered, and selects both its own membership and the President of the College, who is the chief executive officer. Under the Statutes of the College, the faculty determines the courses of study, requirements for admission, and other academic regulations, subject to approval by the Board of Trustees.

Lafayette College is a member of the Lehigh Valley Association of Independent Colleges (LVAIC), which also includes Cedar Crest College, DeSales University, Lehigh University, Moravian College, and Muhlenberg College. The consortium offers opportunities for cross-registration under certain conditions, and promotes cooperation in library resources, technology initiatives, and some academic programs.

DIVERSITY AND INCLUSIVENESS STATEMENT

Lafayette College is committed to creating a diverse community: one that is inclusive and responsive, and is supportive of each and all of its faculty, students, and staff. The College seeks to promote diversity in its many manifestations. These include but are not limited to race, ethnicity, socioeconomic status, gender, gender identity, sexual orientation, religion, disability, and place of origin.

The College recognizes that we live in an increasingly interconnected, globalized world and that students benefit from learning in educational and social contexts, in which there are participants from all manner of backgrounds. The goal is to encourage students to consider diverse experiences and perspectives throughout their lives. All members of the College community share a responsibility for creating, maintaining, and developing a learning environment in which difference is valued, equity is sought, and inclusiveness is practiced.

It is a mission of the College to advance diversity as defined above. The College will continue to assess its progress in a timely

manner in order to ensure that its diversity initiatives are effective.

ACCREDITATION

Lafayette College is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools, 3624 Market St., Philadelphia, PA 19104; (215) 662-5606. The Commission on Higher Education is an institutional accrediting agency recognized by the United States Secretary of Education and the Council for Higher Education Accreditation. The Chemical Engineering Program, Civil Engineering Program, Electrical and Computer Engineering Program, and Mechanical Engineering Program are accredited by the Engineering Accreditation Commission of the ABET, http://www.abet.org. The Bachelor of Science program in Computer Science is accredited by the Computing Accreditation Commission of the ABET, http://www.abet.org. The Bachelor of Science program in chemistry and, under certain conditions, the Bachelor of Arts in chemistry meet the requirements of the American Chemical Society, making graduates of those programs eligible for membership in the Society immediately upon graduation.

Academic Programs

DEGREES

Bachelor of Arts
Bachelor of Science
Bachelor of Science in Engineering

Lafayette College offers the Bachelor of Arts degrees in 36 established major fields and the Bachelor of Science in nine fields of science and four fields of engineering.

GRADUATION REQUIREMENTS

Graduation Requirements for All Students

An overall grade-point average of at least 2.00 is required for graduation. Considered in determining the cumulative average are courses taken at Lafayette or at other member colleges in the Lehigh Valley Association of Independent Colleges (LVAIC) under the cross-registration agreement or affiliated study abroad programs. Students must complete an approved major program with an average of at least 2.00 in courses taken in the major. In the majority of majors, this normally includes all courses in the major subject area and excludes collateral/co-curricular courses. Interdisciplinary majors and programs are exceptions and will include multiple subject areas as determined by the major/program. Questions should be referred to the Registrar's Office.

Students must complete at least 32 course credits for the A.B./B.S. Science degree and at least 36 course credits for the B.S. Engineering degree, with at least one-half of the courses for the degree and the major being completed at Lafayette. Some departments may have more restrictive transfer/study abroad policies regarding credits applied towards the major.

The senior year must be completed in full-time residence at Lafayette. "Fulltime" is defined to be a minimum of three courses per semester.

Students are responsible for determining that they have satisfied all requirements for graduation. To participate in the commencement ceremony, students must have completed all degree requirements.

Academic Divisions

The College is divided into four academic divisions with program membership as listed below. The divisional membership of a specific program needs to be considered when selecting courses to satisfy the Common Course of Study as required. Departments and programs not listed below are considered Interdisciplinary.

Humanities:

Art
English
Film and Media Studies
Foreign Languages and Literatures
Music
Philosophy
Religious Studies
Theater

Social Sciences:

American Studies
Anthropology and Sociology
Economics
Environmental Studies
Government and Law
History
International Affairs

Engineering:

Engineering Studies
Chemical Engineering (within the Department of Chemical and Biomolecular Engineering)
Civil Engineering (within the Department of Civil and Environmental Engineering)
Electrical and Computer Engineering
Mechanical Engineering

Natural Sciences:

Biology
Chemistry
Computer Science
Environmental Science
Geology and Environmental Geosciences
Mathematics
Neurosciences
Physics
Psychology

The Common Course of Study

The Lafayette Common Course of Study (CCS) was revised by the faculty in 2012 to create an all-inclusive core. In addition, it is our first outcomes-based curriculum and so includes goals that will be assessed on a continuing basis. The result is an organic general education program that will evolve and change as we review how well we are accomplishing what we aspire to teach our students.

While this curriculum comprises fewer requirements than we have had in the past, we intend that these be concentrated and focus on disciplinary experiences for our students. Consequently, not every course in the catalog necessarily fulfills some CCS requirement. For example, the redesigned Global/Multicultural and Values requirements will be fulfilled by courses that address specifically those issues rather than more general courses that simply include Global and Multiculturalism and Values concerns.

First-Year Seminar, taken in the fall semester of the first year, is designed to introduce students to intellectual inquiry by engaging them as thinkers, speakers, and writers.

Distribution Requirements, require the completion of: one course with a Humanities (H) designation, one course with a Natural Science with lab (NS) designation, one course with a Social Sciences (SS) designation; and two additional courses in two different divisions outside the student's home division. Courses may be selected from Engineering, including courses designated as Science and Technology in a Social Context (STSC); Humanities; Natural Science w/lab or Natural Science w/STSC; and Social Sciences.

Courses designated as Science and Technology in a Social Context (STSC) are courses in science or engineering without a lab in which students will address a scientific or technological issue of timely importance.

Quantitative Reasoning Requirement (Q), is to be satisfied by one course in which students learn to use mathematical methods to solve problems, represent and interpret quantitative information, and critically analyze mathematical results.

A Writing Requirement (W), is to be satisfied through the First-Year Seminar and three additional W-designated courses that use process writing methods with at least one course in the major and at least one course outside the major.

Global and Multiculturalism (GM), requires the completion of two separate courses, a GM1 and a GM2, that examine the structure of identity, diversity, and differences in domestic and global contexts.

Values Requirement (V), is to be satisfied by a course where students construct and evaluate answers to questions of moral and political concern.

Elementary Proficiency in a second language, requires the completion of a year (or less depending on the entry level, 102 or higher) of study of a language. Students may be exempted via advanced placement credit or testing.

Courses can be used to meet more than one requirement, but students must complete at least seven unique courses, the FYS, the five distribution requirements, and the quantitative reasoning requirement.

Policy on Statute of Limitations for Students

All graduation requirements shall normally be met in a time period not to exceed six years following admission to junior status. In the case of hardship, a petition for one additional year may be submitted to the Academic Progress Committee after consultation with the Dean of Advising and the major adviser or department head. Ordinarily, no extensions will be granted beyond the seventh year.

1. To meet expectations of appropriate and current preparation for upper-level work within the major program, a time period not to exceed five years shall be permitted between the completion of a prerequisite course (including transfer credit) and the initiation of the required course for which it is specified. Students who wish to appeal this rule may file a petition to the Academic Progress Committee after having consulted with their major department.

2. If a part-time student fails to maintain minimum progress (two courses in the curriculum successfully completed in 12 months), the student's progress will be reviewed by the Academic Progress Committee, who may then recommend to the Dean of Advising that the student be required to withdraw. Reinstatement to the program is not automatic and will depend on evidence that a student will be able to make reasonable progress in subsequent work. An interview will be required before reinstatement. If a student withdraws from the program for any reason (academic or personal), she or he must meet with the Dean of Advising staff and her or his departmental academic adviser or academic department head before reinstatement. They will make a recommendation to the Dean of Advising concerning reinstatement.

3. If a student must repeat a passing course, both courses will appear on the permanent record and grades for both will be included in the cumulative grade point average. Course credit will only be awarded once.

THE MAJOR

Petitions for entrance into the junior class and to major in a particular department, departments, or interdisciplinary program are normally submitted at the start of the second semester of the sophomore year at a time announced by the Dean of the Advising.

Double Majors

Candidates for the Bachelor of Arts degree may elect two major programs. Requirements common to both majors will count for both majors, with no more than four courses counted toward both majors.

Individualized Major

Students may find that the usual options for majoring or minoring do not meet their special interests or needs. Recognizing this, the College provides a unique opportunity for students to develop an individualized major within the A.B. program based upon their special interests, talents, experiences, and life objectives.

An individualized major combines courses in two or more departments based upon a theme articulated by the student in consultation with one or more faculty members. Examples of individualized majors have included psychobiology, political philosophy, and scientific journalism.

Once the individualized major has been designed, the student petitions the Academic Progress Committee for final approval of the major no later than the end of the sophomore year. The petition must demonstrate a logical coherence of course selection, including a capstone experience, and must be approved by three faculty members who represent the departments involved. Students are invited to speak with the Registrar if they have questions concerning this opportunity.

Change of Curriculum or Major

A student desiring to change from one curriculum major to another must petition the Academic Progress Committee. Petition forms are available in the Registrar's Office or online. Students may direct questions to the Registrar, who is Secretary of the Academic Progress Committee. Students may also check on their progress toward graduation requirements in the Registrar's Office.

THE MINOR/CERTIFICATE

Students may elect a minor/certificate program in addition to their major. A minor consists of a coherent sequence of courses, usually five or six in number, approved by the student's

designated minor adviser. A minor program may be departmental or interdisciplinary in nature. An individualized minor is not available. Students must complete the minor/certificate program with an average of at least 2.00 in courses taken in the minor. In addition at least one-half the courses must be completed at Lafayette.

Normally, a student must petition for a minor program before the end of the second semester of his or her junior year. No more than three courses required (a) for the major or (b) the Common Course of Study requirements may be counted toward the minor.

Courses required for the major are defined as those specifically prescribed for the degree. Students electing a minor are encouraged to choose a minor in a different division from that of their major. No student may elect more than one minor.

FIVE-YEAR, TWO-DEGREE PROGRAMS

Students may petition the Committee on Academic Progress for permission to pursue a five-year, two-degree program leading to the Bachelor of Arts and the Bachelor of Science degrees in two fields of study. Two-degree candidates are required to complete the prescribed course of study for the particular B.S. degree, the requirements for the major and the Common Course of Study, and other general requirements for graduation. Such a program requires at least 40 course credits.

ATTENDANCE AND STANDING

Lafayette College uses a course unit system in computing progress toward the degree. This system is intended to emphasize mastery of subject matter, in contrast to the semester credit hour system, which measures achievement in terms of class time. A unit of instruction includes a combination of lecture, discussion, recitation, group and individual projects, and studio/laboratory work. Lafayette courses vary in the number of scheduled meeting hours. Courses scheduled for three hours of classroom/other instruction per week also include additional instructional activity, e.g. discussion sessions, attendance at lectures and performances, service learning, final examinations, fieldwork, etc.

The normal course of study in a four-year program requires completion of 32 courses over eight semesters with at least four courses per semester. Each course unit is equivalent to four semester credit hours. The Bachelor of Science in Engineering program requires completion of a total of 36 or 38 courses with at least five courses per semester after the first year.

Lafayette will consider a student's progress toward a degree acceptable if he or she has earned at least the following number of course credits by the end of the second semester:

Minimum A.B ./ B.S. Science

	First Semester	Second Semester
First-Year Student	3	6
Sophomore	10	14
Junior	18	22
Senior	27	32

Normal A.B ./ B.S. Science

	First Semester	Second Semester
First-Year Student	4	8
Sophomore	12	16
Junior	20	24
Senior	28	32

Minimum B.S. Engineering

	First Semester	Second Semester
First-Year Student	3	6
Sophomore	11	16
Junior	21	26
Senior	32	38

Normal B.S. Engineering

	First Semester	Second Semester
First-Year Student	4	8
Sophomore	13	18
Junior	23	28
Senior	33	38

Three courses are considered the minimum load for full-time standing.

GRADES

Lafayette uses a five-letter plus / minus grading scale to evaluate and report a student's academic performance. The course letter grade of "A" indicates excellent, "B" indicates good, "C" indicates satisfactory, "D" indicates passing, and "F" indicates failure. Grades of C-, D+, D, and D-, though passing, fall below the minimum grade point average required for graduation. The following system of grade points and letter codes is used in computing grade point averages. All courses considered in determining the grade point average are listed in the student's permanent record. Starting with the class of 2001, a grade point average of at least 2.00 both overall and in the major is required for graduation.

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

INC	INCOMPLETE: course requirements not completed; no credit (temporary grade, given only in extenuating circumstances)
P	PASS: course credit received but no effect on average
WD	WITHDRAWAL: with permission of the Academic Progress Committee; no credit and no effect on average
AU	AUDIT: no credit and no effect on average
NG	NO GRADE (temporary)
NF	NO GRADE (permanent): used in cases of academic dishonesty; carries value of the grade of "F" (zero quality points) in computing semester and cumulative averages
CR	CREDIT: course credit received
CRX	CREDIT course credit may not be used toward minimum degree requirement
NC	NO CREDIT: no course credit received

Incompletes

According to faculty policy, an Incomplete is given only when the student has been unable to complete the work of the course for some reason outside the student's control and has been completing passing work in the course up to that point. When an Incomplete is given, the faculty member should indicate to the Dean of Advising or the Registrar the reason for the Incomplete and give an assessment of the student's work to date.

The student must make arrangements with the instructor as to the timing and manner by which the Incomplete is to be satisfied.

Normally, an Incomplete is to be made up by the end of the second week of the following semester. The instructor may specify a longer period of time after consultation with the Dean of Advising, but all work must be completed and a grade assigned no later than the first day of classes of the second semester of attendance subsequent to the Incomplete. If the instructor specifies a period longer than two weeks, the reason for the longer period and the date established for the completion of the outstanding coursework must be stated in writing to the student with copies to the student's adviser, to the Dean of Advising, and to the Registrar.

Unless the coursework is completed and a grade assigned by the instructor by the end of the specified period, the Registrar will automatically replace the Incomplete with an F.

A student with more than two pending Incompletes will not be permitted to begin a new academic year.

Midterm Grades

Grades of "D" and "F" are normally reported to the Academic Progress Committee, the adviser, and student at midterm to identify and help students encountering academic difficulty. They are not recorded on the student transcript. Students receiving midterm grades should discuss approaches for improvement with their instructors, their advisers, or a dean in the Office of the Dean of Advising.

Academic Probation

Students who are not making satisfactory progress may be placed on academic probation by the Academic Progress Committee. Factors such as term averages, cumulative averages, and graduation progress are among the criteria used in evaluating students, but each case is considered individually. The Committee will typically review all first-year students with a 1.80 GPA or less and all other students with under a 2.00 GPA. When a student is placed on probation, the probationary period is in effect from the date of the action until the end of the following semester.

Students on academic probation may not take more than two unexcused cuts in any course. A student on academic probation may be required to withdraw unless during the next semester that student shows improvement sufficient to demonstrate clear promise of eventual graduation, although a period of probation need not precede action requiring a student to withdraw. First-year students on academic probation may not hold office in student or social organizations, represent Lafayette College in any official capacity, or participate in fraternity or sorority new member education. A student who has not completed six courses will be regarded as a first-year student for purposes of probation.

Required Withdrawal for Academic Reasons

A student may be required to withdraw from the College at the end of any semester because of unsatisfactory progress. A student who is required to withdraw for academic reasons is not eligible for reinstatement for at least one semester. Reinstatement is not automatic; rather, it is dependent upon the student's demonstration of clear promise to eventually graduate. Reinstatement to the College may depend upon the space available in the class.

College-funded aid will be reinstated once the student has been readmitted and has submitted the required documents for financial aid consideration by the specified deadlines. Eligibility will be determined based on demonstration of need, filing by the deadlines and availability of funds. Students must meet Satisfactory Academic Progress Standards for eligibility for federal/state aid. For complete information regarding academic

progress and federal aid, got to admissions.lafayette.edu/financial-aid/

Disciplinary Suspension

When an individual fails to abide by academic and/or social regulations, or acts in a manner which brings discredit upon the College, the student is subject to disciplinary action which may involve probation or suspension from the College.

Leave of Absence

A student in good standing may apply to the Dean of Advising for a leave of absence effective immediately or at the end of a semester. Requests to return after a leave of absence should be directed to the Dean of Advising, who may require an interview prior to reinstatement. Reinstatement to the College may depend upon the space available in the class.

Transferring or Resignation from the College

Students who wish to resign from the College or transfer to another college should arrange to do so through the Office of the Dean of Advising. (See College policy on refunds.) Students who fail to report to the College and complete registration within two weeks after the beginning of any term will be considered as resigned and must request consideration for reinstatement from the Dean of Advising before returning to the College.

Transcripts

The Registrar's Office issues official transcripts through our secure online web page in Banner Self Service or via Transcripts on Demand. The Registrar's Office also releases unofficial copies of academic transcripts to major advisers and college officers who are concerned with the student's academic standing. The transcript may be examined by the student at any time in the Registrar's Office.

Academic Honesty

By College policy, the Dean of Advising and the Academic Progress Committee share responsibility for hearing cases of alleged academic dishonesty and for determining penalties when indicated. Individual faculty members are not empowered to take disciplinary action in the absence of due process as summarized in the Statement of Rights and Responsibilities of Students, which appears in the Student Handbook.

COURSE REGISTRATION

Course and hour schedules and other registration materials are issued by the Registrar's Office just prior to the registration periods. Students consult with their academic advisers to preregister for classes in November for the spring term and the on-campus Interim Session Program, and in April for the fall and summer terms. A student who fails to register within the scheduled periods will be subject to a late registration fee of $50 unless exception is granted by the Dean of Advising or the Registrar. Students who fail to register within the first two weeks of the semester will be regarded as resigned and must apply to the Dean of Advising if they wish to return.

In certain situations, such as outstanding financial obligations to the College or needing to comply with college and/or government requirements, registration for future semesters may be blocked. Students will be notified by email when a registration hold has been placed on the record.

Class Attendance

Class attendance is expected of all students because the lecture, the laboratory, and the discussion group are the formal basis of a college learning experience. Faculty members establish and maintain attendance requirements in their courses and must inform students and the Office of the Dean of Advising of those policies. Students are responsible for meeting class and examination schedules. Unwillingness to meet attendance obligations may result in a penalty, often failure in the course.

The following activities necessitating absence from class are normally considered excusable: College academic course activities such as field trips and scholarship activities, College varsity intercollegiate athletic competitions, health-related absences as verified by the College physician, family emergencies, and extraordinary situations as determined by the Office of the Dean of Advising. Students seeking Dean's excuses for planned absences are expected to provide professors with the dates and total number of proposed class absences as soon as possible and no later than the first day of classes in order for the faculty to determine whether or not the frequency of expected absences violates the pedagogical integrity of the class. In such cases, faculty may advise the student to withdraw from the class or be prepared to accept the academic penalty for such absences.

Students on academic probation may have no more than two unexcused absences from any course. Students on probation who do not meet their attendance obligation will be reported by faculty to the Office of the Dean of Advising. Any student with excessive or unexplained absences will also be reported to the Dean.

Please note that the College does not recognize airline schedules or other traveling plans as a legitimate reason for rescheduling final examinations. Please check the final exam schedule before making travel plans. This schedule is usually available by the fifth week of each semester, and students can obtain a copy from the Office of the Registrar.

Excessive Unexcused Absences

Class attendance is expected of all students because the formal basis of a college learning experience is the lecture, the laboratory, and the discussion group. Faculty members establish and maintain attendance requirements in their courses. Students are responsible for meeting class and examination schedules. Unwillingness to meet attendance obligations may result in a penalty, often failure in the course. If a student accumulates an excessive number of unexcused absences, as defined in the course syllabus, the instructor can request a formal review of this behavior by the Office of the Dean of Advising. Continued unexcused absences may result in failure or the student’s mandatory withdrawal from the course.

Withdrawal from Courses

During the first two weeks of each semester a student is permitted to drop a course without notation and replace it with another. From the end of the two-week period until the end of the eleventh week of the semester, students may withdraw from a course without penalty and with a "withdrawal" recorded on the transcript if approval is granted by the Academic Progress Committee. Ordinarily, approval will be granted, provided that

after the course deletion the student's schedule does not fall below three courses. A student who drops a course without Committee approval will fail the course.

If a petition to withdraw produces a roster of courses that falls below three course credits, the student must provide the Academic Progress Committee with a cogent educational rationale to justify the waiver of standard policy. A student must continue to attend all classes until the petition has been reviewed by the Committee.

In all cases, petitions to withdraw should include an indication of the means by which any deficiency incurred will be made up.

Repeating a Course

When a student fails and retakes a course, both grades are included in the student's Lafayette College transcript and the cumulative grade point average. With the exception of MATH 161 and MATH 162, only courses in which a student receives a failing grade may be repeated.

Pass/Fail Option

A junior or senior in good standing whose cumulative average is 2.00 or higher may, in each semester, take one course on a pass or fail basis, but in no case may a student take more than four pass/fail courses to be counted toward degree requirements.

Students must obtain the permission of the Academic Progress Committee before enrolling in a course for pass/fail credit. They must meet all the regularly stated prerequisites for admission to the course and all the course requirements, such as attendance, assigned work, and examinations.

The course must be outside the major or minor field of concentration and outside related courses as defined by the major department, and the pass/fail option may not be used for courses that are to be used toward satisfaction of the requirements for the Common Course of Study. Courses which are considered introductory in any field or which are designed specifically as exploratory courses for non-majors may not be taken for pass/fail credit.

The petition to the Academic Progress Committee must be submitted within, but not after, the first two weeks of classes. When the petition is submitted the student may indicate the minimum grade that they would accept in lieu of a P on the transcript. The instructor, who has not been informed which members of the class are under the option, will assign a regular letter grade at the conclusion of the course. If the grade received is at or above the minimum, it will be noted on the transcript and included in the calculation of the student's cumulative average. If the grade awarded is below the minimum acceptable grade, it will be awarded as a "P" and it will not be included in the calculation of the student's cumulative average. However, a failing grade (regardless of the student's choice of a "P" or a grade) received under this plan will be included in the student's cumulative average.

If a student drops a course with the pass/fail option after the term has begun, the option may not be used for another course during that term.

Students should be aware that many graduate and professional schools react unfavorably to pass/fail grades.

Course Overloads

Students may petition the Academic Progress Committee for permission to enroll for courses above the normal requirement for the degree program. Class standing and academic achievement are considered during the committee's review. Generally students with a cumulative GPA below 3.20 (3.50 for First Year Students) are not permitted to overload.

Auditing Courses

A student who declares him or herself as an auditor must do so no later than the end of the two-week drop/ add deadline.

Normally, a student who is auditing a course may not change status so that credit is awarded. In those instances where conversion seems justified, it may occur only upon approval of the Academic Progress Committee prior to midterm.

Auditing privileges are limited to listening and observing in the classroom. Auditors need not take exams nor complete other written assignments, nor may they expect the instructor to comment on or evaluate such work. No credit will be granted, but upon recommendation of the instructor, the fact that the individual has audited the course will be noted on the permanent record if the student has met attendance regulations and other requirements set by the instructor. Courses which require a high degree of participation (e.g., laboratory courses, studio art courses, and foreign languages emphasizing conversation) may not be audited.

A regularly enrolled full-time student may audit one and, under unusual circumstances, two courses per semester by petition to the Academic Progress Committee and with the approval of the academic adviser and the instructor in the course or the head of the department in which the course is offered.

Degree-seeking students are not charged for auditing privileges in any semester in which they are enrolled full time.

Cross-Registration

A full-time upperclass student may register at any of the Lehigh Valley Association of Independent Colleges (LVAIC) member institutions (Cedar Crest College, DeSales University, Lehigh University, Moravian College, and Muhlenberg College) for courses suitable to Lafayette degree programs. Courses must be ones which cannot be scheduled at Lafayette, are limited to no more than two per semester, and may not produce an overload. Students may not cross-register for January term courses. A student must have the written approval of his/her adviser, the Lafayette Registrar, and appropriate persons at the host institution.

Questions concerning the suitability of particular courses to Lafayette degree programs should be referred to the Registrar. Grades earned under the cross-registration program will be used in computing semester and cumulative averages. It is the student's responsibility to arrange transportation to any cross-registered courses.

Summer Courses

A student wishing to take summer courses at another institution, whether for enrichment or to make up deficiencies, must petition the Academic Progress Committee in advance for approval. Course credits are transferrable only if the student earns a grade of "C" or better as certified on an official transcript. Grades

earned elsewhere are not recorded on the permanent record; transfer grades affect the cumulative average only in courses taken at other LVAIC institutions. Students with junior or senior status are not normally permitted to transfer courses from two-year institutions.

Evaluation of Faculty and Courses

Student evaluations at Lafayette College provide information to (1) instructors and department heads for use in faculty and course development; (2) the Provost for use by the faculty committee on Promotion, Tenure, and Review as one of several considerations in recommendations concerning appointments, promotions, and tenure; and (3) students for use in course selection.

Near the end of each semester, instructors set aside a portion of class time for this purpose. The standard evaluation consists of a questionnaire and a comment sheet. Within a few weeks of the evaluation, computer results and written comments are sent to instructors and to the Provost. Numerical results are available online to students.

ADVISING

Academic Advising

Students pursuing a B.S. program are assigned to advisers in the department or area of their interest by the Dean of Advising. First-year and sophomore candidates for the A.B. degree are assigned to advisers whose scope of interests suggests that they can be helpful in encouraging the students to develop programs which will provide the breadth of study generally associated with the A.B. degree and to leave them in a position by the end of their sophomore year to have a reasonable basis upon which to choose majors. Juniors and seniors are assigned advisers in their major departments by the major department head.

Students are responsible for determining that they have satisfied all requirements for graduation. To participate in the commencement ceremony, students must have completed all degree requirements.

Fellowships, Scholarships, and Postgraduate Studies

The undergraduate education provided by Lafayette opens the door to many opportunities including prestigious scholarships and fellowships for undergraduate or postgraduate study/ research as well as attendance at a top tier graduate or professional school. The Office of the Dean of Advising assists students and recent graduates in fulfilling their intellectual and professional goals by promoting awareness of external scholarship/fellowship and preprofessional opportunities while providing the advice and support necessary to compete successfully. Included among the scholarships/fellowships are postgraduate programs, regardless of academic discipline, for international destinations such as the Marshall, Rhodes, and Gates Cambridge scholarships to the United Kingdom, the Mitchell to Ireland (Northern or Republic of), DAAD-sponsored programs for study in Germany, and Fulbright and related grants to more than 140 countries worldwide. Scholarship/fellowship programs for undergraduate and/or postgraduate study in the United States include the Goldwater, Truman, and National Science Foundation, among others. Students of all disciplines who are interested in external scholarships and fellowships should contact the Office of the Dean of Advising.

Health Professions

Any of the majors in the Bachelor of Arts and Bachelor of Science curriculums provide the necessary background for entrance into the health professions, including schools of medicine, dentistry, osteopathy, and veterinary medicine. Health professions students should follow their own intellectual and academic interests provided that the program of study includes one year of biology with labs, physics with labs, and writing intensive coursework, as well as two years of chemistry with labs. Some health profession schools require or recommend one year of college mathematics, including a semester or full year of calculus and/or statistics, and recommend courses in biology and chemistry. No course should be taken on a pass-fail basis. It is advisable, but not necessary, that students planning healthcare careers take more than the minimum number of science courses, which can be arranged regardless of major.

Health professions students work with the Dean of Advising Office, Career Services, and the Health Professions Advisory Committee in preparation for admission to a health professions school. First-year and sophomore students should register to meet with a Gateway adviser in Career Services. The Dean of Advising Office is available to assist students in areas related to health professions school admissions, preparation for the MCAT, GRE, and DAT, and selection of a school. The Health Professions Program sponsors a number of related activities as well as informational meetings to assist students. Any student interested in health professions should contact the Dean of Advising Office, as well as consult catalogs from the schools in which they are interested. Reference materials are available in the Dean of Advising, Career Services, and the reference section in Skillman Library.

Legal Professions

While no particular courses are required for admission to law school, legal professions students need to develop strong reading and writing skills, as well as the ability to think logically, analyze critically, and express oral and written ideas clearly. These skills are not obtained exclusively in any field of study. Many majors accentuate these skills, but for those that do not, elective courses should be selected with these qualities in mind. A strong academic record is required for admission to law school.

The Legal Professions Program sponsors a number of related activities as well as informational meetings to assist students. Students have the opportunity to participate in debate competitions as part of the Forensics Society and play roles on the College's Mock Trial Team. Any student interested in legal professions should contact the Dean of Advising. First-year and sophomore students should meet with a Gateway adviser in Career Services. Members of the Legal Professions Advisory Committee are also available for consultation. The Dean of Advising Office is available to assist students in areas related to law school admissions including preparation for the LSAT and selecting a school.

ACADEMIC SERVICES

Academic Tutoring and Training Information Center (ATTIC)

Academic Tutoring and Training Information Center (ATTIC), part of the Office of the Dean of Advising, provides academic

support services to enhance student success. Peer tutoring, study skills workshops, academic counseling, disability services, academic support for student athletes and supplemental instruction are among the programs provided by the ATTIC and are available to all students.

Peer Tutoring Program

The Academic Tutoring and Training Information Center (ATTIC) is committed to providing high quality peer tutoring services to our students. Peer tutoring is available in a wide variety of courses, and students may request a tutor for as many courses as they choose. The peer tutoring program provides one hour of tutoring per week for the remainder of the semester. Peer tutor assignments begin each semester during the second week of classes.

Study Skills/Academic Counseling

The ATTIC offers free study skills assistance for students with the ultimate goal of helping them become more efficient learners and better organized students. Our coordinators are available to meet individually with students or conduct small-group workshops. Students can be assisted in any of the following areas: study habits, note taking, reading strategies, test preparation, test taking, time management, etc.

Academic Support for Student Athletes

Lafayette offers a range of services to student-athletes who face the dual challenge of performing well in the classroom while maintaining a commitment to varsity athletics. First-year student-athletes are assigned a peer mentor to help with the transition to Lafayette. In addition, academic enhancement workshops, structured study sessions, and access to specific educational technologies that may be borrowed while traveling assist students in meeting their academic obligations. A full-time Student-Athlete Academic Support Coordinator monitors student-athlete academic progress and coordinates with both faculty and coaches to provide specific resources to enhance success of struggling student-athletes.

Supplemental Instruction

Supplemental Instruction (SI) is an internationally known academic support program that is targeted to aid students who are enrolled in historically difficult courses. These courses frequently are introductory or "gatekeeper courses" such as general chemistry, general biology, economics and calculus. SI sessions are student-facilitated, regularly-scheduled, informal review sessions in which students compare notes, discuss readings, develop organizational tools, solve practice problems, and predict test items. Students learn how to integrate course content and study skills while working together.

Peer Advising

The Peer Advising Program is supported by the Office of the Dean of Advising and is dedicated to assisting students throughout their important first year of college by establishing one-on-one peer-mentoring relationships between first-year and 'PARDners' who are upper-class students and have been selected for this important role on the basis of their ability to assist new students navigate their first year at Lafayette College.

Disability Services

Lafayette College is committed to ensuring reasonable accommodations to students who are substantially limited by a documented disability. Lafayette students with physical, psychological and/or learning disabilities have met the same competitive requirements for admission as all other Lafayette students. Once admitted, students may request support services in accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act Amendments Act of 2008 (ADAAA). All accommodations requests can be forwarded to the ATTIC.

Due to the confidential nature of disability issues, students must specifically request that letters of accommodation be forwarded to each professor, from whom they expect to request accommodation, each semester. Accommodation letters inform faculty members of a student's eligibility for accommodations and provide an overview of approved accommodations. Students in need of disability accommodation should make an appointment to discuss the accommodations with their professors during the first two weeks of classes. Students requesting accommodations for the first time should allow 10 business days for review of documentation and supporting material. Students wishing to take an exam or other evaluation with verified accommodations should provide 7 days of notice of their intent to utilize their accommodations. Notice is required for each evaluation in which the student wishes to utilize their accommodations.

Part-Time Studies

Lafayette College offers a part-time study program which is designed for non-traditional students who wish to take advantage of the academic programs and courses offered by the College. Information on admission, registration, and academic advising for part-time students is provided by the Office of Admissions, (610) 330-5100.

Degree Programs

All degree programs are available to part-time students through the day program.

Degree Candidacy

Part-time students intending to pursue a degree program who have no prior college experience must have completed high school at least two years previously and must meet the minimum requirements for admission established for all students in the chosen program.

The College welcomes applications from students who wish to transfer from two-year and four-year institutions. A student who transfers from a regionally accredited institution will be granted credit toward a Lafayette degree for courses that are consistent with the goals of his or her academic program at Lafayette and in which a grade of at least "C" (or equivalent) has been earned. Engineering courses must be from an engineering program that is accredited by the Accreditation Board for Engineering and Technology.

Students who have earned credits from other colleges and universities must submit official transcripts and catalogs containing course descriptions from these institutions as part of the admissions procedure. Applicants who have successfully completed courses at these colleges will receive an evaluation of transfer credit. An official copy of the student's high school

record or a G.E.D. (General Equivalency Diploma) is also required for all applicants. Transfer students are normally not admitted with advanced standing beyond the sophomore level. They are required to complete at least half of their degree requirements at Lafayette.

Non-matriculating Students

Non-matriculating students with special interests in particular subject areas who wish to take courses may be admitted on a semester-to-semester basis as Special Students. Evidence of course prerequisites may be required. Courses may be taken for credit or audited. The audit fee for part-time and special students is the prevailing part-time audit rate. All audits must have the approval of the instructor of the course. Courses that require a high degree of participation (e.g., laboratory courses, studio art courses, and foreign languages emphasizing conversation) normally may not be audited.

Academic Policies

Part-time students are limited to no more than two courses per semester and are charged at the prevailing part-time rate. When a part-time student reaches senior standing, however, the student may take an additional course in two of his or her last four semesters at Lafayette. The student will continue to be billed at the part-time rate. Such exceptions must be approved by the Dean of the Advising or the Registrar.

The Office of Admissions coordinates academic advising for all degree students through the appropriate department in the student's major area. These advisers are assigned when the student is accepted into a degree program. Students who have not been officially accepted into a major and special students who are not seeking entrance into a degree program are advised by the Registrar.

All part-time students are expected to follow the College's policy on Statute of Limitations for Students listed under "Graduation Requirements." It is the obligation of the student to become aware of the College's policies regarding the rights and responsibilities of students.

A part-time degree candidate wishing to enroll as a full-time student must petition the Academic Progress Committee to change to full-time status. Admission on a full-time basis is restricted to those with exemplary academic records and a minimum of five courses taken at Lafayette.

Lafayette is a member of the Lehigh Valley Association of Independent Colleges (LVAIC), which also includes Cedar Crest College, DeSales University, Lehigh University, Moravian College, and Muhlenberg College. LVAIC has extended to part-time degree candidates who have achieved sophomore standing the opportunity to cross-register for part-time day and evening courses. Both grades and credits earned at one of the cooperating colleges under this policy will transfer automatically to the student's home institution. Cross-registration provides the opportunity to take courses not available at the home institution and thus eases the scheduling difficulties sometimes experienced by working adults. A part-time student may enroll in a maximum of two courses through cross-registration for each year of equivalent full-time study. Fees are charged according to the policy of the host institution.

HONORS

Lafayette College encourages and recognizes superior academic work. Students who achieve a semester average of at least 3.60 in a term during which they have completed 3 or more courses (with no pending Incompletes) are named to the Dean's List. Those who graduate with high cumulative averages based upon four years' work are awarded their degrees summa cum laude (a cumulative average of 3.85 or higher), magna cum laude (3.75), or cum laude (3.65).

Departmental Honors

Departmental honors and honors in interdisciplinary major programs are awarded for outstanding performance in writing a senior thesis or in conducting senior research. Departments that have honors programs offer a sequence of two courses titled "Thesis" or "Honors Thesis."

Students who hope to become candidates for departmental honors must register for the courses in Thesis during the senior year. Discussions about pursuing honors should be held with faculty well in advance of the senior year. Work in these courses will be supervised by a faculty member and will be graded in the usual way.

Candidates for honors must have and maintain cumulative averages of 3.00 and averages of 3.20 in the honors department and must fulfill such other requirements as may be established by the department with the approval of the Academic Progress Committee. Students who wish to do honors work in departments other than the major department must separately petition the Committee for permission to do so. Such students must have taken at least six courses, exclusive of Thesis, in the honors department, four of which must be at or above the sophomore (200) level.

The transcripts of students who receive honors bear the legend Honors in (department or program name) with Thesis.

Honorary Societies

Phi Beta Kappa:

Outstanding students from all curricula are eligible for election to Phi Beta Kappa in either the junior or senior year. Membership criteria are established by the local chapter, not by the College. In addition to meeting the requirements of their degree programs, students should demonstrate breadth in their coursework and a commitment to liberal learning. More specifically, the chapter takes into account grade point average, advanced level courses outside the student's major, and the study of mathematics and foreign language. Admission to Phi Beta Kappa is always at the discretion of the chapter, and membership is gained only by election.

Sigma Xi:

The Society of Sigma Xi is an international honorary organization dedicated to the encouragement of pure and applied scientific research. The society annually elects to associate membership selected students who have demonstrated marked aptitude for scientific research; election is usually based on written work. In addition, faculty members who have demonstrated noteworthy achievement in research may be elected to full membership.

Tau Beta Pi:

Outstanding candidates for engineering degrees are elected to membership in Tau Beta Pi, the national honorary engineering fraternity, during their junior or senior years.

Alpha Sigma Lambda:

This national honor society was founded in 1946 to recognize part-time students who accomplish academic excellence while facing the competing interests of family, community, and work. The Lafayette branch is the Iota chapter. To be eligible, students must be working for their first bachelor's degree, be current degree candidates in the Part-Time Studies Program at Lafayette, and demonstrate superior scholarship. Students must have completed a minimum of eight courses at Lafayette, including at least four courses outside the major field and four courses in liberal arts and sciences.

Other Societies:

Twelve honorary societies recognize personal achievement in specific fields: Delta Phi Alpha in German; Dobro Slovo in Russian; Eta Kappa Nu in electrical engineering; Omicron Delta Epsilon in economics, Phi Alpha Theta in history; Phi Lambda Upsilon in chemistry, biochemistry, and chemical engineering; Pi Delta Phi in French; Pi Mu Epsilon in mathematics; Pi Sigma Alpha in political science; Psi Chi in psychology; Sigma Delta Pi in Spanish, Sigma Iota Rho in international affairs, Sigma Pi Sigma in physics, Upsilon Pi Epsilon in computer science and Alpha Psi Omega in theater.

Prizes and Awards

The generosity of individuals, organizations, and graduating classes has made possible the following prizes awarded at Lafayette:

George Wharton Pepper Prize:

Awarded to the senior who, by vote of the faculty and students, most nearly represents the Lafayette ideal.

Africana Studies Scholastic Award:

Awarded to a student selected by Africana studies program faculty who has demonstrated academic excellence and potential for future leadership in American society.

Charles L. Albert '08 Trophy:

Given to the senior student who is judged to be the outstanding athlete of the year; name inscribed on plaque in athletic department.

John H. Allen Prize:

Awarded to the author of the best essay in public finance, as judged by a committee of the department of economics.

American Chemical Society Division of Polymer Chemistry Award:

Presented to the sophomore or junior chemistry major with the most outstanding performance in the first two semesters of organic chemistry.

American Chemical Society Prize:

Given to the outstanding senior chemistry major for achievement in chemistry.

American Chemical Society Undergraduate Award in Analytical Chemistry:

Presented to the junior chemistry major with the greatest achievement in the study of analytical chemistry.

American Defense Preparedness Association Award:

Presented annually to a senior cadet from each ROTC department who has consistently maintained a high level of academic achievement while participating in campus activities.

American Friends of Lafayette Essay Contest:

Awarded annually for the essay on the Marquis de Lafayette that best epitomizes those qualities that earned him the title of “Hero of Two Worlds” as a soldier-statesman and humanitarian.

American Institute of Chemical Engineers Donald F. Othmer Award:

Given to a junior or senior student majoring in chemical engineering who has attained the highest grade point average for two years.

American Institute of Chemists Award:

Presented by the Philadelphia Chapter of the Pennsylvania Institute of Chemists to a senior chemistry major in recognition of a demonstrated record of leadership, character, and scholastic achievement.

American Legion General Military Excellence Award:

Presented to a cadet in the top 25 percent of his or her class in academic and ROTC subjects who has demonstrated outstanding qualities in military leadership, discipline, character, and citizenship.

American Legion Scholastic Excellence Award:

Presented to a cadet in the top 10 percent of his or her academic class and the top 25 percent of the ROTC class who has

demonstrated qualities of leadership and actively participated in campus student activities.

American Veterans of World War II, Korea, and Vietnam Award:

Presented to cadets who have displayed a high level of diligence and discharge of duty and the willingness to serve both God and country.

Karl J. Ammerman Prize:

Awarded annually to the most deserving student in the mechanical engineering department, as selected by the faculty of the department.

Carol G., Jr. ’67 and Deborah B. Anderson P’01 Mechanical Engineering Prize:

Awarded to a mechanical engineering major on the strength of high academic achievement and promise for excellence in his or her career.

AROTC General Dynamics Award:

Presented to the Military Science IV Cadet who has demonstrated both outstanding scholastic achievement and superb leadership ability, and who shows great potential for a distinguished military career.

Armed Forces Communication and Electronics Association Award:

Presented annually to a cadet in each ROTC unit who demonstrates excellence in leadership and academics.

Association of the United States Army Military History Award:

Presented to a cadet who has demonstrated a strong interest in and acumen regarding the study of military history. The award is a joint project of the A.U.S.A. and the U.S. Army Center for Military History.

David Fowler Atkins Jr. Prize:

Presented to the student who, in work during the junior or senior year in the department of religious studies, gives promise of future usefulness in service to religious communities.

Frank Kline Baker Spanish and Latin American Civilization Award:

Awarded to the student who attains the greatest proficiency in the study of Spanish and Latin American Civilization.

Benjamin F. Barge Mathematical Prize:

Awarded annually to first-year student(s) or sophomores in recognition of excellence in mathematics.

Benjamin F. Barge Oratorical Prize:

Presented to a member of the senior class who writes and pronounces in public competition an English oration in the best manner.

Carroll Phillips Bassett Prize:

Awarded annually to senior students deemed most outstanding by the department of civil and environmental engineering.

Carroll Phillips Bassett Prize for Juniors:

Awarded annually for outstanding work up to and including the junior year.

Paul Bernon Memorial Prize in Sociology:

Awarded each year by the faculty in the department of anthropology and sociology to the graduating senior most outstanding in sociology.

Charles L. Best Memorial Prize in A.B. Engineering:

Awarded annually to senior students who best exemplify the ideals behind the Bachelor of Arts in Engineering degree and who have demonstrated leadership in the Bachelor of Arts in Engineering program.

Bethlehem Honorary First Defenders Award:

Recognizes those cadets who are designated as distinguished military graduates.

H. MacKnight Black Poetry and Literature Prize:

Awarded annually to the student who submits the best poem or group of poems in a contest conducted by the English department.

Sanfurd G. Bluestein '42 Award:

Presented annually to a junior planning a career in medicine who, in the opinion of the Health Professions Advisory Committee, has distinguished himself or herself academically and contributed to various aspects of college life, especially through participation in athletics, student government, or music and arts programs.

Russell C. Brinker Prize in Civil Engineering:

Awarded to a junior in the civil and environmental engineering department who, in the opinion of that department's faculty, is most deserving on the basis of self-reliance, scholarship, and student activities.

James F. Bryant '40 Excellence Award:

Awarded to a junior who meets standards of excellence, as did James F. Bryant, by demonstrating high academic achievement, lettering in at least one varsity sport, and showing noticeable and noteworthy evidence of community service.

George H. Catlin Prize:

Awarded to the senior with the highest average in the study of the classics.

Eugene P. Chase Government Prize:

Awarded annually to the student who, in the judgment of the department of government and law, has submitted the best written exposition in the field of political science during the academic year.

Eugene P. Chase Phi Beta Kappa Prize:

Awarded to a sophomore who has demonstrated scholarship as a first-year student.

Chemical Rubber Company Freshman Achievement Award:

Presented to the outstanding first-year student in general chemistry.

Class of 1883 Prize:

Awarded to a senior who, in the opinion of the department of English faculty, has demonstrated excellence in English.

Class of 1910 Prize:

Awarded annually by the department of history to the senior who has excelled in the study of history or in an allied field of the humanities and who, in the determination of the department, manifests the greatest promise for responsible civic leadership and public service.

Class of 1913 Trophy:

Presented to the senior who has attained the greatest distinction as an athlete and a scholar.

Murray G. Clay '30 Award:

Presented to a sophomore or junior who has an outstanding academic record in engineering or science.

Burton H. Cohen Memorial Prize:

Awarded annually to a senior psychology major who, in the opinion of the selection committee, has demonstrated the inclination, intellectual curiosity, determination, and potential to become a dedicated, creative, and selfless teacher.

Lyman Coleman Prize:

Awarded annually to the senior who has demonstrated broad interest and superior performance in the department of religious studies.

College President's Award:

Awarded annually to the outstanding cadets from each class in terms of overall achievement, measured by scholastic excellence, leadership, military performance, and extracurricular involvement.

Community-Based Learning and Research Prize:

This award is given annually by the Center for Community Engagement to a senior who has made significant contributions to the community through course projects, an honors thesis, EXCEL scholar work, or some other form of academic community engagement.

Lawrence J. Conover '24 Electrical Engineering Prize:

Presented each year to a senior in electrical engineering upon recommendation of the electrical and computer engineering department.

Jean Corrie Poetry Prize:

Awarded annually to first-, second-, and third-year students who submit the best poetry in a contest conducted by the Academy of American Poets.

Professor James P. Crawford Prize in Mathematics:

Awarded to a student who has made a special contribution to the mathematics community at Lafayette by participating in and providing leadership for the cocurricular activities of the department.

Daughters of the American Revolution Award:

Presented to the senior cadet who has displayed outstanding qualities of leadership and patriotism.

Daughters of Founders and Patriots of America:

Presented annually to basic course cadets who have excelled in the ROTC program.

Frederick Knecht Detwiller Prize:

Awarded to a senior art major for distinguished work in art and art history.

Distinguished Military Graduate:

Awarded to the top 20 percent of the Military Science IV cadets who have demonstrated outstanding leadership, attained superior academic standing, and contributed to the advancement of ROTC.

Francis Shunk Downs Award:

Awarded to the senior who, in the judgment of the department of religious studies and the chaplain's office, has shown the best all-around growth and development in academic and extracurricular activities while exercising outstanding leadership and influence upon the campus.

James L. Dyson Geology Award:

The James L. Dyson Award, an award of distinction, is given to a junior who by academic achievements and character, exemplifies the ideals by which James L. Dyson lived and worked.

J. J. Ebers Memorial Award:

Given to a student selected by the department of electrical and computing engineering, based on high academic achievement and noteworthy professional interest in the field of electrical engineering.

Economics Award for Scholastic Excellence:

Awarded to a student for outstanding academic performance in economics and for leadership in departmental activities.

Charles Duncan Fraser Prize:

Awarded to seniors who, in the judgment of the department of chemical engineering, are best qualified for advanced work in materials science and engineering.

Germanoski Award

Given to a student majoring in Geology or Environmental Science who achieves high academic standing through hard work and diligence and who demonstrates a particular interest in environmental systems, earth surface processes, or hydrogeology.

Gilbert Prize:

Awarded annually to students who, in the judgment of the department of English, have demonstrated superiority in English.

Ralph Scott Grover Music Scholar Award:

Presented to a student who has achieved distinction in music scholarship.

Harold A. Hageman '39 Award:

Awarded each year to the outstanding pitcher on the baseball team.

William Forris Hart '27 Chemistry Prize:

Presented to a junior or senior chemistry major for proficiency in organic chemistry and potential for further achievement in chemistry.

Jeffrey B. Havens Memorial Prize:

Awarded to an engineering major to provide a nontraditional summer learning experience.

Guy and Joyce Hovis Award

Given to a student majoring in geology who, by dedicated effort in a rigorous academic program, has achieved distinction in science and math throughout his/her academic career, or who has come to achieve such distinction through steady improvement.

Robert F. Hunsicker Educational Prize:

Awarded to a student who has done meritorious work in the area of small-business studies.

Willis Roberts Hunt Biology Prize:

Awarded annually to the senior biology student(s) felt by the members of the department to be most deserving.

Institute of Internal Auditors Award for Excellence in Accounting-Related Studies:

Given to a student for excellence in accounting and business subjects.

Institute of Management Accountants Award:

Given to a student for excellence in accounting.

Instrument Society of America, Charles F. Homewood Scholarship:

Awarded to an outstanding senior engineering student who has demonstrated interest and aptitude in the field of instrumentation and control systems.

Henry Richard Jahn Trophy:

Awarded annually to a member of the track team who, by vote of the track team and approval of the track coach, is determined to have contributed most to the track team by virtue of leadership and ability.

Hugh H. Jones Most Valuable Player Award:

Presented to the most valuable player in football.

Clinton Kline Prize:

Awarded to the senior who has demonstrated excellence in acting, directing, or technical theater.

Paul E. Koch '28 Trophy:

Presented to the member of the Lafayette baseball team who, in the opinion of the baseball coach and director of athletics, is considered to be the most valuable member of the team.

Joseph Watt Kuebler Jr. Memorial Prize:

Presented annually to the senior student in the department of biology who has the highest scholastic average and will be entering medical school.

Lafayette Alumni of the Lehigh Valley Performing Arts Award:

Awarded annually to a senior residing in the greater Lehigh Valley who has made a significant contribution to Lafayette's performing arts program while demonstrating strong academic achievement.

Lafayette Alumni of the Lehigh Valley Scholarship Award:

Awarded annually to a senior residing in the greater Lehigh Valley who demonstrates outstanding academic achievement.

Lehigh Valley Battalion Commanders Award:

Presented annually to outstanding cadets in each class by Army ROTC Cadre for demonstrated acumen for leadership and an aptitude for military service as an officer.

Lehigh Valley Chapter of the American Society for Metals Prize:

Awarded to an outstanding senior in materials engineering.

Lehigh Valley Section of the American Chemical Society Award:

Given by the Lehigh Valley Section of the American Chemical Society to the outstanding senior chemical engineering major for achievement in chemistry.

Lehigh Valley Section of the American Institute of Chemical Engineers Award:

Presented to a senior in chemical engineering who has compiled an impressive academic record and who has demonstrated outstanding accomplishments in one or more extracurricular activities.

Lehigh Valley Section of the American Society of Civil Engineers Outstanding Senior Award:

Awarded to a senior engineering student who exhibits outstanding scholastic ability as well as involvement in extracurricular activities.

Lehigh Valley Section of the American Society of Materials Award:

Awarded annually to the student who has attained the most impressive record in the introductory materials course.

Leopard Medal:

Awarded to a first-year cadet who contributes the most to the advancement of Army ROTC at Lafayette College, and is academically in the top 10 percent of the ROTC class and the top 25 percent of his or her academic class; made possible through the generous contributions of Harry M. Jones '66, Lieutenant Colonel, U.S. Army Retired.

Francis A. March Fellowship:

Given to a senior who has distinguished himself or herself in English studies and who has been admitted to a graduate school approved by the department of English.

Maroon Club Student Award:

Presented to a senior male and a senior female athlete based equally upon academic achievement, athletic accomplishments, and campus/community service.

General George C. Marshall Award:

Awarded by the George C. Marshall Foundation in recognition of attainment as the outstanding student in military studies and leadership in the tradition of this country's citizen soldier as exemplified by the career of Gen. George C. Marshall.

J. H. Tarbell Award:

Awarded to a student who demonstrates an understanding of financial operations and institutions.

Dr. E. L. McMillen-K. K. Malhotra '49 Prize:

Awarded to a junior(s) who has attained a high cumulative average in chemical engineering and who has demonstrated a high level of proficiency in the Unit Operations Laboratory.

Mechanical Engineering Design Award:

Awarded to a senior mechanical engineering student for an outstanding senior capstone design project.

Mechanical Engineering Faculty Award:

Awarded by the mechanical engineering faculty to an outstanding mechanical engineering senior who has demonstrated superior knowledge of the discipline and shows promise in the practice of the profession.

Merck Index Award:

Given to a senior for superior academic work in chemistry and promise of future excellence.

Ted and Georgia Metropolis Award

Given to a junior or senior Geology major who has exhibited high academic achievement and demonstrated enthusiasm for geology and environmental geoscience both in class and outside the classroom, and through service.

Military Order of the Purple Heart Award:

Presented annually to cadets for military and scholastic excellence by the Lehigh Valley Chapter of the Military Order of the Purple Heart.

Military Order of the World Wars Leadership Award:

Presented by the Philadelphia chapter ot the cadet who best exemplifies the spirit of ROTC leadership.

Military Order of the World Wars Ribbon:

Presented annually to outstanding cadets who have shown the most improvement in military and scholastic studies during the school year.

Military Science Cadre Award:

Presented annually to a senior army cadet from each campus who has exhibited outstanding qualities of leadership and an aptitude for military service as recognized by his/her instructors and who serves as an example of the kind of officer the cadre endeavors to produce.

Wesley S. Mitman Prize:

Awarded to the senior most outstanding in mathematics.

Moles Student Award:

Given to a student in engineering whose academic achievement and enthusiastic application shows outstanding promise of personal development leading to a career in construction engineering and management.

Arthur Montgomery Geology Award:

Awarded annually to a student of high academic achievement with a special interest in mineralogy and petrology in honor of Arthur Montgomery, professor of geology from 1951-75.

National Guard of Pennsylvania Award:

Presented to a graduating cadet who is entering or is a member of the Pennsylvania National Guard for outstanding attitude and motivation, academic achievement, leadership, and overall ROTC achievement.

National Sojourners Award:

Awarded to a sophomore or junior Military Science cadet who encourages American ideals by deed or conduct, demonstrates outstanding leadership, and achieves academic excellence.

Donald U. Noblett Prize in Chemical Engineering:

Given to a chemical engineering major based on high academic achievement, with outstanding promise of future excellence in his or her career.

Vivian B. Noblett Prize in Studio Art:

Awarded to an art major with preference given to a student with an interest in studio art who has demonstrated proficiency in painting and drawing and who shows potential for future achievements.

Minerva and Emil V. Novak Prize in Government and Law:

Presented annually to a student majoring in the department of government and law, based on overall excellence in academic work and citizenship in the campus community.

Louise M. Olsted Prize in Ethics:

Awarded to a student who, in the judgment of the members of the department of philosophy, has done outstanding work in theoretical ethics, applied ethics, or a related field.

Pennsylvania Institute of Certified Public Accountants Award:

Given to a graduating senior for excellence in accounting and for participation in college and community affairs.

James Alexander Petrie Prize in French:

Awarded annually to a student demonstrating a high degree of proficiency in French.

Reverend J. W. and R. S. Porter Bible Prize:

Awarded annually to students judged by the department of religious studies to have demonstrated high proficiency in the study of religion, based upon work done in their first and second years.

David A. Portlock Memorial Prize:

Awarded annually to an outstanding student receiving Lafayette grant aid who will benefit most from studying abroad.

William C. Rappolt ’67 and Walter Oechsle ’57 Neuroscience Prize:

Awarded to an outstanding senior based on scholarship in the classroom and laboratory and service to the major, College, or community.

John D. Raymond Music Award:

Awarded annually by the department of music to a deserving music student.

Reserve Officers Association Award:

Presented to the Military Science II, III, and IV cadets who have displayed exceptional leadership and academic performance.

Retired Officers Association Award:

Presented to the Military Science II, III, IV cadets who have displayed exceptional leadership and academic performance.

Rexroth Prize in German:

Awarded to a student for meritorious achievement in German.

Herbert W. Rogers Psychology Prize:

Awarded annually to the outstanding senior psychology major(s) judged by the department to be the most deserving.

James P. Schwar Prize:

Awarded annually in honor of James P. Schwar, professor of computer science from 1962-2000, to a deserving computer science student.

Dr. and Mrs. David Schwimmer '35 Prize in Honor of Theodore A. Distler:

Awarded annually to the pre-medical student who, in the opinion of the Health Professions Advisory Committee, best represents the humanitarian, cultural, and scientific qualities required of the true physician.

David Bishop Skillman 1913 Library Prize:

Awarded to a graduating senior library assistant who by his/her exemplary performance, skill and dedication has enhanced the library's educational role.

Finley W. and Ethelwyne H. Smith Electronic Engineering Prize:

Awarded annually to the electrical and computer engineering senior who has earned, at the end of the junior year, the highest cumulative average attained by any senior who is working for departmental honors with a project in the electronics or communications field.

Society of American Military Engineers NYC Post Scholarship:

Awarded to engineering students enrolled in Military Science to continue their educational studies.

Society for Applied Spectroscopy Prize:

Awarded to a senior in the department of chemistry.

Society of the War of 1812 Award:

Presented annually to sophomore ROTC cadets who encourage and demonstrate the ideals of Americanism by deed, conduct, or both.

Sons of American Revolution Award:

Emphasizes the importance of perpetuating the principles of government established by the colonial statesmen. It honors cadets for outstanding leadership qualities, military bearing, and excellence.

Carl J. Staska Prize:

Awarded each year to a student who has demonstrated a high degree of proficiency in chemical laboratory skills.

Superior Cadet Award:

Awarded to Military Science cadets who are the top cadets in their respective ROTC classes.

William G. McLean Tau Beta Pi Prize:

Awarded to a sophomore engineering student based on academic performance, campus citizenship, and professional orientation.

Track Prize:

Presented by the department of athletics to the ideal Lafayette track and field or cross-country team member in memory of Peter Crampton.

Paul Tully Memorial Prize:

Presented to the student who best exemplifies the progressive principles of social and political serviceædemocratic ideals to which Paul Tully devoted his life.

Professor Carolynn Van Dyke Prize:

Awarded annually to a student majoring in any subject, preference for computer science, to provide funds for a nontraditional learning experience.

Veterans of Foreign Wars Award:

Presented to outstanding cadets who are actively engaged in the ROTC program and who possess individual characteristics contributing to leadership.

B. Vincent Viscomi Civil Engineering Prize:

Awarded to a civil engineering student based on demonstrated academic achievement and leadership during his or her first three years at Lafayette.

Wall Street Journal Student Achievement Award:

Given to a student whose academic performance in economics is considered exceptional.

J. Hunt Wilson '05 Prize in Analytical Chemistry:

Awarded annually to the senior chemistry major with the highest ranking in courses and research.

Luther F. Witmer Prize:

Awarded annually to the senior with the most outstanding accomplishments in materials science and engineering.

T. Gordon Yates '29 Award for Swimming:

Awarded annually to the most improved male and female swimmers as determined by the swimming coaches and the director of athletics.

Thomas G. Yohe Memorial Prize in Studio Art:

Awarded to a student who displays creativity in drawing and illustration.

Class of 1884 R. B. Youngman Greek Prize:

Awarded annually to a student who has demonstrated a high degree of proficiency in Greek.

SPECIAL ACADEMIC OPPORTUNITIES

In addition to its regular academic programs, Lafayette College offers a variety of optional programs ranging from student/ faculty research projects and intensive short-term courses during the January or May interim to foreign study and work-study internships.

Interim Session Programs

The Lafayette academic calendar leaves a period of about three weeks open during January or May. Some students use this period to enroll in optional special academic courses sponsored by Lafayette, either on campus or in foreign locations. Interim Session may include intensive courses, laboratory exercises, field trips, or study abroad. For students in Bachelor of Science programs whose heavy schedule of prescribed courses may make off-campus semesters difficult to arrange, the Interim Session provides an especially useful opportunity to participate in a period of foreign study.

Special courses offered only during Interim Sessions are described in the listings. Additional information about the study-abroad programs may be obtained from the Office of International and Off-Campus Education. Students applying to participate in the interim abroad program must be in good standing academically and with respect to College regulations at the time of application, and when they depart for the program. For information about on-campus interim programs, contact the Office of the Dean of Advising.

Normally, students are not permitted to study abroad through a nonaffiliated program. Should the Academic Progress Committee make an exception for a program in a country in which Lafayette has no formal affiliation or arrangement, the student must obtain prior approval. Without approval, any course taken cannot be credited toward the Lafayette degree.

Regular financial aid does not cover the Interim Session, but some funding is available on a competitive basis, and the Office of Financial Aid can advise students about loans and other possible forms of assistance.

Study Abroad

Lafayette College recognizes that we live in an increasingly complex and interrelated global environment. Connecting the classroom to the world outside our walls is at the core of the College's mission. Off -campus study combines academic rigor with experiential learning through immersion in an international or culturally significant domestic setting. Engaging in an unfamiliar cultural milieu is often a truly transformative experience for students. Participants are encouraged to expand their comfort zones, encounter new perspectives, and examine their own cultural viewpoints. Students return to campus with a greater appreciation of global issues, which enriches their understanding of their own on-campus curricula while stimulating and deepening conversation within the College community.

The Office of International and Off-Campus Education provides opportunities ranging from interim to semester and year-long programs. Generally, the cost for a semester or year abroad is the same as that for a semester or year on campus. Students pay Lafayette's Comprehensive Fee (tuition). Those who select a faculty-led program also pay Lafayette's room and (depending on the program) board; the College arranges and pays for the airfare. Students who select an approved affiliated program pay Lafayette's Comprehensive Fee (tuition) plus the host institution

room and board charges. (Host costs are detailed in the Host Program Estimate Cost Profile, available in the Office of International and Off-Campus Education). For most affiliated programs, students make their own travel arrangements. Lafayette bills the student for the applicable tuition and other fees and pays the host institution directly. Students are responsible for incidental costs such as books, passports, visas, immunizations, optional travel, and personal expenses.

Students enrolled in faculty-led or approved affiliated programs have access to the same financial aid they have while studying on campus at Lafayette. Financial aid is capped, however, at Lafayette's cost. A few of our approved programs are more expensive than Lafayette; in those situations, students selecting such programs are responsible for any amount above and beyond Lafayette's cost.

The deadline for application for the fall semester is February 15 and September 15 for the spring semester. At the time of application and departure for the study-abroad program, students must have a minimum cumulative grade point average of 2.80, be in good standing academically and with respect to College regulations, and be making satisfactory progress toward the degree.

Students accepted by off-campus programs must seek approval in advance from the Academic Progress Committee for courses they wish to present for a grade and for credit towards the Lafayette degree. A student may transfer no more than a normal semester program or not more than eight courses for a full academic year of foreign study. Normally, students are not permitted to study abroad through a non-affiliated program. Should the Academic Progress Committee make an exception for a program in a country in which Lafayette has no formal affiliation or arrangement, the student must obtain prior approval. Without approval, any course taken cannot be credited toward the Lafayette degree.

Frontiers Abroad

In 2009 Lafayette College and Frontiers Abroad, New Zealand entered into an agreement through which Lafayette became the "School of Record" for Frontiers Abroad.

Students completing the Frontiers Abroad programs in Geology and Earth Studies and courses at their partner institutions in New Zealand, the University of Canterbury and the University of Auckland, earn Lafayette credits that are reported to their home campuses on a Lafayette transcript.

The program and its courses are reviewed and approved through the Registrar's Office and the Office of International and Off-Campus Education in conjunction with full-time Lafayette faculty in our related programs. Participation by both faculty and staff from Lafayette and Frontiers Abroad includes regular curricular review as well as site visits and program assessment on both campuses.

EVST 360 Māori, Indigenous Knowledge and the Environment
This course examines Māori and indigenous knowledge from the perspective of their culture, as well as their relationship to modern science, natural resources management and the environment. Students explore how indigenous knowledge is utilized to manage New Zealand's natural resources through field based education and community engagement. Led by Dr. Daniel Hikuroa, a leading Māori earth scientist and research director of Ngã Pae o te Māramatanga at the University of Auckland, this program challenges the dominance of western approaches to natural resource management and introduces students to multi-generational management approaches drawn from both indigenous knowledge and science. The course is delivered through a series of field modules, community engagement, and evening readings and lectures.

EVSC 364 Field Study in Earth Systems
For centuries, New Zealand and South Pacific peoples have had to cope and adapt to frequent volcanic eruptions, earthquakes, floods, storms and the threat of sea-level rise. These island nations have had to develop an acute understanding of the Earth's systems in order to sustainably manage natural resources and the environment and ensure survival. This course is designed as a series of field modules exposing students to marine ecology, geomorphology, environmental science, hydrology, environmental guardianship, cultural studies, chemistry, natural hazards and resources. It is open to students with a background in any of the natural sciences, environmental science, environmental studies, and engineering. After five weeks in the field, students will have developed essential field skills and techniques and collected field data to be processed and developed as part of a semester research method course at the University of Auckland.

EVSC 366 Field Research in Earth Systems
A seminar-style course in earth systems research that is open only to students who complete Earth Systems Field Camp in New Zealand. Students will be exposed to different areas of research and methods in earth systems science as a basis for developing his/her own research project using data collected during Field Camp. In addition, students will be introduced to analytical facilities and, in some cases, will have the opportunity to prepare samples and operate facilities as part of his/her research project. The final product will be a research report and conference-style presentation. [W]

GEOL 365 Field Geology
New Zealand is one of the youngest land masses on earth and characterized by landscapes that are rapidly evolving and being reshaped by active geologic processes. In a series of field modules, students will develop field skills in stratigraphy, structure, neo-tectonics, igneous and metamorphic petrology, glaciology, volcanology, fluvial systems, geothermal systems, and hazard assessment. After five weeks in the field, students will have gained an understanding of how the New Zealand micro-continent has evolved, and will have collected field data to be processed and developed as part of a semester research methods course at the University of Canterbury.

GEOL 367 Field Research in Geology
A seminar-style course in geologic research that is open only to students who complete Geology Field Camp in New Zealand. Students will be exposed to different areas of research and methods in geology as a basis for developing his/her own research project using data collected during Field Camp. In addition, students will be introduced to analytical facilities and, in some cases, will have the opportunity to prepare samples and operate facilities as part of his/her research project. The final product will be a research report and conference-style presentation.[W]

GEOL 380 Independent Study

Independent study research course for students enrolled in the Frontiers Abroad program. This course is designed to link field mapping and/or data collection with an independent research project to analyze, process and interpret data. As part of this course, students conduct their own independent research component as part of a larger team research project. At the end of the course students will have completed a series of learning objectives, written a short journal-article style paper, and delivered a professional research presentation.

Interim Abroad Program

Each year, Lafayette faculty offer six to nine three-week courses abroad during the January term and in May. Each course counts for one course credit. Individual courses are listed under "Interim Session/Study Abroad."

Internships

First-year students are not eligible for participation in an internship program unless approved by the Academic Progress Committee, and no credit may be given ex post facto for internships.

Internships are available to all students upon completion of their first year, including rising sophomores; internships completed in the summer between the first and second year may count for credits towards graduation at the discretion of the internship department/program.

Internships are offered by several academic departments and involve practical, hands-on experience at jobs generally outside the College community. Academic departments and programs that offer internship courses for credit include A.B. engineering, art, economics, English, film and media studies, government and law, history, music, psychology, theater, and women's and gender studies. Only one internship scheduled through an academic department may count towards the minimum number of courses required for graduation.

Students participating in internships will be graded on a credit/no credit basis. The student's coursework must be approved in advance and be supervised by a member of the department, as well as by personnel at the workplace. Internships may, by departmental approval, be offered under project or independent courses in engineering. At the conclusion of the internship, the student typically prepares a paper on the experience.

Summer internships are available through selected academic departments or the College-wide internship program (INT 200). INT 200 credit is recorded on the transcript, but may not be used to fulfill the minimum course requirement for graduation.

INT 200 – Internship
This course emphasizes learning through the interplay between academic work and fieldwork in a various entities during the summer months. Each internship will be supervised by a faculty member who will provide a formal evaluation of its outcome in consultation with the relevant personnel in the workplace. Under the supervisor’s guidance, each intern will produce a tangible academic project during the internship experience, such as a paper, journal, or portfolio.

Independent Study

Students who wish to pursue special academic topics or individual research programs endorsed by a faculty member may register in most departments for a credit-bearing course of independent study. Normally, no more than one independent study course may be taken in a semester.

Center for Innovation, Design, Entrepreneurship, and Leadership (IDEAL)

The IDEAL Center provides resources, curricular connections, and initiatives that build and sustain a culture of creativity and collaboration. Hands-on learning, collaboration with external partners, and connections between the liberal arts and engineering are hallmarks of the program.

Lafayette EXCEL Scholars Program

The Lafayette EXCEL Scholars Program enables students to participate in academically meaningful experiences outside the classroom. Students selected for this program engage in collaborative research projects with Lafayette faculty, enhancing their academic skills as well as developing other skills which will be useful in post-graduate education and careers.

EXCEL Scholars have the opportunity to work full time for ten weeks during the summer; full time for three weeks during the Interim Session; and eight to ten hours per week during the academic year.

Students selected to the EXCEL Scholars Program receive a stipend of $8 to $10 per hour and residence hall housing during the interim and summer sessions.

Information concerning the EXCEL program may be obtained from the Director of Research Services.

College Writing Program

The College Writing Program provides student Writing Associates the opportunity to work closely with faculty in courses across the curriculum. Each Writing Associate is assigned to a course affiliated with the program and meets individually with the students to help them revise their written work. The Writing Associate works under the guidance of the professor and the College Writing Program's professional staff. The Writing Associates also provide a drop-in service for the campus at large.

Students selected as Writing Associates are themselves skilled writers and insightful readers with strong listening and coaching skills. They are paid a stipend for their services. For more information, see Christian Tatu, the coordinator of the College Writing Program, 319 Pardee Hall.

McKelvy Scholars

Each year, 20 students of high academic ability and promise are invited to live together at McKelvy House, a residence four blocks from the campus. The McKelvy Scholars program was established to recognize and encourage academic excellence and to facilitate exchange of ideas and information among students with different interests and in different disciplines. Admission is competitive and requires nomination by a faculty member. Information about the program may be obtained from the Dean of Advising.

Military Science

Military Science centers on the theory and application of leadership and management fundamentals and also includes professional knowledge subjects, physical training, small unit tactics, and basic military skills. The program sponsors the Reserve Officers' Training Corps (ROTC), leading to duty as a commissioned officer in the active Army, Reserves, or National Guard.

The program is a part of the United States Army Cadet Command. Classes and activities are conducted on the Lafayette and Lehigh campuses under the auspices of Lehigh University's ROTC program, which acts as the local headquarters for ROTC and Military Science instruction.

Any student may take ROTC classes during any semester. To be eligible for commissioning as an officer, however, a student must have at least two years until graduation upon entry into ROTC. Non-scholarship students incur no military obligation until their junior year. Students continuing in ROTC beyond their sophomore year may sign a contractual agreement leading to a commission as a Second Lieutenant in one of more than 20 branches of the Army upon graduation. All juniors and seniors receive tax-free monthly stipends of $450 and $500 respectively during the school year.

Four-year ROTC scholarships cover full tuition and fees and also offer a stipend and $900 per year for books. Scholarships are available to those who will be entering Lafayette College as first-year students. Two- and three-year ROTC scholarships are available once enrolled at Lafayette College (current participation in Army ROTC is not required).

All Army ROTC scholarships are awarded solely on merit, and recipients incur a military obligation.

For more information, see "Military Science (p. 55)" section.

LIBRARY RESOURCES

Lafayette's libraries provide students with a wide range of information sources and services to support their educational pursuits. The David Bishop Skillman Library is the college's main library, with a collection of more than 500,000 volumes. Kirby Library has an additional 30,000 volumes related to government and law. The two libraries subscribe to thousands of magazines, journals, and newspapers in electronic and paper formats and an extensive array of electronic databases and books, accessible both on and off campus. The libraries' Special Collections and College Archives houses the College's rare books, manuscripts, and institutional records, including a premier collection on the Marquis de Lafayette.

The libraries also provide access to collections beyond those at Lafayette. Students have borrowing privileges at five other colleges in the Lehigh Valley and may use interlibrary loan services to request materials from libraries across the country.

A staff of librarians helps students to use the libraries' resources and obtain the information they need. Librarians and archivists meet with classes in all disciplines and provide group instruction in library research. Reference assistance is available to students on weekdays, most evenings, and Sundays. Students may arrange personalized research assistance sessions with librarians for extended consultations about their research projects.

Lafayette's libraries also provide space for students to study and collaborate with one another. Kirby Library is housed in the Beaux-Arts style Kirby Hall of Civil Rights, which was completed in 1930 and renovated in the late 1990s. The library's classic, oak-paneled reading room is among the most beautiful interior spaces on campus.

A renovated and expanded Skillman Library was dedicated in 2005. The three-year project added more than 28,000 sq. ft. to the library and created an enhanced environment for collaborative learning, information technology, and an expanding book collection. The library’s newly redesigned spaces include a formal reading room, a program room, two instruction rooms, a digital media lab, the largest public computing cluster on campus, and a variety of individual and group study spaces.

INFORMATION TECHNOLOGY SERVICES

Lafayette College's information technology services are delivered via a 10 Gigabit network backbone that serves the entire campus community. Devices can access the network over wired 1 Gigabit connections or via campus wireless. The college network is connected to the Internet as well as to high-speed research networks like Internet2.

Information Technology Services (ITS) manages and supports both Windows and Macintosh computers. Multiple Novell and Linux-based servers support a variety of applications, including email, personal file storage, and course management systems. Students and faculty have web access to academic and financial records, course registration, blogging platforms, and other services.

Assistance with technology is available 24/7 through the Lafayette College help desk. Support is available for hardware and software, including assistance with common desktop applications like MS Office. ITS maintains the technology installed in most classrooms and provides instruction, equipment, and support for the creation and presentation of multimedia projects.

Although most students bring a computer to campus, Lafayette does not require students to have their own. Productivity software and all course-related applications are available on computers in a number of public computing sites throughout campus, including a 24-hour lab. In additions, most academic departments have special-purpose computing labs available for student use.

Students can purchase personal computers through special pricing arrangements with Dell and Apple. Microsoft Windows and Mac OSX are the supported operating systems; Microsoft Office is the supported productivity suite. In late spring, newly accepted students are sent full details on recommended hardware and software configurations, along with procedures to prepare a system for connection to the Lafayette network.

Admissions and Costs

ADMISSIONS

Admission to Lafayette College is highly competitive. The College receives about 12 applications annually for each available place in the first-year class and seeks to admit students who are engaged academically and socially and who want to make a difference on campus, in the community and in the world. Factors considered in evaluating each student's admissions file include academic performance in secondary school; rigor of courses taken; personal character such as motivation, social awareness, ambition, individualism and leadership potential; evidence of significant talent; and the recommendations of secondary school officials. Applicants for admission must submit test scores from either the SAT or ACT (writing section not required). SAT Subjects test results are recommended but not required. Students are strongly encouraged to have an on-campus interview.

Students admitted to Lafayette as full- time, degree-seeking students must have a high school diploma or recognized equivalent of a high school diploma at the time of their matriculation. Lafayette complies with federal and state legislation and does not in any way discriminate in education programs or in employment on the basis of gender, race, color, religion, creed, national origin, ancestry age, physical ability, or sexual orientation.

PREPARATION

Candidates for admission to the Bachelor of Arts degree program should have pursued a college preparatory curriculum in high school, including at least four years of English, three years of mathematics, two years of laboratory science, two years of a foreign language, and a minimum of five additional units in academic subjects. Candidates for the degree of Bachelor of Science, whether in a natural science or in engineering, should have pursued a program including four years of college preparatory mathematics, and a science sequence incorporating both chemistry and physics.

The secondary school report submitted in support of the application should include an evaluation from the secondary school counselor as well as one from a teacher who taught the candidate a major subject during the junior or senior year.

ADVANCED PLACEMENT

Lafayette participates in the Advanced Placement examination program of the College Entrance Examination Board (CEEB). Candidates interested in receiving course credit and placement in advanced classes should take the AP examinations given in May of each year. A score of either 4 or 5 on most examinations, and 3 or above on selected others, will earn course credit and advanced placement. The Lafayette faculty determine score assignments each spring. It is possible to receive sophomore standing with sufficient scores.

Lafayette cannot grant any AP credit without possession of the official AP score report from the CEEB before the end of the student's sophomore year at the College.

International Baccalaureate

The official results of the higher level examinations of the International Baccalaureate are considered for academic course credits at Lafayette. The acceptable score level is 5 or higher in all subjects. The amount of credit is determined by each department. No credit is given for subsidiary level examinations.

Students awarded the full IB diploma with results of 5 or above on all higher level and subsidiary level examinations, and results of C or above on both the Theory of Knowledge course and the Extended Essay, may apply for sophomore standing after arriving on campus. Students approved for sophomore standing receive between six to eight course credits, including up to two free elective credits (undesignated or INDS 098). Students who receive sophomore standing may not be awarded more than eight course credits and must complete the First-Year Seminar (FYS) as a graduation requirement. Free electives may not be used for major or distribution requirements.

A number of subjects in the IB program do not have a direct Lafayette course equivalent. Credit for higher level examination results in these areas is not guaranteed. If no departmental sponsor can be found for the subject, results of 5 or higher in these areas may be awarded as free elective course work (undesignated or INDS 098). Credits count toward the requirements for sophomore status as noted in the section above.

Academic Scholarships

Lafayette recognizes its most outstanding applicants with merit-based awards named for the Marquis de Lafayette. The Marquis Fellowship, valued at $40,000 per year, is offered to approximately 30 admitted students each year. The Marquis Scholarship, valued at $24,000 per year, is offered to approximately 10 percent of admitted students each year. Marquis Fellows and Marquis Scholars seeking financial aid award and whose demonstrated need exceeds the amount of their fellowship or scholarship award will receive a financial aid award, inclusive of the fellowship or scholarship, up to demonstrated need. Applicants seeking need-based aid must submit the required documents by the deadlines.

Other special benefits of the Marquis Fellowship and the Marquis Scholarship program include:

- a stipend of up to $4,000 for one faculty-led off-campus course during an interim session (Lehigh Valley Association of Independent Colleges programs excluded), approved semester study abroad, poorly paid/unpaid internship, or poorly paid/unpaid research with a member of the Lafayette faculty, participation in special events and activities including cultural opportunities coordinated by the Marquis Fellows and Scholars
- participation in special events and activities, including cultural opportunities
- faculty mentors

Students admitted under both Early Decision and Regular Decision are considered for this scholarship. Early decision applicants designated as Scholars will be notified at the time of admission. All Fellowship recipients will be notified in mid-

March as well as all regular decision candidates who are designated as Scholars.

Please note that only first year applicants to the College are considered for this scholarship at the time of their application for admission. Selection is based on the academic record prior to enrolling at Lafayette.

TRANSFER STUDENTS

Lafayette welcomes applications for the fall and spring semesters from students wishing to transfer from other institutions. All applicants must have a high school diploma (or GED) and be in good standing at their current institution. The College does not specify a minimum grade point average for consideration as a transfer student, but the majority of those offered admission present strong records of achievement. To be considered a transfer student you need a minimum of three transferable courses.

Students who transfer from a regionally accredited institution may be granted credit toward a Lafayette degree for courses which are consistent with the goals of the candidate's academic program at Lafayette and in which the candidate has achieved a grade of C or higher (2.0 on a 4.0 scale). Transfer students must spend a minimum of two academic years in residence to be eligible for graduation. At least half the courses applied toward a major must be taken at Lafayette.

INTERNATIONAL STUDENTS

Lafayette actively seeks international students, whose special experiences contribute significantly to the rich diversity of the campus community. Currently, approximately nine percent of the student body is made up of international students who represent 55 countries.

All applicants are required to submit official results of the SAT or the ACT with writing. Additionally, Lafayette recommends but does not require the results of two SAT Subject Tests. Prospective math and science majors are encouraged to take Subject Tests in mathematics and science.

Students whose first language is not English must submit official results of the TOEFL test unless the language of instruction during their four years of high school has been English. Generally, most competitive international candidates achieve a TOEFL (iBT) score of 95 or higher for admission.

FEES

Fees are subject to change by action of the Board of Trustees. For 2017-18, fees are:

Tuition	$50,400
Matriculation Fee*	$750
Student Activity/Technology Fee	$450
Standard Room Fee	$9,300
Board Fee (20-meal plan)	$5,740
(plus $100 Pard Card Dollars)	
Minimum Board Fee	$750
Health Insurance (optional)	$1,597
Tuition Refund Insurance (optional)	$356-$461
Parking Fee	$430

*The matriculation fee is a one-time fee charged to New Students only

In addition, the College estimates an allowance of at least $1000 for books and academic supplies and approximately $1000 for miscellaneous personal expenses and travel. Financial aid will be pro-rated for seniors who are approved for less than full-time status.

Students who enter Lafayette as full-time students and wish to change to part-time status (enrollment in fewer than three courses) must be in the final semester of their senior year. For consideration, a petition must be filed by Aug. 1 for fall semester and Dec. 1 for spring. Once granted permission to enroll for less than full-time study, the student will pay the full-time comprehensive fee pro-rated to the number of courses for which the student is allowed to register and the full student activity fee.

Students are advised to check their family health plan to be sure coverage will apply in case a claim is filed while they are registered on a part-time basis.

Last semester seniors who are approved for pro-rated enrollment status should expect to have their grants, scholarships and/or loans adjusted accordingly. Students must be enrolled at least half time to receive state, federal and/or institutional financial aid.

Interim Session

There will be a limited amount of financial support available for Off-Campus Interim programs, consisting of need-based grants that range from 50-75% of the cost of the program. Factors that are taken into consideration include the applicant's demonstrated level of financial need, the availability of loans, and previous study-abroad experience. Applicants must be currently receiving financial aid in order to qualify for a need-based grant. Note that international students studying at Lafayette College are considered to have "previous study abroad experience."

All students will automatically be considered for need-based grants. Decisions will be made by the Office of Financial Aid, and students will be notified if they have been awarded a grant. No application is required.

Please note: Marquis Scholars and previous recipients of financial assistance for an interim abroad program are not eligible for need-based grants.

Dining Plans

Lafayette offers a variety of dining options, more information about options and requirements can be found at https://dining.lafayette.edu.

Payments and Penalties

All college fees must be paid in full at an established date prior to the start of each semester. The student will not be permitted to register or to attend classes until the account is paid in full or until satisfactory arrangements for payment are made with the Controller's Office. Failure to comply will result in both the withdrawal of the student for the current semester and a refusal of permission to register for subsequent semesters. The Registrar will not release the transcript of a student whose account has not been paid in full. International students are required to make all payments in the form of an international money order or a check that is drawn on and collectible by a United States bank. Upon request, the College will provide instructions for the wire transfer of payment to the College.

The penalty fee for failure to register within the scheduled period is $50 unless excused by the Dean of Advising. Failure to follow the established procedures in changing one's schedule results in a $50 penalty. **The penalty for late payment of fees is $300.**

Checks returned by the payor's bank will be subject to a $25 fee. The amount of the check, plus the $25 penalty, must be received by the Controller's Office not later than one week after notification.

Refund Policy

If a student leaves Lafayette during a term, the College will provide a partial refund of tuition and fees according to the following terms:

Comprehensive Fee, Student Activity Fee, and Room Fees

Withdrawal on or before the first day of classes: 100 percent.

Withdrawal 2-50 days into the semester: pro-rated - based on the number of days remaining in the semester divided by the total number of days in the semester.

Withdrawal 51+ days: no refund

For purposes of this calculation, weekend days are included, but the five-day Thanksgiving break and spring break are excluded.

A student required to withdraw for disciplinary reasons is not eligible for a refund of the comprehensive fee, student activity fee, or the room fee.

While a student is residing in College property, the College assumes no responsibility for loss of or damage to personal property. Students should verify that coverage is provided under their families' homeowners policies or contact an insurance agent concerning protection against such losses.

Board Fees

Board fee refund will be prorated based on the number of unused weeks remaining in the semester.

Flex Dollars

Flex dollars will be refunded to a withdrawn student to the extent that those dollars have not been used. No refunds will be granted except as described above.

Financial Aid

The Financial Aid Office is required by federal statute to recalculate federal financial aid eligibility for students who withdraw, drop out, are dismissed, or take a leave of absence prior to completing 60 percent of a payment period or term.

If a student leaves the institution prior to completing 60 percent of a payment period or term, the financial aid office recalculates eligibility for Title IV funds. Recalculation is based on the percentage of earned aid using the following Federal Return of Title IV funds formula:

> Percentage of payment period or term completed = the number of days completed up to the withdrawal date divided by the total days in the payment period or term. (Any break of five days or more is not counted as part of the days in the term.) This percentage is also the percentage of earned aid.

Funds are returned to the appropriate federal program based on the percentage of unearned aid using the following formula:

> Aid to be returned = (100 percent of the aid that could be disbursed, minus the percentage of earned aid) multiplied by the total amount of aid that could have been disbursed during the payment period or term.

If a student earned less aid than what was disbursed, the institution would be required to return a portion of the funds and the student would be required to return a portion of the funds. Keep in mind that when Title IV funds are returned, the student borrower may owe a debit balance to the institution.

If a student earned more aid than was disbursed to him/her, the institution would owe the student a post-withdrawal disbursement. The student must be offered any post-withdrawal disbursement of loan funds within 30 days of the date the institution determined the student withdrew.

The institution must return the amount of Title IV funds for which it is responsible no later than 45 days after the date of the date of the student's withdrawal.

Refunds are allocated in the following order:

- Unsubsidized Federal Direct Loans
- Subsidized Federal Direct Loans
- Federal Perkins Loans
- Federal Parent (PLUS) Loans
- Federal Pell Grants for which a return of funds is required
- Federal Supplemental Opportunity Grants for which a return of funds is required
- Other assistance under this Title for which a Return of funds is required

Tuition Refund Insurance

To complement this refund policy and to help protect your educational investment, the College offers an optional Tuition Refund Insurance Plan. When combined with the College's published refund policy, reimbursement totaling 100 percent of the comprehensive fee (tuition) and those College room charges billed by the College will be made if your son/daughter is forced to withdraw from school due to a personal illness or accident. In

case of withdrawal due to a mental/nervous disorder, 60 percent of the above charges is covered. A plan description and enrollment application will be mailed approximately 30 days prior to the first day of fall semester classes.

Student Health Insurance

The Affordable Care Act requires all individuals to be covered by health insurance. To ensure all students have access to comprehensive medical care while attending Lafayette College, all students will be enrolled automatically in the Student Health Insurance Plan (SHIP). This enrollment will result in an automatic premium charge to the student's account. This charge will be removed only if the student waives the enrollment. Students may waive the coverage only if they are enrolled in a comparable insurance plan.

To waive enrollment in SHIP, students must provide proof of comparable coverage, and submit the online waiver form by the established waiver deadline.

Please closely evaluate your coverage to make an informed decision regarding health insurance needs while enrolled at Lafayette College. The College is not responsible for medical or other expenses resulting from injuries sustained by students while enrolled, whether such injuries occur on or off campus.

Please see the Bailey Health Center website for more information.

Majors

Most of the major headings in this chapter correspond to the names of academic departments or interdisciplinary majors at Lafayette. Basic requirements for all engineering programs are listed under the heading "Engineering." All departments offer opportunities to take on special academic challenges that foster marketable skills and enhance the academic program such as internships, independent study, study abroad, research with faculty, and writing an honors thesis.

FIRST-YEAR SEMINAR PROGRAM

The First-Year Seminar, which is required of all students, is designed to introduce students to intellectual inquiry through engaging them as thinkers, speakers, and writers. Each seminar focuses intensively on a special topic that is articulated with related cocurricular activities. Limited to approximately 16 students per section, the First-Year Seminar includes significant reading, writing, discussion, and presentation and is affiliated with the College Writing Program. Students are also introduced to use of the library for research. First-Year Seminars are designed to generate collaboration among faculty from various disciplines and to encourage intellectual communities among students and faculty. While each seminar is taught independently, most are grouped in topical clusters that may share common lectures and readings, co-teaching, tutorials, cocurricular activities, etc. Seminars normally meet three hours per week; a fourth hour may be scheduled at the discretion of the faculty. First-Year Seminars are a critical part of the Common Course of Study, a corequisite for other courses taken by students in their first semester, and a prerequisite for subsequent courses. A comprehensive listing of seminars is available online, although the offerings change each year. During the summer, all entering first-year students receive, as part of the registration materials, a list of the seminars to be given in the following fall. Students are asked to indicate their first five choices; every effort is made to place students according to their preferences.

First Year Seminar Courses (p. 121)

AFRICANA STUDIES

Acting Program Chair
Assistant Professor Blunt

The Africana Studies Program is an interdisciplinary program that brings together faculty from diverse Lafayette disciplines and departments who share expertise and research interests in the study of Africa and the African diaspora (communities of African descent worldwide) including African Americans. The interdisciplinary focus of the program provides students with a wide choice of courses which explore the history, cultures, and social dynamics of communities on the continent of Africa as well as dispersed communities of African descent. Many exciting research opportunities are offered in Africana Studies courses, including working with professors on digital humanities projects and working in small groups to uncover new material about African Americans in the nineteenth century. Other innovative and challenging activities include making videos as part of class assignments, working with visiting professors in the arts, and in-class guest lectures on a variety of contemporary topics, including current issues in Africa. Students are expected to engage course topics through intensive reading of primary and secondary materials, and are required to develop skills in critical thinking, to increase their knowledge of global geographies, and to recognize theoretical frameworks important to the evolution of the field of Africana studies. The curriculum includes the study of the numerous waves of migration of people from the African continent to Europe, Southeast Asia, and the Middle East, as well as the Americas. The program takes a global view of African history and the history of its diasporas, including 20th and 21st century migrations.

Africana Studies Courses (p. 70)

Africana Studies Major

Requirements

The major consists of a minimum of 9 courses from at least two academic disciplines:

AFS 101	Ideas of Africa
AFS 102	Introduction to Africana Studies
AFS 211	The Black Experience
AFS 400	Capstone Seminar in Africana Studies
	Five upper-level electives

Electives are chosen from an approved list of AFS electives.

Honors: Students who meet College and major requirements may submit a written proposal for approval during their junior year or early part of their senior year for an honors thesis. Students pursuing honors will be allowed to substitute first-semester AFS 495 for AFS 400.

Africana Studies Minor

Requirements

The minor consists of a minimum of 5 courses:

Choose one:

AFS 101	Ideas of Africa
AFS 102	Introduction to Africana Studies
AFS 211	The Black Experience

And:

AFS 400	Capstone Seminar in Africana Studies
	Three upper-level electives

Electives are chosen from an approved list of AFS electives.

Honors: Students who meet College and major requirements may submit a written proposal for approval during their junior year or early part of their senior year for an honors thesis. Students pursuing honors will be allowed to substitute first-semester AFS 495 for AFS 400.

ANTHROPOLOGY AND SOCIOLOGY

Department Head
Professor Smith

Studying Anthropology and Sociology offers students the opportunity to gain a strong grounding in cultural difference and diversity, as well as understanding social forms and processes on a global scale. Looking beyond the surface of human relations, students develop a keen awareness of cultural and social complexity in diverse contexts around the world. From broad overviews of the field to more specialized offerings and required upper-level seminars in theory and method, A&S courses collectively allow students to build crucial skill sets, including analytic skills and critical thinking, research design and practice, qualitative and quantitative methods, clear communication and writing, group projects and presentation skills. Anthropology and Sociology classes work to expand our intellectual and geographic horizons, while preparing students for professional lives that require creative analytic and research capabilities, the capacity to work effectively in diverse or cross-cultural environments, global sophistication, effective communication, and real-world experience.

Anthropology and Sociology Courses (p. 76)

Anthropology and Sociology Major

Requirements

The major consists of a minimum of 10 courses:

A&S 102	Cultural Anthropology
A&S 103	Introduction to Sociology
A&S 200	Research Methods and Design
A&S 342	Theories of Society
	And
	Six additional A&S electives

Anthropology and Sociology Minor

Requirements

The minor consists of a minimum of six courses:

Choose two from:

A&S 102	Cultural Anthropology
A&S 103	Introduction to Sociology
A&S 342	Theories of Society

And:

A&S	Four A&S electives

A&S Electives: Selected in consultation with the minor adviser.

ART

Department Head

Associate Professor Furniss

The curriculum is a combined studio/art history course sequence in which students may concentrate in the area that most interests them. Museum and gallery internships, independent studio projects, student art exhibits, field trips, and an exceptional visiting artists program contribute to the special character of the program, as does the College's proximity to New York and Philadelphia. Individual studios in the Williams Visual Arts Building are made available to students who qualify for honors work in studio art. Professors encourage individual and communal learning and become deeply involved with the special interests of students.

Art Courses (p. 73)

Art Major

Requirements

The major consists of a minimum of 10 courses:

Including four introductory courses in art history and drawing:

ART 101	Introduction to Art History I
ART 102	Introduction to Art History II
ART 140	Art and Architecture of World Traditions: Asia, Africa, the Americas, and Oceania
ART 109	Drawing I
	One additional studio course
	Five additional courses

Additional courses are chosen from offerings in art history or studio art.

Students emphasizing art history must take a 300-level seminar, AND one non-Western art history course (ART 128, ART 216, ART 240, ART 241, or ART 242) is strongly recommended.

Students emphasizing studio art must take ART 206 and ART 306. (Students in the Class of 2017 may replace ART 306 with a 300-level Art elective.)

Study of at least one foreign language through the intermediate level is strongly recommended for those contemplating graduate study in art history. The department is committed to strong student advising and may recommend courses in other departments based on the programmatic needs of individual students.

Art Minor

Requirements

The minor consists of a minimum of six courses:

Including three introductory courses in art history and drawing:

ART 101	Introduction to Art History I
ART 102	Introduction to Art History II
ART 109	Drawing I
	Three additional courses

Additional courses are chosen from offerings in art history or studio art in consultation with the minor adviser or the department head.

Students emphasizing studio art must take ART 206.

Additional departmental course listings appear under Interim Session (p. 68).

Independent Projects and Honors

The department offers advanced students the opportunity to develop their interests in an intense experience of individualized learning. In partnership with faculty, students work for one or two semesters on rigorously designed projects that culminate with critical review by art department faculty and, in the case of honors, appraisal by professionals from outside the department.

Art Course Areas:

Art History

ART 101	Introduction to Art History I
ART 102	Introduction to Art History II
ART 126	History of Architecture
ART 128	Introduction to Asian Art
ART 140	Art and Architecture of World Traditions: Asia, Africa, the Americas, and Oceania
ART 216	Byzantine Art

ART 221	Ancient Art
ART 222	Medieval Art
ART 223	Italian Renaissance Art
ART 224	Baroque Art
ART 226	Age of Michelangelo
ART 231	American Art
ART 233	Nineteenth-Century Painting and Sculpture
ART 234	Modern Art
ART 235	African American Art
ART 240	Japanese Art and Architecture
ART 242	Chinese Art and Architecture
ART 340	Seminar in Art History
ART 392-393	Independent Study in Art History
ART 495-496	Thesis in Art History

Studio Art

ART 103	
ART 107	The Dynamics of Sculpture
ART 109	Drawing I
ART 110	
ART 111	Beginning Printmaking
ART 114	Beginning Painting
ART 120	Architectural Design and Theory
ART 196	Basic Photography (Black and White)
ART 212	Intermediate Printmaking
ART 215	The Land and the Global Environment
ART 218	Intermediate Painting
ART 306	Capstone: Senior Studio Seminar
ART 339	Advanced Painting
ART 344	Internships
ART 390-391	Independent Study in Studio Art
ART 497-498	Thesis in Studio Art

ASIAN STUDIES

Program Chair
Associate Professor Barclay

The Asian Studies Program at Lafayette College engages students in the interdisciplinary study of Asia. Asia, home to over 60% of the world's population, is defined by its common religious heritages and its historical experiences as an object of Western veneration and commercial expansion. As a distinct mode of inquiry, Asian Studies emphasizes:

1. a solid grounding in the region's geography, history, social structures, political systems, fine arts, and religious traditions
2. a critical approach to information about societies often misunderstood in the West
3. a commitment to sustained language training

The Asian Studies program offers both a minor and a major in Asian Studies, with courses in the humanities and the social sciences that provide the fundamental knowledge base, linguistic skills, and analytical tools to prepare students for careers in public service, the private sector, or advanced academic training. The College also sponsors seminars, lectures, and concerts exposing the community to the varied and important traditions of Asia.

Asian Studies Courses (p. 82)

Asian Studies Major

Requirements

The major consists of a minimum of nine courses:

ASIA 101	Introduction to Asian Studies
ASIA 490	Capstone
	Or
ASIA 495-496	Honors Thesis
	Seven approved electives
	Foreign Language requirement

Electives chosen from at least two academic disciplines. A maximum of two language courses may be used as major electives.

Foreign Language: Intermediate proficiency, e.g. CHN 112/JAPN 112 or another approved Asian language.

This major should also include the AB Common Course of Study (p. 5).

Asian Studies Minor

Requirements

The minor consists of a minimum of five courses:

ASIA 101	Introduction to Asian Studies
	Four approved electives

Electives chosen from at least two academic disciplines. A maximum of two language courses may be used as minor electives.

Current offerings focusing on Asia include: Art History, Chinese Language and Culture, Japanese Language and Culture, History, Government and Law, Religious Studies, and Music. Students should consult with the program chair regarding other approved options.

BIOCHEMISTRY

Majors in Biochemistry take a core of chemistry and biology courses including molecular biology. The curriculum involves the study of the chemical characteristics and reactions of organisms or living systems.

All of the chemistry and biology faculty carry on active research programs in which students are encouraged to participate. Biochemistry majors sometimes carry out projects in which they are guided by both a biology and a chemistry professor. Students can perform research as independent study or through the honors program. Based on their academic record and an interview, upperclass students may apply to be teaching assistants.

Biology (p. 82) or Chemistry (p. 91)

Biochemistry, A.B. Major

Requirements

The program consists of a minimum of 14 major courses and 4 collateral courses:

MATH 125	Modeling and Differential Calculus
	And
MATH 186	Applied Statistics
	Or
MATH 161	Calculus I
	And
MATH 162	Calculus II
	Or
MATH 161	Calculus I

	And
MATH 186	Applied Statistics
PHYS 111	General Physics-Mechanics and Thermodynamics
	And
PHYS 112	General Physics-Electricity, Magnetism, and Optics
	Or
PHYS 131	Physics I: Mechanics
	And
PHYS 133	Physics II: Electricity, Magnetism, and Waves
	Or
PHYS 151	Accelerated Physics I: Mechanics and Thermodynamics
	And
PHYS 152	Accelerated Physics II: Electricity, Magnetism, and Optics
CHEM 121	General Chemistry I
CHEM 122	General Chemistry II
CHEM 221	Organic Chemistry I
CHEM 222	Organic Chemistry II
CHEM 231	Analytical Chemistry I
CHEM 311	Elementary Physical Chemistry
	And
	One additional Chemistry course*
	Or
CHEM 323	Physical Chemistry I without Lab
	And
CHEM 324	Physical Chemistry II without Lab
	Or
CHEM 325	Physical Chemistry I with Lab
	And
CHEM 326	Physical Chemistry II with Lab
CHEM 351	Biochemistry Survey
CHEM 352	Experimental Biochemistry
CHEM 452	Topics in Advanced Biochemistry
BIOL 101	General Biology
BIOL 102	General Biology
BIOL 255	Molecular Genetics
	One additional Biology course

*One additional Chemistry course: 200-level or above, excluding independent study or thesis. Not required if CHEM 323 or CHEM 325 and CHEM 324 or CHEM 326 are taken.

One additional 200-level Biology course: 200-level or above.

This major in addition to other College-wide requirements for the A.B. degree.

Biochemistry majors may not seek a second major (A.B. or B.S.) or minor in either biology or chemistry.

Biochemistry, B.S. Major

Requirements

The program consists of a minimum of 18 major courses and 5 collateral courses:

MATH 161	Calculus I
MATH 162	Calculus II
MATH 263	Calculus III
PHYS 131	Physics I: Mechanics
	And
PHYS 133	Physics II: Electricity, Magnetism, and Waves
	Or
PHYS 151	Accelerated Physics I: Mechanics and Thermodynamics
	And
PHYS 152	Accelerated Physics II: Electricity, Magnetism, and Optics
CHEM 121	General Chemistry I
CHEM 122	General Chemistry II
CHEM 221	Organic Chemistry I
CHEM 222	Organic Chemistry II
CHEM 231	Analytical Chemistry I
CHEM 323	Physical Chemistry I without Lab
	Or
CHEM 325	Physical Chemistry I with Lab
CHEM 324	Physical Chemistry II without Lab
	Or
CHEM 326	Physical Chemistry II with Lab
CHEM 332	Analytical Chemistry II
CHEM 351	Biochemistry Survey
CHEM 352	Experimental Biochemistry
CHEM 392	Independent Research
	Or
CHEM 394	Independent Research
	Or
CHEM 495-496	Thesis
CHEM 452	Topics in Advanced Biochemistry
	One additional Chemistry course*
BIOL 101	General Biology
BIOL 102	General Biology
BIOL 255	Molecular Genetics
	One additional Biology course
	One additional 300/400-level Chemistry or Biology course

CHEM 325, CHEM 326: Must complete one of either CHEM 325 or CHEM 326.

One additional Chemistry course: 200-level or above excluding independent study or thesis.

One additional Biology course: 200-level or above.

This major in addition to other College-wide requirements for the B.S. degree.

Biochemistry majors may not seek a second major (A.B. or B.S.) or minor in either biology or chemistry.

BIOLOGY

Department Head

Professor Kurt

Biology, the study of life, challenges students to think creatively and analytically and allows them to participate in a fascinating academic adventure. The many exciting discoveries in medicine, genetics, molecular biology, agriculture, and ecology throughout the twentieth century are continuing into this millennium. Lafayette's biology curricula are designed to prepare students to contribute to these developments by preparing them for careers in research, teaching, the health professions, and industry.

Biology majors enjoy small classes and may choose from a wide variety of courses. Special opportunities include independent study and collaborative research projects with faculty, a senior honors thesis program, and paid laboratory teaching assistant positions. Non-credit internships for students considering careers in biology and the health professions may be available through the Office of Career Services.

Biology Courses (p. 82)

Biology, A.B. Major

The Bachelor of Arts (A.B.) curriculum combines a solid background in biology with increased opportunity for the students to explore other fields of study.

Requirements

The program consists of a minimum of 10 major courses and 4 collateral courses:

CHEM 121	General Chemistry I
CHEM 122	General Chemistry II
MATH 161	Calculus I
	And
MATH 186	Applied Statistics
	Or
MATH 125	Modeling and Differential Calculus
	And
MATH 186	Applied Statistics
BIOL 101	General Biology
BIOL 102	General Biology

Biology Course Areas:

One course at the 200-level in each of the three course areas noted below; two 300-level courses, one in each of two different course areas noted below; and three 200-level or higher electives. CM 151 may be taken as one of the 200-level electives. GEOL 320 may be taken as a 200-level EEB course and CHEM 351 may be taken as a 200-level GCMB course.

Genetics/Cellular/Molecular Biology (GCMB):

BIOL 212	Developmental Biology
BIOL 215	Phytopathology
BIOL 245	Immunology
BIOL 255	Molecular Genetics
BIOL 256/NEUR 256	Neurobiology
BIOL 270	Special Topics
BIOL 274	Introduction to Bioinformatics
BIOL 310	Aging and Age-Related Diseases
BIOL 336	Evolutionary Genetics
BIOL 338	Biological Pattern Formation
BIOL 340	Molecular Medicine
BIOL 350	Genomics
BIOL 351-380	Special Topics
BIOL 401-404	Independent Research
BIOL 495-496	Thesis
CHEM 351	Biochemistry Survey

Physiology/Organismal Biology (POB):

BIOL 201	Invertebrates and World Health
BIOL 212	Developmental Biology
BIOL 213	Comparative Vertebrate Anatomy
BIOL 214	Neuroanatomy
BIOL 215	Phytopathology
BIOL 224	Plant Form, Function, and Adaption
BIOL 225	Microbiology
BIOL 251	Human Physiology
BIOL 270	Special Topics
BIOL 310	Aging and Age-Related Diseases
BIOL 314	Anatomy of Vision
BIOL 317	Physiology of Extreme Animals
BIOL 338	Biological Pattern Formation
BIOL 342	Botany and Biodiversity
BIOL 345	Infectious Disease
BIOL 351-380	Special Topics
BIOL 401-404	Independent Research
BIOL 495-496	Thesis

Ecology/Evolutionary Biology (EEB):

BIOL 231	Ecology
BIOL 234	Environmental Biology
BIOL 235	Evolutionary Biology
BIOL 270	Special Topics
BIOL 271	Marine Biology
BIOL 272	Conservation Biology
BIOL 274	Introduction to Bioinformatics
BIOL 317	Physiology of Extreme Animals
BIOL 332	Advanced Aquatic Ecology
BIOL 336	Evolutionary Genetics
BIOL 341	Environmental Issues in Aquatic Ecosystems
BIOL 342	Botany and Biodiversity
BIOL 351-380	Special Topics
BIOL 401-404	Independent Research
BIOL 495-496	Thesis
GEOL 320	Paleobiology

The sequence MATH 161/MATH 162/MATH 186 is recommended for A.B. majors planning careers in quantitative fields or medicine; students who are unsure of their degree program should begin with MATH 161.

In unusual circumstances PSYC 120 may substitute for MATH 186 with the approval of the department head.

Candidates must also complete the Common Course of Study (p. 5).

Biology, B.S. Major

The Bachelor of Science (B.S.) curriculum is broader in basic sciences and allows the student ample opportunity to explore advanced areas in biology.

Requirements

The program consists of a minimum of 12 courses and 8 collateral courses:

CHEM 121	General Chemistry I
CHEM 122	General Chemistry II
CHEM 221	Organic Chemistry I

CHEM 222	Organic Chemistry II
PHYS 111	General Physics-Mechanics and Thermodynamics
	And
PHYS 112	General Physics-Electricity, Magnetism, and Optics
	Or
PHYS 131	Physics I: Mechanics
	And
PHYS 133	Physics II: Electricity, Magnetism, and Waves
MATH 161	Calculus I
MATH 186	Applied Statistics
BIOL 101	General Biology
BIOL 102	General Biology

Biology Course Areas:

One course at the 200-level in each of the three course areas noted below; two 300-level courses, one in each of two different course areas noted below; and five 200-level or higher electives. CM 151 may be taken as one of the electives. GEOL 320 may be taken as a 200 level EEB course and CHEM 351 may be taken as a 200 level GCMB course.

Genetics/Cellular/Molecular Biology (GCMB):

BIOL 212	Developmental Biology
BIOL 215	Phytopathology
BIOL 245	Immunology
BIOL 255	Molecular Genetics
BIOL 256/NEUR 256	Neurobiology
BIOL 270	Special Topics
BIOL 274	Introduction to Bioinformatics
BIOL 310	Aging and Age-Related Diseases
BIOL 336	Evolutionary Genetics
BIOL 338	Biological Pattern Formation
BIOL 340	Molecular Medicine
BIOL 350	Genomics
BIOL 351-380	Special Topics
BIOL 401-404	Independent Research
BIOL 495-496	Thesis
CHEM 351	Biochemistry Survey

Physiology/Organismal Biology (POB):

BIOL 201	Invertebrates and World Health
BIOL 212	Developmental Biology
BIOL 213	Comparative Vertebrate Anatomy
BIOL 214	Neuroanatomy
BIOL 215	Phytopathology
BIOL 224	Plant Form, Function, and Adaption
BIOL 225	Microbiology
BIOL 251	Human Physiology
BIOL 270	Special Topics
BIOL 310	Aging and Age-Related Diseases
BIOL 314	Anatomy of Vision
BIOL 317	Physiology of Extreme Animals
BIOL 338	Biological Pattern Formation
BIOL 342	Botany and Biodiversity
BIOL 345	Infectious Disease
BIOL 351-380	Special Topics
BIOL 401-404	Independent Research
BIOL 495-496	Thesis

Ecology/Evolutionary Biology (EEB):

BIOL 231	Ecology
BIOL 234	Environmental Biology
BIOL 235	Evolutionary Biology
BIOL 270	Special Topics
BIOL 271	Marine Biology
BIOL 272	Conservation Biology
BIOL 274	Introduction to Bioinformatics
BIOL 317	Physiology of Extreme Animals
BIOL 332	Advanced Aquatic Ecology
BIOL 336	Evolutionary Genetics
BIOL 341	Environmental Issues in Aquatic Ecosystems
BIOL 342	Botany and Biodiversity
BIOL 351-380	Special Topics
BIOL 401-404	Independent Research
BIOL 495-496	Thesis
GEOL 320	Paleobiology

BIOL 401-404, BIOL 495-496: No more than a total of four courses may be counted toward the course requirements.

The sequence MATH 161/MATH 162/MATH 186 or MATH 165/MATH 166/MATH 186 is recommended for B.S. majors planning graduate work and careers in quantitative fields or in medicine.

In unusual circumstances PSYC 120 may substitute for MATH 186 with the approval of the department head.

Candidates for the B.S. degree in Biology may elect a minor program in addition to their major. The requirements for a minor are the same as the College requirements.

Candidates must also complete the Common Course of Study (p. 5).

CHEMISTRY

Department Head
Professor Husic

Majors learn to interpret the physical world through the study of the properties, composition, and structure of matter.

The Bachelor of Science is the most structured and is preferred by graduate schools and employers who seek maximum professional capability at the undergraduate level. The Bachelor of Arts requires fewer chemistry courses and more study in other fields; it is chosen by students who plan health service careers or others who desire a broader educational experience.

Chemistry Courses (p. 91)

Chemistry, A.B. Major

Requirements

The program consists of a minimum of 10 major courses and 4 collateral courses:

MATH 161	Calculus I
	And
MATH 162	Calculus II
	Or
MATH 161	Calculus I
	And
MATH 186	Applied Statistics

PHYS 111	General Physics-Mechanics and Thermodynamics
	And
PHYS 112	General Physics-Electricity, Magnetism, and Optics
	Or
PHYS 131	Physics I: Mechanics
	And
PHYS 133	Physics II: Electricity, Magnetism, and Waves
	Or
PHYS 151	Accelerated Physics I: Mechanics and Thermodynamics
	And
PHYS 152	Accelerated Physics II: Electricity, Magnetism, and Optics
CHEM 121	General Chemistry I
CHEM 122	General Chemistry II
CHEM 212	Inorganic Chemistry I
	Or
CHEM 213	Inorganic Chemistry I with Laboratory
CHEM 221	Organic Chemistry I
CHEM 222	Organic Chemistry II
CHEM 231	Analytical Chemistry I
CHEM 311	Elementary Physical Chemistry
	And
	Three advanced Chemistry electives
	Or
CHEM 323	Physical Chemistry I without Lab
	And
CHEM 324	Physical Chemistry II without Lab
	And
	Two advanced Chemistry electives
	Or
CHEM 325	Physical Chemistry I with Lab
	And
CHEM 326	Physical Chemistry II with Lab
	And
	Two advanced Chemistry electives

Students selecting CHEM 311 and Three advanced Chemistry electives: May not include CHEM 323 or CHEM 325.

Students selecting CHEM 323/324/ or 325/326 and Two advanced Chemistry electives: May not include CHEM 311.

Chemistry 323 or 325 plus three advanced courses not including either 324 or 326 is not an option.

Advanced Chemistry electives are 300- or 400-level courses, only two of which may be Biochemistry courses.

In addition, College-wide requirements for the A.B. degree must be satisfied.

Chemistry, B.S. Major

The B.S. Degree is certified by the American Chemical Society.
Requirements

The program consists of a minimum of 14 major courses and 6 collateral courses:

MATH 161	Calculus I
MATH 162	Calculus II
MATH 263	Calculus III
MATH 264	Differential Equations with Linear Algebra
	Or
MATH 272	Linear Algebra with Applications
	Or
MATH 300	Vector Spaces
PHYS 131	Physics I: Mechanics
	And
PHYS 133	Physics II: Electricity, Magnetism, and Waves
	Or
PHYS 151	Accelerated Physics I: Mechanics and Thermodynamics
	And
PHYS 152	Accelerated Physics II: Electricity, Magnetism, and Optics
CHEM 121	General Chemistry I
CHEM 122	General Chemistry II
CHEM 213	Inorganic Chemistry I with Laboratory
CHEM 221	Organic Chemistry I
CHEM 222	Organic Chemistry II
CHEM 231	Analytical Chemistry I
CHEM 325	Physical Chemistry I with Lab
CHEM 326	Physical Chemistry II with Lab
CHEM 332	Analytical Chemistry II
CHEM 351	Biochemistry Survey
CHEM 392	Independent Research
	Or
CHEM 394	Independent Research
	Or
CHEM 495-496	Thesis
CHEM 431	Inorganic Chemistry II
	Two advanced Chemistry electives

Two advanced Chemistry electives: 300- or 400-level, excluding independent study or thesis and including a minimum of 500 hours of chemistry laboratory.

In addition, College-wide requirements for the B.S. degree must be satisfied.

Chemistry Minor

Requirements

The minor consists of a minimum of six courses:

CHEM 121	General Chemistry I
CHEM 122	General Chemistry II
CHEM 221	Organic Chemistry I
CHEM 222	Organic Chemistry II
CHEM 311	Elementary Physical Chemistry
	Or
CHEM 323	Physical Chemistry I without Lab

	And
CHEM 324	Physical Chemistry II without Lab

And an additional course selected from:

CHEM 212	Inorganic Chemistry I
CHEM 231	Analytical Chemistry I
CHEM 252	Environmental Chemistry
CHEM 351	Biochemistry Survey

For information on the A.B. and B.S. majors in Biochemistry, go back to the main catalog page and select "Biochemistry (p. 31)."

COMPUTER SCIENCE

Department Head
Associate Professor Pfaffmann

Computer science is the study of algorithms and their implementations. This field of study is quite recent -- almost all of the computer scientists who ever lived are still alive. Its growth has been explosive, especially in subfields such as networks, artificial intelligence, and e-commerce.

The main emphasis of the curriculum is software engineering: a systematic approach to the development of medium-to-large programs. One aspect of this approach is the separation of principles from technology. Students learn underlying concepts in lecture sections and learn technical details-such as programming languages and operating systems-in laboratory sections. Students have opportunities for team projects as well as independent study and research.

Lafayette's fiber-optic networked campus provides computing resources to support course work, research, and personal projects. Many students gain additional experience by working part-time for the Information Technology Services department.

Computer Science Courses (p. 97)

Computer Science, B.S. Major

Requirements
The program consists of a minimum of 13 major courses and 12 collateral courses:

CS 104	Introduction to Game Programming
	Or
CS 105	Digital Media Computing
	Or
CS 106	Personal Robotics
CS 150	Data Structures and Algorithms
CS 200	Computers and Society
CS 202	Analysis of Algorithms
CS 203	Computer Organization
CS 205	Software Engineering
CS 301	Principles of Programming Languages
CS 303	Theory of Computation
CS 406	Operating Systems
CS 470	Senior Project
	Or
CS 495-496	Senior Thesis
CS	Three CS 300 or 400 level electives
MATH 161	Calculus I
MATH 162	Calculus II
MATH 263	Calculus III
MATH 182	Discrete Structures
MATH 186	Applied Statistics
	Or
PSYC 120	Quantitative Methods in Psychology
	Or
MATH 335	Probability
	And
MATH 336	Mathematical Statistics
MATH 272	Linear Algebra with Applications
	Or
MATH 282	Techniques of Mathematical Modeling
PHIL 200	Logic
PHYS 131	Physics I: Mechanics
	And
PHYS 133	Physics II: Electricity, Magnetism, and Waves
	Or
PHYS 151	Accelerated Physics I: Mechanics and Thermodynamics
	And
PHYS 152	Accelerated Physics II: Electricity, Magnetism, and Optics
	Or
CHEM 121	General Chemistry I
	And
CHEM 122	General Chemistry II
	Or
BIOL 101	General Biology
	And
BIOL 102	General Biology
	One additional laboratory course in the natural sciences

Natural Science laboratory course must be outside Computer Science.

The Common Course of Study (p. 5) is required.

Computer Science, A.B. Major

Requirements
The program consists of a minimum of 8 major courses and 9 collateral courses:

CS 104	Introduction to Game Programming
	Or
CS 105	Digital Media Computing
	Or
CS 106	Personal Robotics
CS 150	Data Structures and Algorithms
CS 202	Analysis of Algorithms
CS 203	Computer Organization
CS 205	Software Engineering
CS	Three CS 300 or 400 level electives
MATH 161	Calculus I
MATH 182	Discrete Structures
MATH 186	Applied Statistics
	Or
PSYC 120	Quantitative Methods in Psychology

	Or
MATH 335	Probability
	And
MATH 336	Mathematical Statistics
PHIL 200	Logic
	Approved Five or Six course cluster

Five or Six courses: Coherent, pre-approved by the department cluster of five or six courses outside of computer science. This requirement is waived for double majors.

The Common Course of Study (p. 5) is required.

Computer Science Minor

Requirements

The minor consists of a minimum of six courses:

CS 104	Introduction to Game Programming
	Or
CS 105	Digital Media Computing
	Or
CS 106	Personal Robotics
CS 150	Data Structures and Algorithms
CS	Four CS 200, 300 or 400 level electives

ECONOMICS

Department Head
Professor DeVault

Economics is the branch of social sciences that studies how societies allocate scarce resources among competing ends. The core of the economics curriculum at Lafayette emphasizes macroeconomic and microeconomic theory, econometric analysis, accounting and finance. Upper-level electives cover a wide range of fields within economics, including applied economics, development and international economics, political economy and public policy. In addition, the curriculum also features courses in accounting, finance, and marketing.

All economic majors will have the opportunity to learn and apply econometric software. Special opportunities within the department include research with faculty, internships, opportunities to engage in student-centered learning, and the Lafayette Student Investment Research Fund.

The requirements for a major in economics are Econ 101, 251, 252 and 253, five economics electives (at least three of which must be at the 300 level), and a capstone requirement. Students are also required to complete either Math 141 or Math 161 as well as Math 186.

Students who intend to major in economics are encouraged to complete Economics 101, 251, 252 and 253 by the end of their sophomore year. This will require completion of Math 141 or Math 161 as well as Math 186. Normally, students are not expected to take Economics 251, 252 or 253 in their first year of study. Students who would like to take additional economics courses in their first year are encouraged to take one of the department's 200-level electives. Note that students can only count two 200-level electives towards a major in economics.

Economics Courses (p. 100)

Economics Major

Requirements

The program consists of a minimum of 10 major courses and 2 collateral courses:

ECON 101	Principles of Economics
ECON 251	Intermediate Microeconomics
ECON 252	Intermediate Macroeconomics
ECON 253	Fundamentals of Econometrics
ECON	Economics Capstone Elective
ECON	Five Economics electives
MATH 141	Differential Calculus and Economic Modeling
	And
MATH 186	Applied Statistics
	Or
MATH 161	Calculus I
	And
	Mathematics Department multivariate calculus module
	And
MATH 186	Applied Statistics

Economics electives: A minimum of five department electives at least three of which must be at the 300 level or higher.

Internships do not count toward the major.

Beginning with the class of 2018, all majors must complete a capstone requirement. This requirement can be met through a capstone seminar or through approved individualized instruction.

Economics Minor

Requirements

The minor consists of a minimum of six courses:

Requirements: Economics 101, Economics 251 or 252, and four other economics courses.

Economics Certificate in Financial Policy and Analysis

Requirements

The certificate consists of a minimum of nine courses:

ECON 101	Principles of Economics
ECON 251	Intermediate Microeconomics
ECON 259	Financial Accounting and Analysis
ECON 319	Financial Theory and Analysis
MATH 141	Differential Calculus and Economic Modeling
	Or
MATH 161	Calculus I
	Approved Statistics course

Category A elective

Choose one:

CS 104	Introduction to Game Programming
CS 105	Digital Media Computing
CS 106	Personal Robotics
CM 151	Introduction to Computational Science
ECON 358	Corporate Governance and Ethical Responsibility in the Global Environment
EGRS 450	Engineering Management
MATH 272	Linear Algebra with Applications

PSTD 300	Industry, Strategy, and Policy

Category B electives

Choose two:

ECON 320	Corporate Finance
ECON 321	Investments
ECON 323	Money, Financial Intermediation, and the Economy
ECON 324	Options and Futures
ECON 342	Public Finance
MATH 347	Financial Mathematics

For information on the joint major in Mathematics and Economics, refer to the Mathematics and Economics major (p. 55).

Additional departmental course offerings appear under Interim Session (p. 68).

EDUCATION PROGRAM

Program Chair
Instructor Squarcia

Although Lafayette does not have an Education major, details regarding receiving teacher certification can be found using the link below.

Education Courses (p. 106)

Education

Students interested in pursuing a teaching career upon graduation should contact the Education Program Adviser at the earliest opportunity. Although Lafayette does not offer teaching certification, several possibilities exist for receiving secondary teaching certification. Students who have completed the core education requirements at Lafayette may enroll in DeSales University's ninth-semester program for teaching certification at an additional cost established by DeSales.

Lafayette students may also receive advanced standing toward a graduate degree and certification at other universities. Students wishing to pursue teaching certification need to plan their academic program in cooperation with the Education Program Adviser.

ENGINEERING

Director of Engineering
Professor Hummel

The Division of Engineering offers four Bachelor of Science degrees in Chemical, Civil, Electrical and Computer, and Mechanical Engineering, as well as a Bachelor of Arts in Engineering, and a dual degree: Bachelor of Arts in International Affairs/B.S. Engineering.

Candidates for a Bachelor of Science in one of the engineering disciplines may elect a minor program in addition to their major. The minor requirements are the same as the College requirements.

Engineering Science Courses (p. 113)

AB International Studies/BS Engineering

Program Chair
Associate Professor Smith

Globalization of engineering and technology is increasing the number of attractive job opportunities in foreign countries for engineers with proficiency in a second language and an understanding of foreign cultures. This two-degree program helps students prepare for these careers with international corporations.

Students earn a Bachelor of Science degree in chemical, civil, electrical & computer, or mechanical engineering and a Bachelor of Arts in International Studies. Besides studying a chosen language, students take international politics, international history, and other humanities or social science courses related to the countries or regions where the language is spoken. The capstone experience, either a foreign practicum or study abroad, involves total immersion in a non-English-speaking culture.

A.B. in International Studies Courses (p. 161)

AB International Studies/BS Engineering Major

Requirements

The major requires completion of the requirements for the B.S. in Chemical, Civil, Electrical & Computer, or Mechanical Engineering.

The major consists of a minimum of eight courses:

GOVT 102	Introduction to International Politics
IA 362	Seminar
INS 401	International Studies Practicum I
	Foreign Language
	One course in International History
	Two electives

Foreign Language: Study of a foreign language through the advanced (211) level or equivalent proficiency.

Two Electives: Two additional upper-level electives in the humanities and social sciences directly related to the countries where the language proficiency is spoken

INS 401, INS 402: This requirement may also be met by a minimum two courses full-immersion experience in a country where the student's chosen language is spoken

Chemical and Biomolecular Engineering

Department Head
Associate Professor L. Anderson

Chemical engineers discover and implement new processes and products that are useful and economical. The chemical engineering profession has evolved in concert with the technological landmarks of the last century: from petroleum refining at the beginning of the last century, to the biotechnology and biomedical developments, innovations in digital communications and microelectronics, and nanotechnology.

Lafayette chemical engineers are well suited to take on these challenges. Our curriculum emphasizes general proficiency in

science and mathematics the first two years, followed by professionally oriented work the next two. Students may enroll in technical electives to learn more about a variety of areas. Students who do well may take on an independent research project, and seniors may complete a thesis.

The main laboratories are equipped for work on bench-scale and pilot scale equipment in the areas of fluid flow, heat transfer, mass transfer, separation processes and chemical reactor design. The department is accredited by the Engineering Accreditation Committee of the Accreditation Board for Engineering and Technology. Graduates are eligible to become members of the American Institute of Chemical Engineers.

The goals of the program are to graduate students who:

- Are able to tackle unfamiliar problems and demonstrate an ability to understand, formulate, analyze, design and provide solutions in the field of chemical engineering
- Demonstrate professional responsibility, addressing economic, sustainability, and environmental considerations in the solution of engineering problems in both local and global settings
- Work well in multi-disciplinary teams and appreciate the value of multiple perspectives in engineering problem solving
- Explain and defend their solutions and communicate effectively using graphic, verbal and written techniques to all audiences
- Value mentoring, life-long learning and developing the talents of others and by accomplishing these objectives become effective leaders in engineering.

Chemical Engineering Courses (p. 89)

Chemical Engineering, B.S. Major

Requirements

The program consists of a minimum of 14 major courses and 11 collateral courses:

MATH 161	Calculus I
MATH 162	Calculus II
MATH 263	Calculus III
MATH 264	Differential Equations with Linear Algebra
CHEM 121	General Chemistry I
CHEM 122	General Chemistry II
CHEM 221	Organic Chemistry I
	An approved Chemistry elective
PHYS 131	Physics I: Mechanics
	Or
PHYS 151	Accelerated Physics I: Mechanics and Thermodynamics
ES 101	Introduction to Engineering
	An approved engineering/engineering science elective
CHE 211	Material and Energy Balances
CHE 222	Thermodynamics
CHE 311	Transport Phenomena
CHE 312	Experimental Design I
CHE 321	Applied Fluid Mechanics and Heat Transfer
CHE 322	Experimental Design II
CHE 324	Process Control
CHE 411	Mass Transfer, Separations, and Bioseparations
CHE 412	Integrated Chemical Engineering
CHE 413	Reaction Kinetics and Reactor Design
CHE 415	Design Analysis
CHE 422	Design Synthesis
CHE	Two CHE electives

The Common Course of Study (p. 5) is required.

Civil and Environmental Engineering

Department Head
Professor Roth

Civil engineers, like all engineers, are problem-solvers. They find the best ways to construct, operate, and maintain bridges, buildings, dams, and highways. They design water plants and waste treatment systems, and look for ways to manage hazardous materials.

The curriculum prepares students for a variety of situations by emphasizing fundamental principles of engineering, an appreciation of the effect of human factors on technology, logical thinking, resourcefulness, and ethical considerations in applying science to human problems. In addition to a thorough grounding in science and technology, students select more than one-fifth of their courses in the liberal arts and humanities.

Students may choose to focus on structural, environmental, geotechnical, transportation, construction or hydraulic engineering. Facilities include laboratories for structural systems, materials, fluid mechanics, geotechnical engineering, geographical information systems, and environmental engineering. Design concepts and analytical techniques are integrated into the curriculum, which includes extensive use of state-of-the-art computer systems.

Juniors and seniors may undertake independent studies and research projects in conjunction with faculty. Seniors may also do honors theses.

Civil and Environmental Engineering Courses (p. 86)

Civil Engineering, B.S. Major

Requirements

The program consists of a minimum of 12 major courses and 14 collateral courses:

MATH 161	Calculus I
MATH 162	Calculus II
MATH 263	Calculus III
MATH 264	Differential Equations with Linear Algebra
CHEM 121	General Chemistry I
PHYS 131	Physics I: Mechanics
	Or
PHYS 151	Accelerated Physics I: Mechanics and Thermodynamics
ES 101	Introduction to Engineering
ES 226	Statics
ES 230	Strength of Materials
CE 251	Fluid Mechanics

CE 271	Civil Engineering Land Development-Surveying
CE 311	Structural Analysis and Steel Design
CE 321	Introduction to Environmental Engineering and Science
CE 331	Civil Engineering Project Management
CE 341	Introduction to Transportation Systems
CE 351	Water Resources Engineering
CE 361	Geotechnical Engineering
CE 472	Civil Engineering Capstone Design I
CE 473	Civil Engineering Capstone Design II
CE	Two CE electives Approved CE science elective in BIOL, GEOL, or NEUR Two additional approved CE math or science electives One approved CE engineering elective One approved CE technical elective

Science or Mathematics Electives: At least one science course from outside Chemistry or Physics.

Engineering elective: 200-level or higher in CE, CHE, ECE, or ME or 300-level or higher in EGRS

Technical elective: 200-level or higher in mathematics, science, CE, CHE, ECE, or ME or 300-level or higher in EGRS

The Common Course of Study (p. 5) is required.

Electrical and Computer Engineering

Department Head
Associate Professor Yu

Electrical and computer engineers, like all engineers, are problem-solvers. They plan and direct the design and development of electrical, electronic, electromechanical, and computing equipment. In addition, they apply computers as design tools, control systems, communications systems, and research resources. Careers in electrical and computer engineering are widely varied and include electronics design, communications, computing, manufacturing, wireless systems, electric power generation and distribution, consulting, and research.

The curriculum builds on the fundamentals in the physical and engineering sciences as well as mathematics and computer science. More than 20 percent of the program may include social sciences and humanities courses. Well-planned, hands-on engineering design experiences are woven into the curriculum. Facilities include computer systems, control systems, microelectronics, photonics, microwaves, VLSI and signal processing laboratories. Juniors and seniors are encouraged to undertake independent study and research projects.

The program prepares students to achieve the following career and professional accomplishments also known as Educational Objectives:

EO1-To have the ability to continually educate themselves

EO2-To adapt to changing job assignments/challenges

EO3-To function in a team and provide leadership

EO4-To apply their engineering education to solving a broad range of problems

EO5-To demonstrate involvement in professional/public/community service

EO6-To excel in their chosen area of professional activity

EO7-To have mature and effective communication skills

EO8-To have an appreciation of business enterprise, technology management, and social and legal issues.

Electrical and Computer Engineering Courses (p. 98)

Electrical and Computer Engineering, B.S. Major

Requirements
The program consists of a minimum of 13-14 major courses and 12-13 collateral courses:

MATH 161	Calculus I
MATH 162	Calculus II
MATH 182	Discrete Structures
MATH 263	Calculus III
MATH 264	Differential Equations with Linear Algebra
CHEM 121	General Chemistry I
PHYS 131	Physics I: Mechanics And
PHYS 133	Physics II: Electricity, Magnetism, and Waves Or
PHYS 151	Accelerated Physics I: Mechanics and Thermodynamics And
PHYS 152	Accelerated Physics II: Electricity, Magnetism, and Optics
ES 101	Introduction to Engineering Approved science/mathematics elective
CS 104	Introduction to Game Programming Or
CS 105	Digital Media Computing Or
CS 106	Personal Robotics
CS 150	Data Structures and Algorithms
CS 205	Software Engineering Or
ECE 318	
ECE 211	Digital Circuits I
ECE 212	Digital Circuits II
ECE 221	Basic Electric Circuit Analysis
ECE 322	Introduction to Solid State Devices and Circuits
ECE 323	Analysis and Design of Solid State Circuits
ECE 331	Signals and Systems
ECE 332	Communications Systems
ECE 341	Engineering Electromagnetics
ECE 433	Industrial Electronics and Control Systems

ECE 491	Senior Project
ECE 492	Electrical and Computer Engineering Design Laboratory II
ECE	Two approved ECE electives

The Common Course of Study (p. 5) is required.

Engineering Studies

Program Chair
Associate Professor Sanford Bernhardt

This degree provides a technical yet broad education that spans the physical and social sciences and the humanities; it is a liberal education for a technological age.

Students who choose this major value the analytical skills and technical literacy that the study of engineering provides. They do not intend to practice as design engineers, but want to be able to understand and communicate technical concepts and issues.

The curriculum provides a sound background in mathematics and physical science; basic engineering knowledge and problem-solving skills; concepts and analytical techniques relevant to specific areas of engineering; sensitivity to societal concerns through courses in history, government, economics, literature, and foreign cultures; and an understanding of human behavior through courses in psychology and sociology.

Engineering Studies Courses (p. 106)

Engineering, A.B. Major

Requirements
The program consists of a minimum of 10 major courses and 11 collateral courses:

ES 101	Introduction to Engineering
EGRS 251/PSTD 251	Introduction to Engineering and Public Policy
EGRS 261	Engineering Economics and Management
EGRS 451	Seminar on Engineering and Society
	Three approved 200-level engineering electives
	Three approved 300 or 400-level engineering electives
MATH 161	Calculus I
MATH 162	Calculus II
MATH 263	Calculus III
CHEM 121	General Chemistry I
PHYS 131	Physics I: Mechanics
	Or
PHYS 151	Accelerated Physics I: Mechanics and Thermodynamics
ECON 101	Principles of Economics
MATH	One approved Mathematics elective
	Two approved science electives
	Two approved social science electives

The Common Course of Study (p. 5) is required.

Mechanical Engineering

Department Head
Associate Professor Helm

Like all engineers, mechanical engineers are problem solvers. They design, develop, and construct internal combustion engines, machinery, power plants, transportation vehicles, and biomedical devices. They work in manufacturing, marketing, management, research, education, and system design and development.

The department offers a comprehensive program that prepares students for professional work or further study. The curriculum includes a solid grounding in mathematics, science, and technology, along with electives in the humanities and social sciences. Design, a central component of mechanical engineering, is integrated throughout the curriculum. Students use contemporary engineering computer software and apply modern manufacturing processes in creating and constructing their design projects. Facilities include laboratories for modern manufacturing designs, internal combustion engines, thermo-fluids, controls, instrumentation, precision measurement, and materials. All majors do a year-long senior design project. Seniors may elect to do independent study or honors thesis research.

Mechanical Engineering Courses (p. 165)

Mechanical Engineering, B.S. Major

Requirements
The program consists of a minimum of 14 major courses and 12 collateral courses:

MATH 161	Calculus I
MATH 162	Calculus II
MATH 263	Calculus III
MATH 264	Differential Equations with Linear Algebra
CHEM 121	General Chemistry I
PHYS 131	Physics I: Mechanics
	And
PHYS 133	Physics II: Electricity, Magnetism, and Waves
	Or
PHYS 151	Accelerated Physics I: Mechanics and Thermodynamics
	And
PHYS 152	Accelerated Physics II: Electricity, Magnetism, and Optics
ES 101	Introduction to Engineering
ES 226	Statics
ES 230	Strength of Materials
ES 231	Nature of Engineering Materials
ME 210	Manufacturing and Design
ME 240	Dynamics
ME 331	Instrumentation and Data Acquisition
ME 352	Dynamics of Physical Systems and Electrical Circuits
ME 354	Thermodynamics
ME 355	Mechanical Engineering Design
ME 362	Fluid Mechanics
ME 470	Heat Transfer
ME 475	Thermal/Fluids Systems
ME 480	Control Systems and Mechatronics
ME 497	Senior Design Project I
ME 498	Senior Design Project II
ME	Two ME electives
	Science/mathematics elective

The Common Course of Study (p. 5) is required.

Mechanical Engineering Minor

Requirements

The minor consists of a minimum of six courses:

ES 101	Introduction to Engineering
ES 226	Statics
AMS 252	Engineering America
	Or
ES 252	Engineering America
	Or
HIST 215	History of Technology
ME 240	Dynamics
	One Design elective
	Two Thermal Fluids and/or Systems Modeling electives

Design electives: ES 230, ME 210, ME 353, ME 380, ME 497

Thermal Fluids/Systems Modeling electives: ME 350, ME 352, ME 362

ENGLISH

Department Head
Professor Donahue

In 1857, Lafayette became the first college in the world to establish a chair for the study of the English language and literature. Today more than ever, the English Department's curricula enhance the student's ability to read, analyze, and criticize texts, whether they are written, oral, digital, or visual. Success in diverse fields may confidently be founded on these skills, which are crucial to almost every personal and professional interaction.

English Courses (p. 108)

English Major, Literature Concentration

Requirements

The literature concentration within the English major is the traditional English major. It reflects a strong commitment to the major periods, authors, and forms. Students explore various critical methods, theories, and cultural traditions.

The major consists of a minimum of 10 courses:

ENG 205	Seminar in Textual Practices
ENG 206	Literary History

Eight English electives:

ENG	Eight English Electives

Five of the eight ENG electives must be numbered 300 or above.

One of the electives must be a course in literature prior to 1800.

No more than one semester of independent study or thesis may be included. ENG 100 (Intro to Academic Writing), ENG 202 (Writing Seminar), and ENG 272/273 (Internship) do not count toward the literature concentration.

English Major, Writing Concentration

Requirements

The writing concentration within the English major allows students to concentrate on a variety of styles and forms, including creative writing, nonfiction, journalism, media, and rhetoric.

The major consists of a minimum of 10 courses:

ENG 205	Seminar in Textual Practices
ENG 206	Literary History
ENG	Three ENG electives

Three English electives: Numbered 300 or above. One of the electives must be a course in literature prior to 1800.

Two courses from:

ENG 150	Introduction to the Digital Humanities
ENG 151	Introduction to Creative Writing
ENG 231	Journalistic Writing
ENG 250	Writing Genres
ENG 251	Screenwriting
ENG 252	Writing for Television
ENG 254	Humor Writing
ENG 255	Creative Writing
ENG 256	Fiction Writing Workshop
ENG 257	Poetry Writing Workshop

ENG 250: May be repeated for credit when they address different topics. The adviser will authorize counting special topics courses toward the concentration when they are offered with a writing focus.

Three courses from:

ENG 320	The English Language
ENG 350	Studies in Writing and Rhetoric
ENG 351	Environmental Writing
ENG 361	Advanced Creative Writing: Poetry
ENG 362	Advanced Creative Writing: Short Fiction

ENG 350: May be repeated for credit when they address different topics. The adviser will authorize counting special topics courses toward the concentration when they are offered with a writing focus.

No more than one semester of independent study or thesis may be included. ENG 100 (Intro to Academic Writing), ENG 202 (Writing Seminar), and ENG 272/273 (Internship) do not count toward the writing concentration.

English Minor

Requirements

The minor consists of a minimum of five courses:

ENG 205	Seminar in Textual Practices
	Four ENG electives

Four English electives: Three of the four ENG electives must be numbered 300 or above

One semester of internship may count toward the five. ENG 100 (Academic Writing) and ENG 202 (Writing Seminar) may not count.

Writing Minor

Requirements

The minor consists of a minimum of five courses:

ENG 205	Seminar in Textual Practices
	Or
ENG 206	Literary History

Two courses from:

ENG 150	Introduction to the Digital Humanities
ENG 151	Introduction to Creative Writing
ENG 231	Journalistic Writing
ENG 250	Writing Genres
ENG 251	Screenwriting
ENG 252	Writing for Television
ENG 254	Humor Writing
ENG 255	Creative Writing
ENG 256	Fiction Writing Workshop
ENG 257	Poetry Writing Workshop

ENG 250: May be repeated for credit when they address different topics. The adviser will authorize counting special topics courses toward the concentration when they are offered with a writing focus.

Two courses from:

ENG 320	The English Language
ENG 350	Studies in Writing and Rhetoric
ENG 351	Environmental Writing
ENG 360	
ENG 362	Advanced Creative Writing: Short Fiction

ENG 350: May be repeated for credit when they address different topics. The adviser will authorize counting special topics courses toward the minor when they are offered with a writing focus.

ENG 110 (College Writing) and ENG 202 (Writing Seminar) do not count toward the Writing minor. This minor is not open to English majors.

ENVIRONMENTAL SCIENCE AND STUDIES

Program Chair
Professors Germanoski and Brandes

The study of the environment is inherently an interdisciplinary enterprise. Environmental inquiry rightfully belongs in the humanities through inspiration and expression in art and literature, philosophy, religion, and also in the social sciences in economics, policy and law, history, and anthropology and social inquiry, and certainly in the natural sciences and engineering. Therefore, it makes perfect sense to develop and foster interdisciplinary programs with a focus on environmental inquiry in both the humanities and social sciences as well as in the natural sciences and engineering. The A.B. in Environmental Studies focuses on studies in the humanities and social sciences and the soon to be approved B.S. in Environmental Sciences will focus more on the natural sciences and engineering.

The Germanoski Award is given to a student majoring in Geology or Environmental Science who achieves high academic standing through hard work and diligence and who demonstrates a particular interest in environmental systems, earth surface processes, or hydrogeology.

Environmental Science (p. 114)/Environmental Studies Courses (p. 115)

Environmental Studies, A.B. Major

Requirements

The major consists of a minimum of 14 courses:

EVST 100	Introduction to the Environment: A Systems Approach
EVST 215	Environmental Policy
EVST 290	Climate Change: The Facts, the Issues, and the Long-Term View
	Or
GEOL 115	Introduction to Geology: Earth-Evolution of a Habitable Planet
EVST 400	Capstone
	Or
EVST 495-496	Thesis
ECON 101	Principles of Economics
MATH 110	Statistical Concepts
	Or
MATH 186	Applied Statistics
	Two approved Environmental Studies science electives
	Two approved Environmental Studies social science electives
	Two approved Environmental Studies humanities electives
	Two additional Environmental Studies electives

The Common Course of Study (p. 5) is required.

Environmental Science, B.S. Major

Requirements

The major consists of a minimum of 20 courses:

EVST 100	Introduction to the Environment: A Systems Approach
EVST 400	Capstone
	Or
EVSC 495-496	Thesis
GEOL 110	Introduction to Geology: Environmental Geology
EVST 290	Climate Change: The Facts, the Issues, and the Long-Term View
	Or
GEOL 115	Introduction to Geology: Earth-Evolution of a Habitable Planet
MATH 161	Calculus I
MATH 162	Calculus II
MATH 186	Applied Statistics
CHEM 121	General Chemistry I
CHEM 122	General Chemistry II
PHYS 111	General Physics-Mechanics and Thermodynamics
	Or
PHYS 131	Physics I: Mechanics
	Or
PHYS 151	Accelerated Physics I: Mechanics and Thermodynamics

CE 321	Introduction to Environmental Engineering and Science
	Or
CHEM 252	Environmental Chemistry
BIOL 234	Environmental Biology
	Or
BIOL 272	Conservation Biology
	Two approved Environmental Studies electives
	Approved six course concentration in Hydrology and Aquatic Systems, Restoration Ecology, or Energy Resources

The Common Course of Study (p. 5) is required.

Environmental Science Minor

Requirements

The minor consists of a minimum of six courses:

EVST 100	Introduction to the Environment: A Systems Approach
	Five electives

Five electives: Apportioned in three components: a core component, a technical elective component, and a policy/issues component.

Environmental Studies Minor

Requirements

The minor consists of a minimum of six courses:

EVST 100; two environmental po;icy/issues core course; one environmental science core course; one science elective; and one policy/issues elective.

FILM AND MEDIA STUDIES

Program Chair
Associate Professor Smith

Lafayette College's new interdisciplinary program in Film and Media Studies (FAMS) explores the moving image and digital media in art, culture, and society. FAMS combines rigorous theoretical study with hands-on practice, all within a rich liberal arts context. The FAMS major is effective beginning Fall 2010, with the new incoming class of 2014; the FAMS minor is available starting with the class of 2012.

FAMS emphasizes connections between cinema, visual media, electronic arts, social technologies, and cultural contexts. Since we live in an increasingly media-driven world, it is essential that students be able to analyze diverse visual and textual forms while honing their skills as effective communicators across an array of media platforms. The FAMS program situates the moving image within broader historical and social landscapes, examining the production, circulation, and cultural impact of different media on a global scale. Students focus on the moving image as an art form as well as a social medium, investigating the complexities of its history and employing it as a creative force and research tool.

Lafayette's FAMS program works actively to nurture relationships with established film and media artists, integrating career and advanced-study opportunities for students within local, regional, national, and international centers of film and media activity-connecting what goes on in the classroom to the larger world.

Film and Media Studies Courses (p. 117)

Film and Media Studies Major

Requirements

The major consists of a minimum of nine courses:

FAMS 101	Introduction to Film and Media Studies
FAMS 420	Capstone
	At least one course in Film and/or Media History
	At least one course in Film and/or Media Theory
	At least one course in Film and/or Media Practice

FAMS major, via close consultation with programs advisers, will build depth and focus into their specific course of study. In dialogue with their advisers, students will select elective courses that best suit their interests, for example, choosing to focus on global issues in FAMS, on cinema history, or on new media.

Film and Media Studies Minor

Requirements

The minor consists of a minimum of five courses:

FAMS 101	Introduction to Film and Media Studies
	Film and/or Media History course
	Film and/or Media Theory course
	Film and/or Media Practice course
	Approved elective

FOREIGN LANGUAGES AND LITERATURES

Department Head
Professor Geoffrion-Vinci

The curriculum in Foreign Languages & Literatures (FLL) is designed to help students develop linguistic proficiency and cultural competency, both of which facilitate freedom of thought and movement throughout people's personal and professional lives. In advanced courses, students gain an understanding of the literature, politics, history, and cultures of the world regions in which the target language is (or was) spoken. Joining Art, English, Music, Philosophy, and Religious Studies, FLL belongs to the Humanities Division of the College; as such, the Department is firmly committed to the "mind-freeing" educational mission of the liberal arts.

FLL offers majors and minors in French, German, and Spanish, as well as minors in a variety of other languages. Course work in the Department's nine languages also plays a significant role in many interdisciplinary degree programs at Lafayette: Chinese and Japanese support the major and minor in Asian Studies; Russian language and literature are the backbone of the major in Russian & East European Studies; Greek and Latin are the foundation of the minor in Classical Civilization; Modern Hebrew is essential to the minor in Jewish Studies; Spanish is the mainstay of the minor in Latin American & Caribbean Studies. FLL is also home to Comparative Literature, which offers a wide selection of courses taught in English and a minor in Literature in Translation.

The Department encourages all majors to take at least one course in Comparative Literature and to participate in an approved study-abroad program, either for an entire academic year, a college semester, or a summer (i.e., summer programs sponsored

by Lafayette and other Lehigh Valley Association of Independent Colleges).

Language course placement: Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. All students should submit any relevant AP, IB, or SAT2 subject test scores to the Registrar or, when possible, take the online placement exam prior to registering for a language course.

Foreign Languages and Literatures Courses (p. 119)

Chinese

College may be the first opportunity you have to study Chinese. So, forget the myth that you have to start learning another language in childhood. College can help young adults become faster and more effective language learners than small children. With a little imagination and hard work, Chinese studies at Lafayette can lead to an amazing study-abroad experience. And for each additional year of language studies, research shows a wide range of benefits, including improved verbal and math scores on entrance exams (GREs, MCATs, LSATs). Advanced language studies lead to greater opportunities for admission to graduate and professional schools and greater access to career-oriented jobs.

Chinese Courses (p. 94)

Chinese Minor

Requirements

The minor consists of a minimum of five courses:

CHN 111	Intermediate Chinese I
CHN 112	Intermediate Chinese II
CHN 211	Advanced Chinese I
CHN 212	Advanced Chinese II
CHN	One 300-level CHN course

One 300-level CHN course: Students are also required to complete at least one 300-level course in Chinese or, in consultation with a faculty adviser in Chinese, another subject area with a significant Chinese-language component.

Note: Chinese counts toward the major and minor in Asian Studies.

Classics and Classical Languages: Greek and Latin

College may be the first chance you have to study Classical Greek or Latin, both of which will provide you with a window to many exciting opportunities. Greek and Latin are critical to the study of Law, Life Sciences, Natural Sciences, and Social Sciences. In fact, for each additional year of language studies, research shows a wide range of benefits, including improved verbal scores on graduate and professional school entrance exams (GREs, MCATs, LSATs). In addition to Greek and Latin, Lafayette offers an interdisciplinary minor in Classical Civilization, which provides a strong foundation in Mediterranean history and cultures, particularly the glories that were Greece and the grandeur that was Rome.

Classics Courses (p. 95)/Greek Courses (p. 147)/Latin Courses (p. 162)

Classical Civilization Minor

Requirements

The minor consists of a minimum of six courses:

CL 121	Greek Literature in English
CL 225	Special Topics in Comparative Literature

And four additional electives from:

CLSS 103	Classical Mythology
CLSS 220	From Aeschylus to Woody Allen: Greek Tragedy and Beyond
LAT 111	Intermediate Latin I
LAT 112	Intermediate Latin II
ART 221	Ancient Art
PHIL 214	First Philosophers
REL 202	Christian Scriptures

Comparative Literature

In addition to its language programs, the Department of Foreign Languages & Literatures offers Comparative Literature, which, broadly defined, is the study of literary works from different cultures. At Lafayette, all courses in Comparative Literature are taught in English, and students can minor in Literature in Translation.

Comparative Literature Courses (p. 95)

Literature in Translation Minor

Requirements

The minor consists of a minimum of five courses:

CL 101	Survey of European Literature I
CL 102	Survey of European Literature II

And three additional electives from:

CL 121	Greek Literature in English
CL 142	Masterworks of German Literature and Film
CL 161	Literary Masters of Tsarist Russia
CL 162	Soviet and Russian Literature: Avant-garde to Putin
CL 225	Special Topics in Comparative Literature
CL 301	French Cinema in English
CL 351	Special Topics in Literature in Translation
CL 460	Reading and Research in Comparative Literature
CLSS 103	Classical Mythology
ENG 345	Foundations of Modern Drama

French

French Courses (p. 120)

French Major

Requirements

Students are required to complete the language sequence up to and including Advanced French (FREN 101-FREN 102, FREN 111-FREN 112, and FREN 211) or demonstrate equivalent proficiency that would allow for advanced placement.

The major consists of a minimum of five courses beyond Advanced French:

FREN	Two 300-level FREN courses
FREN	Three 400-level FREN courses

Two 300-level FREN courses, Three 400-level FREN courses: Following completion of the language sequence, majors are

required to take at least two 300-level courses and three 400-level courses, one of which must be taken during the senior year.

In some cases, approved courses other than those listed above (including those taken at other institutions) may be used to satisfy the requirements for the major.

The Department recommends that students who plan to undertake graduate work in French complete all the courses in the FREN 421, FREN 422, FREN 423, and FREN 424 sequence and, in the senior year, pursue honors work. All majors are urged to take one or more courses in Comparative Literature.

French Minor

Requirements

The minor consists of a minimum of five courses:

FREN 111	Intermediate French I
FREN 112	Intermediate French II
FREN 211	Advanced French
FREN	Two 300-level FREN courses

Two 300-level FREN courses: Following completion of the language sequence, minors are required to take at least two 300-level courses.

In some cases, approved courses other than those listed above (including those taken at other institutions) may be used to satisfy the requirements for the minor.

French Course Level Information

French Seminars (French 400s):

The general prerequisite is one course at the 300 level. Students who perform exceptionally well in FREN 211 may be admitted with permission of the instructor.

Language Courses (French 100s and 200s):

Students with two or more years of high-school French should submit their AP, IB, or SATII score to the Registrar or take the placement test administered by the Department. First-year students should take the online placement test prior to registration. Continuing students should make an appointment with the Foreign Languages & Literatures Department Head to take the exam prior to registration.

Literature, Culture, and Civilization Courses (French 300s):

The general prerequisite for courses in this group is FREN 211 or equivalent proficiency. Students who perform exceptionally well in FREN 112 may be admitted with approval of the instructor.

German

German Courses (p. 139)

German Major

Requirements

Students are required to complete the language sequence up to and including Advanced German (GERM 101-GERM 102, GERM 111-GERM 112, and GERM 211) or demonstrate equivalent proficiency that would allow for advanced placement. The major consists of a minimum of five courses beyond Advanced German:

GERM	Five 300/400-level GERM courses

Five 300/400-level GERM courses: Following completion of the language sequence, majors are required to take at least five 300/400-level course, (GERM 225 may be used as one of the electives), one of which must be taken during the senior year.

The Department recommends that students who plan to undertake graduate work in German pursue honors work in their senior year. All majors are urged to take one or more courses in Comparative Literature. In some cases, courses taken at other institutions may be used to satisfy the requirements for the major.

German Minor

Requirements

The minor consists of a minimum of five courses:

GERM 111	Intermediate German I
GERM 112	Intermediate German II
GERM 211	Advanced German
GERM	Two 300/400-level GERM courses

Two 300/400-level GERM courses: Following completion of the language sequence, minors are required to take at least two 300/400-level course, (GERM 225 may be used as one of the electives), one of which must be taken during the senior year.

In exceptional cases, approved courses other than those listed may be used to satisfy the requirements for the minor.

German Course Level Information

Language Courses (German 100s and 200s):

Students with two or more years of high school German should submit their AP, IB, or SAT II score to the Registrar or take the placement test administered by the Department. First-year students should take the online placement test prior to registration. Continuing students should make an appointment with the Foreign Languages & Literatures Department Head to take the exam prior to registration.

Literature, Culture, and Civilization Courses (German 300s):

The general prerequisite for courses in this group is GERM 211, GERM 225, or equivalent proficiency. Students who perform exceptionally well in GERM 112 may be admitted with approval of the instructor.

Hebrew

College may be the first opportunity you have to study Modern Hebrew. So, forget the myth that you have to start learning another language in childhood. College can help young adults become faster and more effective language learners than small children. With a little imagination and hard work, Hebrew studies at Lafayette can lead to an amazing study-abroad experience. And for each additional year of language studies, research shows a wide range of benefits, including improved verbal and math scores on entrance exams (GREs, MCATs, LSATs). Advanced language studies lead to greater opportunities for admission to graduate and professional schools and greater access to career-oriented jobs.

Note: Hebrew counts toward the minor in Jewish Studies.

Hebrew Courses (p. 147)

Japanese

For over a millennium, the arts, philosophy, and literature of Japan have drawn upon and contributed to East Asian civilization. Today, the State Department considers knowledge of Japanese "critical" to U.S. global interests, especially in trade and finance. Attentive to your level of experience in language studies

and your academic areas of specialization, Lafayette offers classes to suit your needs. In Japanese-language courses, you may focus on basic conversation and literacy, or you may work on more advanced skills, such as letter-writing and cultural analysis of literature or pop-culture. Courses in Japanese language are also an essential component of Lafayette's interdisciplinary major and minor in Asian Studies, which will give you a strong foundation in the history, arts, and cultures of Japan and East Asia.

Note: Japanese counts toward the major and minor in Asian Studies.

Japanese Courses (p. 161)

Russian

College may be the first opportunity you have to study Russian. So, forget the myth that you have to start learning another language in childhood. College can help young adults become faster and more effective language learners than small children. With a little imagination and hard work, Russian studies at Lafayette can lead to an amazing study-abroad experience. And for each additional year of language studies, research shows a wide range of benefits, including improved verbal and math scores on entrance exams (GREs, MCATs, LSATs). Advanced language studies lead to greater opportunities for admission to graduate and professional schools and greater access to career-oriented jobs.

Russian Courses (p. 187)

Russian Minor

Requirements

The minor consists of a minimum of five courses:

RUSS 111	Intermediate Russian I
RUSS 112	Intermediate Russian II
	Electives

Electives: Following completion of the language sequence, minors are required to take three adviser-approved electives.

Note: Russian language and literature courses also count toward the major in Russian and East European Studies.

Spanish

Spanish Courses (p. 188)

Spanish Major

Requirements

Students are required to complete the language sequence up to and including Advanced SPAN 211 or demonstrate equivalent proficiency that would allow for advanced placement.
The major consists of a minimum of seven courses beyond Advanced Spanish.
Following completion of the language sequence, majors are required to take one survey of culture/civilization from:

SPAN 303	Spanish Civilization and Culture
SPAN 304	Spanish American Civilization and Culture, 1492-1900
SPAN 313	Contemporary Spain
SPAN 314	Contemporary Spanish America and Hispanics in the U.S.
SPAN 315	Introduction to Visual Cultures of the Iberian Peninsula: Spanish Culture and Society through Film

Two surveys of literature from:

SPAN 310	Survey of Spanish Literature I
SPAN 311	Survey of Spanish Literature II
SPAN 317	Survey of Spanish American Literature I
SPAN 318	Survey of Spanish American Literature II

Three seminars from:

SPAN 425	Don Quixote
	And
SPAN 435	Research Seminar in Hispanic Literature and Civilization
	One additional seminar from
SPAN 370	Seminar on Translation
SPAN 421	Seminar in the Literature and Culture of the New World
SPAN 423	Seminar in Early Modern Spanish Literature and Culture
SPAN 427	Seminar in Contemporary Spanish Literature and Culture
SPAN 428	Seminar in Modern Spanish American Literature and Culture

One course in Hispanic studies:

SPAN	Any 300/400-level SPAN course

Designed to meet the specific needs of majors interested in studying abroad or teaching, the Hispanic studies requirement may be fulfilled by choosing from FLL 380 or FLL 381 (the teaching internship in Spanish), or by taking any 300- or 400-level course in Spanish. By senior year, all candidates for the major are required to take SPAN 425 and SPAN 435.

In lieu of SPAN 435 and a course in Hispanic studies (described above), students in their junior year may propose a research topic for an honors thesis (SPAN 495, SPAN 496) to be completed during their senior year.

Spanish Minor

Requirements

The minor consists of a minimum of four courses:

SPAN 211	Advanced Spanish
SPAN	Three 300/400-level SPAN courses

Three 300/400-level SPAN courses: Following completion of the language sequence, minors are required to take three courses at the 300 or 400 level with at least one focusing on literature.

Note: Spanish also counts toward the minor in Latin American & Caribbean Studies.

Spanish Course Level Information

Heritage Speakers (Spanish 215):

Students with a personal or historical connection to the language but limited formal study may take SPAN 215 to demonstrate advanced-level proficiency. They should also work closely with their Spanish adviser to address specific academic needs not met in the classroom. Those who have already had formal schooling in Spanish prior to starting college are encouraged to begin at the 300 or 400 level.

Language Courses (Spanish 100s and 200s):

Students with two or more years of high school Spanish should submit their AP, IB, or SAT II score to the Registrar or take the placement test administered by the Department. First-year

students should take the online placement test prior to registration. Continuing students should make an appointment with the Foreign Languages & Literatures Department Head to take the exam prior to registration. Students with two or more years of high school Spanish are not eligible to take SPAN 101. Students with four or more years of high school Spanish are not eligible to take SPAN 102 or SPAN 103.

Literature, Culture, and Civilization Courses (Spanish 300s):

The general prerequisite is SPAN 211, equivalent proficiency, or permission of the instructor.

Seminars (Spanish 400s):

The general prerequisite is one course at the 300 level.

GEOLOGY AND ENVIRONMENTAL GEOSCIENCES

Department Head
Professor Lawrence

Geology is the study of the earth and its history. The department offers both the Bachelor of Science and the Bachelor of Arts degree. The B.S. degree is designed to meet the needs of students who wish to become practicing geologists or environmental geoscientists, or who wish to pursue graduate degrees in the geosciences. One may pursue either a geology or an environmental geosciences track in the B.S. program. The A.B., in the tradition of liberal arts education, is designed to maximize flexibility for students who wish to study geology. The A.B. also is an ideal degree for students pursuing a double major; recent graduates have combined geology with areas such as Government and Law (environmental law), International Affairs, Economics (environmental management), and Chemistry.

The curriculum and the interests of the faculty span a wide range of topics from sedimentology, paleobiology, climate change, and geomorphology to geophysics, geochemistry, and earth materials. Field and laboratory work are integral parts of the curriculum and many opportunities exist for cooperative student-faculty research. Students have traveled as far as Alaska, Nevada, Mexico, Illinois and Cambridge, England, to perform cooperative research with Lafayette faculty, and many excellent projects also are available locally.

The James L. Dyson Scholarship Prize is given to a junior major for a summer field experience in geology, usually a summer field camp. The Arthur Montgomery Award is given to a student of high academic achievement whose leadership and participation has contributed to the Geology Community at Lafayette College. The Ted and Georgia Metropolis Prize is given to a junior or senior Geology major who has exhibited high academic achievement and demonstrated enthusiasm for geology and environmental geoscience both in class and outside the classroom, and through service.

The Guy and Joyce Hovis Award is given to a student majoring in geology who, by dedicated effort in a rigorous academic program, has achieved distinction in science and math throughout his/her academic career, or who has come to achieve such distinction through steady improvement.

The Germanoski Award is given to a student majoring in Geology or Environmental Science who achieves high academic standing through hard work and diligence and who demonstrates a particular interest in environmental systems, earth surface processes, or hydrogeology.

Geology and Environmental Geosciences Courses (p. 137)

Geology, B.S. Major, Environmental Geosciences Track

Requirements for the BS Geology Major Environmental Geosciences Track

The major consists of a minimum of 11 major courses and 5 collateral courses:

One course in Physical Geology:

GEOL 100	Introduction to Geology: From Fire to Ice
GEOL 110	Introduction to Geology: Environmental Geology
GEOL 120	Introduction to Geology: Geological Disasters-Agents of Chaos
GEOL 150	The Geologic Evolution of the Hawaiian Islands
GEOL 160	Geology from A (Arches) to Z (Zion): The Geology of National Parks in the Western United States
GEOL 170	Geological and Paleobiological Evolution of Ecuador and the Galapagos Islands

No more than one 100-level interim course may count as either the Physical Geology or Earth History course.

One course in Earth History:

GEOL 115	Introduction to Geology: Earth-Evolution of a Habitable Planet
GEOL 130	Introduction to Geology: Dinosaurs, Darwin, and Deep Time
GEOL 160	Geology from A (Arches) to Z (Zion): The Geology of National Parks in the Western United States

No more than one 100-level interim course may count as either the Physical Geology or Earth History course.

Additional required courses:

GEOL 200	Earth and Planetary Materials
GEOL 205	Oceanography
	Or
GEOL 315	Paleoclimatology and Paleoceanography
GEOL 210	Hydrogeology
GEOL 215	Sedimentology and Stratigraphy
GEOL 300	Earth Surface Processes
GEOL 307	Igneous and Metamorphic Petrology
GEOL 317	Structure and Tectonics of the Earth
GEOL 322	Environmental Geophysics
	One department approved environmental elective
MATH 125	Modeling and Differential Calculus
	And
MATH 186	Applied Statistics
	Or
MATH 161	Calculus I
	And
MATH 162	Calculus II
	Or
MATH 161	Calculus I
	And

MATH 186	Applied Statistics
CHEM 121	General Chemistry I
CHEM 122	General Chemistry II
	Or
GEOL 321	Geochemistry
PHYS 111	General Physics-Mechanics and Thermodynamics
	Or
PHYS 131	Physics I: Mechanics
	Or
PHYS 151	Accelerated Physics I: Mechanics and Thermodynamics

The Common Course of Study (p. 5) is required.

Geology, B.S. Major, Geology Track

Requirements for Geology Track

The major consists of a minimum of 11 major courses and 5 collateral courses:

One course in Physical Geology:

GEOL 100	Introduction to Geology: From Fire to Ice
GEOL 110	Introduction to Geology: Environmental Geology
GEOL 120	Introduction to Geology: Geological Disasters-Agents of Chaos
GEOL 150	The Geologic Evolution of the Hawaiian Islands
GEOL 160	Geology from A (Arches) to Z (Zion): The Geology of National Parks in the Western United States
GEOL 170	Geological and Paleobiological Evolution of Ecuador and the Galapagos Islands

No more than one 100-level interim course may count as either the Physical Geology or Earth History course.

One course in Earth History:

GEOL 115	Introduction to Geology: Earth-Evolution of a Habitable Planet
GEOL 130	Introduction to Geology: Dinosaurs, Darwin, and Deep Time
GEOL 160	Geology from A (Arches) to Z (Zion): The Geology of National Parks in the Western United States

No more than one 100-level interim course may count as either the Physical Geology or Earth History course.

Additional required courses:

GEOL 200	Earth and Planetary Materials
GEOL 205	Oceanography
	Or
GEOL 315	Paleoclimatology and Paleoceanography
GEOL 215	Sedimentology and Stratigraphy
GEOL 300	Earth Surface Processes
GEOL 307	Igneous and Metamorphic Petrology
GEOL 317	Structure and Tectonics of the Earth
	Three department approved technical electives-with at least one 200-level or above geology course
MATH 125	Modeling and Differential Calculus
	And
MATH 186	Applied Statistics
	Or
MATH 161	Calculus I
	And
MATH 162	Calculus II
	Or
MATH 161	Calculus I
	And
MATH 186	Applied Statistics
CHEM 121	General Chemistry I
CHEM 122	General Chemistry II
	Or
GEOL 321	Geochemistry
PHYS 111	General Physics-Mechanics and Thermodynamics
	Or
PHYS 131	Physics I: Mechanics
	Or
PHYS 151	Accelerated Physics I: Mechanics and Thermodynamics

Department approved technical electives: With at least one 200-level or above geology course.

The Common Course of Study (p. 5) is required.

Geology, A.B. Major

Requirements

The major consist of a minimum of nine courses:

One course in Physical Geology:

GEOL 100	Introduction to Geology: From Fire to Ice
GEOL 110	Introduction to Geology: Environmental Geology
GEOL 120	Introduction to Geology: Geological Disasters-Agents of Chaos
GEOL 150	The Geologic Evolution of the Hawaiian Islands
GEOL 160	Geology from A (Arches) to Z (Zion): The Geology of National Parks in the Western United States
GEOL 170	Geological and Paleobiological Evolution of Ecuador and the Galapagos Islands

No more than one 100-level interim course may count as either the Physical Geology or Earth History course.

One course in Earth History:

GEOL 115	Introduction to Geology: Earth-Evolution of a Habitable Planet
GEOL 130	Introduction to Geology: Dinosaurs, Darwin, and Deep Time
GEOL 160	Geology from A (Arches) to Z (Zion): The Geology of National Parks in the Western United States

No more than one 100-level interim course may count as either the Physical Geology or Earth History course.
Additional required courses:

GEOL 200	Earth and Planetary Materials
GEOL	Six Geology electives

Geology electives: With at least five 200-level or above courses.

The Common Course of Study (p. 5) is required.

Geology Minor

Requirements
The minor consists of a minimum of five courses:

GEOL	Five Geology courses

Geology courses: At least three of which must be 200-level or above.

Additional geology courses may be found under Interim Session.

Geology majors must have specific permission of the instructor to take 100-level geology courses during the senior year.

GOVERNMENT & LAW AND FOREIGN LANGUAGE

Government & Law and Foreign Language is a coordinate major between the departments of government and law, and foreign languages and literatures. This major is good preparation for students who are interested in pursuing careers or in focusing on intellectual issues that relate strongly to both political science and international studies and to foreign language.

The major provides the background needed for careers in diplomatic service, for work in international organizations or foundations, and for pursuing higher degrees in fields such as Area Studies and International Affairs.

Students may choose from three tracks: A coordinate major in (1) Government and Law and French, (2) Government and Law and German, or (3) Government and Law and Spanish.

Government & Law and Foreign Languages, French Track Major

Requirements
The major consists of a minimum of 13 courses:

GOVT 102	Introduction to International Politics
GOVT 103	Introduction to Comparative Politics
GOVT	One GOVT 400-level seminar
	Or
GOVT 390-391	Independent Study
	Or
GOVT 495-496	Thesis

Four electives from:

GOVT 221	
GOVT 227	Latin American Politics
GOVT 230	International Politics of the Middle East and Persian Gulf
GOVT 244	Modern Political Theory
GOVT 322	
GOVT 329	The Politics of Social Movements
GOVT 332	Globalization and Security
GOVT 334	American Security Policy
GOVT 335	
GOVT 336	International Conflict

French courses:

FREN 111	Intermediate French I
FREN 112	Intermediate French II
FREN 211	Advanced French

Three electives from:

FREN 225	Business French
FREN 323	Iconoclasts: Nineteenth- and Twentieth-Century French Literature
FREN 324	Turning the World Upside Down: French Civilization since 1789
FREN 424	Literature, Ideas, and Film: Twentieth-Century French Culture
FREN 431	Contemporary France: Political, Economic, and Social Institutions
FREN 495-496	Thesis in French

Government & Law and Foreign Languages, German Track Major

Requirements
The major consists of a minimum of 13 courses:

GOVT 102	Introduction to International Politics
GOVT 103	Introduction to Comparative Politics
GOVT	One GOVT 400-level seminar
	Or
GOVT 390-391	Independent Study
	Or
GOVT 495-496	Thesis

Four electives from:

GOVT 221	
GOVT 237	
GOVT 329	The Politics of Social Movements
GOVT 332	Globalization and Security
GOVT 334	American Security Policy
GOVT 335	
GOVT 336	International Conflict
GOVT 341	Contemporary Political Thought

German courses:

GERM 111	Intermediate German I
GERM 112	Intermediate German II
GERM 211	Advanced German

Three electives from:

GERM 225	Business German
GERM 311	German and Austiran Identities as Reflected in Contemporary Media
GERM 322	German Literature and Culture after 1750
GERM 424	From Modernism to Postmodernism and Beyond: Literature and Film of the German-Speaking World in the Twentieth Century
GERM 441	Junior/Senior Seminar
GERM 495-496	Thesis in German

Government & Law and Foreign Languages, Spanish Track Major

Requirements
The major consists of a minimum of 14 courses:

GOVT 102	Introduction to International Politics
GOVT 103	Introduction to Comparative Politics

GOVT	One GOVT 400-level seminar
	Or
GOVT 390-391	Independent Study
	Or
GOVT 495-496	Thesis

Four electives from:

GOVT 221	
GOVT 227	Latin American Politics
GOVT 322	
GOVT 329	The Politics of Social Movements
GOVT 332	Globalization and Security
GOVT 334	American Security Policy
GOVT 335	
GOVT 336	International Conflict

Spanish courses:

SPAN 111	Intermediate Spanish I
SPAN 112	Intermediate Spanish II
SPAN 211	Advanced Spanish

Four electives from:

SPAN 225	Business Spanish
SPAN 311	Survey of Spanish Literature II
SPAN 313	Contemporary Spain
SPAN 314	Contemporary Spanish America and Hispanics in the U.S.
SPAN 318	Survey of Spanish American Literature II
SPAN 427	Seminar in Contemporary Spanish Literature and Culture
SPAN 428	Seminar in Modern Spanish American Literature and Culture
SPAN 495-496	Thesis in Spanish

GOVERNMENT AND LAW

Department Head
Professor Silverstein

Politics, leadership, individual rights, government, public policy-issues that dominate the daily lives of citizens around the world-are the focus of the Government and Law major. Students in this major address such questions as: What are the most critical political issues facing the United States and the world? What public policies make most sense in economics, education, urban revitalization, and protection of the environment?

The well-balanced curriculum offers an unusually broad selection of offerings in domestic and comparative law, foreign political systems, international issues, federalism, state and local politics, and civil liberties. Faculty work with students to include special interests in their course of study and many students participate, for academic credit, in the department's internship program.

Government and Law Courses (p. 141)

Government and Law Major

Requirements
The major consists of a minimum of 10 courses:

Three introductory courses from:

GOVT 101	Introduction to United States Politics
GOVT 102	Introduction to International Politics
GOVT 103	Introduction to Comparative Politics
GOVT 104	Introduction to Political Theory

Two seminar courses:

	Two 400-level seminars
	Or
	One 400-level seminar
	And
	Honors thesis

Five additional courses:

GOVT	Five additional Government and Law electives

Introductory Courses/Subfields

Exposure to each of the four subfields required (United States Politics, International Politics, Comparative Politics, Political Theory) AND exposure beyond the introductory level in at least three of the subfields:

United States Politics:

GOVT 101	Introduction to United States Politics
GOVT 207	Racial and Ethnic Minorities in American Politics
GOVT 211	State and Local Government and Politics
GOVT 213	Law and Society
GOVT 215	Campaigns and Elections in the U.S.
GOVT 218	Politics of Public Policy
GOVT 245	Early American Political Thought
GOVT 258	Political Opinion and Participation in the U.S.
GOVT 310	Politics, Policy, and Law in American Federalism
GOVT 311	Constitutional Law and Politics in the United States
GOVT 313	First Amendment in the United States: Law and Politics
GOVT 314	Liberty in the United States: Law and Politics
GOVT 315	Equlaity in the United States: Law and Politics
GOVT 320	The Presidency and Executive Politics
GOVT 321	Congress and the Legislative Process
GOVT 401	Representation, Apportionment and Democratic Participation
GOVT 407	Law and Social Movements
GOVT 410	Personality and Supreme Court Decision Making
GOVT 421	American Political Economy

International Politics:

GOVT 102	Introduction to International Politics
GOVT 220	The United States and Latin American Relations
GOVT 230	International Politics of the Middle East and Persian Gulf
GOVT 231	Global Environmental Politics
GOVT 232	
GOVT 238	East Asian International Relations
GOVT 270	Chinese Foreign Policy
GOVT 331	Politics of the European Union
GOVT 332	Globalization and Security
GOVT 334	American Security Policy
GOVT 336	International Conflict
GOVT 405	US Foreign Policy in a Changing World
GOVT 412	Politics of European Integration
GOVT 415	Nationalism in World Politics
GOVT 419	Global Governance

Comparative Politics:

GOVT 103	Introduction to Comparative Politics
GOVT 223	Politics of Africa
GOVT 225	Politics of Russia, the Other Post-Soviet States, and Eastern Europe
GOVT 226	Political Regimes and Regime Change
GOVT 227	Latin American Politics
GOVT 230	International Politics of the Middle East and Persian Gulf
GOVT 329	The Politics of Social Movements
GOVT 412	Politics of European Integration
GOVT 415	Nationalism in World Politics
GOVT 420	Topics in Latin American Politics

Political Theory:

GOVT 104	Introduction to Political Theory
GOVT 241	The Politics of Fashion
GOVT 242	African American Political Thought
GOVT 243	Ancient and Medieval Political Theory
GOVT 244	Modern Political Theory
GOVT 245	Early American Political Thought
GOVT 246	Recent American Political Thought
GOVT 248	Capitalism and its Critics
GOVT 341	Contemporary Political Thought
GOVT 414	Political Thought through Literature
GOVT 416	Critical Theory: Power and Resistance
GOVT 418	Democracy, Inclusion, Exclusion

Prerequisite for 200- and 300-level courses in this group: GOVT 104, or permission of instructor.

Seminars:

GOVT 401	Representation, Apportionment and Democratic Participation
GOVT 405	US Foreign Policy in a Changing World
GOVT 407	Law and Social Movements
GOVT 410	Personality and Supreme Court Decision Making
GOVT 412	Politics of European Integration
GOVT 414	Political Thought through Literature
GOVT 415	Nationalism in World Politics
GOVT 416	Critical Theory: Power and Resistance
GOVT 418	Democracy, Inclusion, Exclusion
GOVT 419	Global Governance
GOVT 420	Topics in Latin American Politics

General Courses:

GOVT 309	Scope and Methods of Political Science
GOVT 380	Internship
GOVT 390-391	Independent Study
GOVT 495-496	Thesis

Coordinate majors: Government and Law with Religion, and Foreign Languages and Literatures.

Government and Law Minor

Requirements

The minor consists of a minimum of six courses:

A general minor (three introductory courses and three mid-level courses in the respective subfields).

A subfield (concentration) minor (one introductory course and five other courses in the same subfield).

A thematic minor. A student who wants to pursue a thematic minor must submit a statement explaining the rationale and the plan behind his/her idea to the department head.

Introductory Courses/Subfields

United States Politics:

GOVT 101	Introduction to United States Politics
GOVT 207	Racial and Ethnic Minorities in American Politics
GOVT 211	State and Local Government and Politics
GOVT 213	Law and Society
GOVT 215	Campaigns and Elections in the U.S.
GOVT 218	Politics of Public Policy
GOVT 245	Early American Political Thought
GOVT 258	Political Opinion and Participation in the U.S.
GOVT 310	Politics, Policy, and Law in American Federalism
GOVT 311	Constitutional Law and Politics in the United States
GOVT 313	First Amendment in the United States: Law and Politics
GOVT 314	Liberty in the United States: Law and Politics
GOVT 315	Equlaity in the United States: Law and Politics
GOVT 320	The Presidency and Executive Politics
GOVT 321	Congress and the Legislative Process
GOVT 401	Representation, Apportionment and Democratic Participation
GOVT 407	Law and Social Movements
GOVT 410	Personality and Supreme Court Decision Making
GOVT 421	American Political Economy

International Politics:

GOVT 102	Introduction to International Politics
GOVT 220	The United States and Latin American Relations
GOVT 230	International Politics of the Middle East and Persian Gulf
GOVT 231	Global Environmental Politics
GOVT 232	
GOVT 238	East Asian International Relations
GOVT 270	Chinese Foreign Policy
GOVT 331	Politics of the European Union
GOVT 332	Globalization and Security
GOVT 334	American Security Policy
GOVT 336	International Conflict
GOVT 405	US Foreign Policy in a Changing World
GOVT 412	Politics of European Integration
GOVT 415	Nationalism in World Politics
GOVT 419	Global Governance

Comparative Politics:

GOVT 103	Introduction to Comparative Politics
GOVT 223	Politics of Africa
GOVT 225	Politics of Russia, the Other Post-Soviet States, and Eastern Europe
GOVT 226	Political Regimes and Regime Change
GOVT 227	Latin American Politics
GOVT 230	International Politics of the Middle East and Persian Gulf
GOVT 329	The Politics of Social Movements
GOVT 412	Politics of European Integration
GOVT 415	Nationalism in World Politics
GOVT 420	Topics in Latin American Politics

Political Theory:

GOVT 104	Introduction to Political Theory
GOVT 242	African American Political Thought
GOVT 241	The Politics of Fashion
GOVT 243	Ancient and Medieval Political Theory
GOVT 244	Modern Political Theory
GOVT 245	Early American Political Thought
GOVT 246	Recent American Political Thought
GOVT 248	Capitalism and its Critics
GOVT 341	Contemporary Political Thought
GOVT 414	Political Thought through Literature
GOVT 416	Critical Theory: Power and Resistance
GOVT 418	Democracy, Inclusion, Exclusion

Prerequisite for 200- and 300-level courses in this group: GOVT 104, or permission of instructor.

Seminars:

GOVT 401	Representation, Apportionment and Democratic Participation
GOVT 405	US Foreign Policy in a Changing World
GOVT 407	Law and Social Movements
GOVT 410	Personality and Supreme Court Decision Making
GOVT 412	Politics of European Integration
GOVT 414	Political Thought through Literature
GOVT 415	Nationalism in World Politics
GOVT 416	Critical Theory: Power and Resistance
GOVT 418	Democracy, Inclusion, Exclusion
GOVT 419	Global Governance
GOVT 420	Topics in Latin American Politics

General Courses:

GOVT 309	Scope and Methods of Political Science
GOVT 380	Internship
GOVT 390-391	Independent Study
GOVT 495-496	Thesis

HISTORY

Department Head
Professor Sanborn

The study of history is an essential feature of a liberal arts education. Historians examine how people living in different times and places understood their world and acted within it. Students taking history courses at Lafayette acquire knowledge about past events around the globe, develop analytical skills, and are taught to think both about historical specificities and about connections across time and space. The curriculum also teaches apprentice historians how to ask important questions about the past, how to research answers to those questions, and then how to communicate findings in compelling prose and clear oral presentations. These research, analytical, and expository skills are essential for the proper understanding of history, but they are also valuable in a wide range of other endeavors that students pursue both during their college careers and afterwards. History majors graduate with a complex understanding of the past and with the skills necessary to both understand and help transform the social and cultural contexts they inherited.

History Courses (p. 148)

History Major

Requirements
The major consists of a minimum of 10 courses:

HIST 105	History of the Modern World
HIST 110-149	One Introduction to History Seminar
HIST 206	The Politics and Practice of History
HIST 350-399	Two Research Seminars
HIST	One additional 300/400-level History elective
HIST	Four additional History electives

History Distribution Requirement

The ten courses must consist of at least one course focused on the history of the United States; at least one course focused on the history of Europe (including Eastern Europe and Russia); and at least one course focused on the history of Africa, Asia, Latin America,or the Middle East.

Global History Concentration

Requirements

Students who major in history and fulfill all the other requirements of the major, but who also meet the following requirements, will be recognized as having completed a Concentration in Global History. The Concentration in Global History consists of five History courses, including HIST 105, a research seminar or colloquium that focuses on global history, plus three other courses that focus on global history. Students must satisfy all of the regular requirements for the history major. Courses can count toward both the general requirements for the History major and the requirements for the Concentration in Global History.

Global History Minor

Requirements
The minor consists of a minimum of five courses:

The Minor in Global History consists of five History courses, including HIST 105, a research seminar or colloquium that focuses on global history, plus three other courses that focus on global history (see list of "global" history courses). This minor is distinct from the History minor.

Global History Courses

HIST 105	History of the Modern World
HIST 114	Food Histories in the Americas
HIST 115	The Crusades
HIST 118	The Cold War
HIST 120	Introduction to History: History in Pictures
HIST 212	The Middle East in the Mind of America, America in the Mind of the Middle East
HIST 215	History of Technology
HIST 238	Global Stimulants: Histories of Coffee, Tea, and Yerba Mate
HIST 261	Making African America, 1500-1880
HIST 265	Modern Jewish History
HIST 276	Conquest: A History
HIST 310	Colloquium: Human Rights and Modern War

History Minor

Requirements
The minor consists of a minimum of five courses:

HIST 206	The Politics and Practice of History
HIST 350-399	Research Seminar
HIST	Three approved History electives

INTERNATIONAL AFFAIRS

Program Chair
Associate Professor von Wahl

The mission of the International Affairs Program at Lafayette College is to educate students to think globally and to consider issues from a variety of perspectives. Through its goal to have students attain global knowledge and awareness, the program is committed to fostering respect for different perspectives. The interdisciplinary I.A. major helps students to appreciate the complex interaction that shapes the relationships between people of different backgrounds. Students gain a multifaceted perspective on global issues by achieving proficiency in at least one foreign language, as well as knowledge of several disciplines.

By understanding other cultures and perspectives, the I.A. major becomes more appreciative of his/her own culture and its perspectives. The I.A. Program, which strongly encourages all students to have a significant international experience by spending at least one semester in a non-English speaking country, prepares them to meet the challenges of an increasingly globalized world.

International Affairs Courses (p. 154)

International Affairs Major

Requirements
The major consists of a minimum of 12 courses:

In consultation with an adviser and the program chair, students will design a six-course interdisciplinary program of study that will focus on a region (at least three courses) and a theme (at least three courses).

Some of the courses for the concentration may be taken abroad with the approval of the adviser and program chair. All courses must be beyond the introductory level.

Students must demonstrate competency in a second language (via test or course work) through the advanced (211) level. The second language must be appropriate to the student's field of inquiry.

Three introductory courses from:

A&S 102	Cultural Anthropology
ECON 101	Principles of Economics
GOVT 102	Introduction to International Politics
HIST 105	History of the Modern World
REL 101	Religions in World Cultures

Additional required courses:

IA 200	Globalization and Its Critics
IA 261	Research Methods in International Affairs
IA 362	Seminar
	Six IA Region and Theme electives

Students will have three options in designing their concentrations:

1. A student may choose to take three courses each in faculty-developed region and thematic concentrations that are approved by the International Affairs Advisory Committee;
2. A student may develop her/his own concentrations and propose them to the adviser and to program chair. The student must submit to his/her IA adviser a written statement that provides a rationale for how the set of courses contributes to her/his concentrations, and how the proposed theme and region are integrated;
3. A student may combine a pre-approved concentration in a region/theme with a self-proposed concentration in a theme/region in consultation with his/her adviser and program chair. The student must submit to his/her IA adviser a written statement that provides a rationale for how the set of courses contributes to his/her proposed concentration, and how the proposed theme and region are integrated.

All International Affairs majors are strongly encouraged to study abroad.

Examples of Geographic Regions (courses from at least 2 departments): Africa, Asia, Western Europe, Latin America and Caribbean, Russia and Eastern Europe

Examples of Themes (courses from at least 2 departments): Conflict & Diplomacy, Development Studies, Gender Issues in a Changing World, Culture, Power and Identity in the Modern World

MATHEMATICS

Department Head
Professor Gordon

The mathematics programs provide a rigorous introduction to the central ideas of algebra and analysis, complemented with electives of direct interest to students who intend to pursue careers in actuarial science, data analysis, finance, higher education, management, secondary education, and many other fields in which mathematical techniques are used or taught. Students who have pursued less mathematics-centered careers, like law and medicine, have found that the mathematician's habits of logical thought and careful abstraction are valuable there, too. Small upper-level classes, seminars, and independent study and research projects give mathematics students the opportunity to study particularly interesting topics in depth.

Bachelor of Arts in Mathematics and Economics:
See Mathematics and Economics (p. 55)

Mathematics Courses (p. 162)

Mathematics, B.S. Major

Requirements
The program consists of a minimum of 13 major courses and 3 collateral courses:

MATH 161	Calculus I
MATH 162	Calculus II
MATH 263	Calculus III
MATH 290	Transition to Theoretical Mathematics
MATH 300	Vector Spaces
MATH 351	Abstract Algebra I
MATH 356	Introduction to Real Analysis
MATH 400	Senior Seminar
	Or
MATH 495-496	Thesis
MATH	Five MATH electives

Five additional Mathematics electives: Must be numbered 300 or higher. At least one 300-level elective must have MATH 351 or MATH 356 as a prerequisite. MATH 264 or MATH 282 may replace one 300-level elective.

Collateral courses

PHYS 131	Physics I: Mechanics
	Or

PHYS 151	Accelerated Physics I: Mechanics and Thermodynamics
PHYS 133	Physics II: Electricity, Magnetism, and Waves
	Or
PHYS 152	Accelerated Physics II: Electricity, Magnetism, and Optics
CS 104	Introduction to Game Programming
	Or
CS 105	Digital Media Computing
	Or
CS 106	Personal Robotics
	Or
CM 151	Introduction to Computational Science

The Common Course of Study (p. 5) is required.

Mathematics, A.B. Major

Requirements

The major consists of a minimum of 10 courses:

MATH 161	Calculus I
MATH 162	Calculus II
MATH 263	Calculus III
MATH 290	Transition to Theoretical Mathematics
MATH 300	Vector Spaces
MATH 351	Abstract Algebra I
MATH 356	Introduction to Real Analysis
MATH	Three MATH electives

Three additional Mathematics electives: Must be numbered 300 or higher. MATH 264 or MATH 282 may replace one 300-level elective

Additional recommended courses include:

MATH 400	Senior Seminar
CS 104	Introduction to Game Programming
CS 105	Digital Media Computing
CS 106	Personal Robotics
CM 151	Introduction to Computational Science

The Common Course of Study (p. 5) is required.

Mathematics Minor

Requirements

The minor consists of a minimum of six courses:

MATH 161	Calculus I
MATH 162	Calculus II
MATH 263	Calculus III
MATH	Three MATH electives

Three additional electives: Must be numbered MATH 264 or higher including at least two numbered MATH 300 or higher.

Normally independent study courses may not be used toward satisfying the requirements for the minor.

MATHEMATICS AND ECONOMICS

This interdisciplinary major gives mathematically talented students with career plans in economics a wide range of mathematical skills and significant experience with the fundamental ideas of economics. It also distinguishes them from the thousands of students around the country who major in economics or business. A distinctive feature of the program is the senior capstone experience, in which students integrate their study of mathematics and economics.

Note: For courses see Mathematics (p. 162) and Economics (p. 100)

Mathematics and Economics, A.B. Joint Major

Requirements

The major consists of a minimum of 15 courses:

MATH 161	Calculus I
MATH 162	Calculus II
MATH 263	Calculus III
MATH 272	Linear Algebra with Applications
	Or
MATH 300	Vector Spaces
MATH 282	Techniques of Mathematical Modeling
MATH 306	Operations Research
MATH 335	Probability
MATH 336	Mathematical Statistics
ECON 101	Principles of Economics
ECON 251	Intermediate Microeconomics
ECON 252	Intermediate Macroeconomics
ECON 365	Econometric Analysis
ECON	Two ECON electives
	Mathematics-Economics Capstone elective

Two ECON electives: Must be 300-level Economics electives
Capstone Experience

In the form of a course, taken during the senior year, designed to integrate the ideas and techniques students have encountered in their work in Mathematics and Economics. The Capstone Experience may consist of ECON 324, ECON 366, MATH 301, MATH 347 or appropriate independent study or honors work. Students interested in graduate study in Economics may substitute MATH 356 for the Capstone.

The Common Course of Study (p. 5) is required.

Any one from CS 104, CS 105, CS 106 or CM 151 is recommended as an elective for students in this major.

Administration of the Joint Major in Mathematics and Economics and advising of students in the program is done by the Department of Mathematics (p. 54).

MILITARY SCIENCE PROGRAM

Faculty

Lt. Col. Farmer

Military Science is part of the United States Army Cadet Command. As such, it sponsors the Reserve Officers' Training Corps (ROTC) Program. Classes are taught under the auspices of the Lehigh Valley Steel Battalion ROTC program, which is the local headquarters for ROTC and military science instruction. Depending upon enrollment, classes are taught either at Lafayette College or at Coxe Laboratory, Lehigh University.

The ROTC Program complements the educational process by adding those additional skills and areas of knowledge critical to

success in a position of leadership in either the Army or as a leader in business or industry.

The objectives of the military science program are to develop leadership and management ability in each student; to provide a basic understanding of the Army's history, philosophy, organization, responsibilities, and role in American society; and to develop fundamental professional knowledge and skills associated with officership. These objectives are achieved through classroom instruction, leadership laboratories, field trips, role-playing, leadership simulations, and individual assessment and counseling.

Army ROTC offers both a four-year program and a two-year program. The four-year program consists of the two-year basic course and a two-year advanced course. The two-year program consists of the two-year advanced course offered to students with previous military experience and those who have successfully completed a five-week ROTC Leadership Training Course (LTC). Basic course students incur no obligation for service in the Army as a result of taking these courses.

Basic Course. Normally taken in the first-year and sophomore years, the course provides training and instruction in leadership, public speaking, and basic military subjects, such as the Army's role and organizational structure, history and philosophy of the Army, basic tactics, land navigation, first aid, group dynamics, and leadership traits and characteristics.

Advanced Course. Normally taken in the junior and senior years, advanced instruction includes management, military skills, advanced leadership and tactics, logistics, administration military law, ethics, and professionalism, and includes attendance at ROTCs National Advanced Leadership Course (LDAC). Students receive $350-$400 per month subsistence pay during the junior and senior years. To enroll in the advanced course, an applicant completes either the basic course or the five-week Leadership Training Course; or has received basic course credit for previous military experience.

Professional Military Education. This education is required for a commission and consists of two essential parts: a baccalaureate degree and at least one undergraduate course in military history (History 255, 262, or 370).

Uniforms and Equipment. The department supplies all uniforms and equipment needed by the student for military science courses. Students are charged only for those items that are not returned when they leave the program.

Transfers. Qualified students transferring from another institution may enter the ROTC program at the appropriate level and year provided they have received the necessary credits, the recommendation of their former professor of military science (if applicable), and the approval of the College.

Obligation after Graduation. Upon graduation a student will receive a commission as a Second Lieutenant in either the active Army or the Reserve Forces. If offered active duty, scholarship students serve four years while non-scholarship students serve three. If offered reserve duty, students normally serve six to eight years in a Reserve or National Guard unit.

Graduate Studies. ROTC graduates may request to delay their active service to pursue a full-time course of instruction leading to an advanced degree. Delay does not lengthen the active service obligation unless the degree is obtained at military expense.

Career Opportunities. Individuals are commissioned as officers in the United States Army after completion of the ROTC program, the National Advanced Leadership Course (LDAC), and a bachelor's degree. They then qualify in branches (specialties) such as the Corps of Engineers, Aviation, Armor, Infantry, Field Artillery, Air Defense Artillery, Signal Corps, Military Intelligence, Military Police, Chemical Corps, Ordnance Corps, Finance, Transportation, Adjutant General, Quartermaster, Medical Service Corps, or Nursing Corps. Officers work as leaders/managers, specialists, or combinations of the two depending on the assignment.

There are many opportunities for advanced military and civilian schooling beginning with nearly three months of training in the branch specialty. A person may later receive additional training in a specialty area such as: information systems engineering, information operations, strategic intelligence, psychological operations, space operations, human resource management, comptroller, public affairs, foreign area specialization, operations research/systems analysis, nuclear operations and research, information systems management, simulations operations, or strategic plans and policy.

Students selected for reserve forces duty become officers in the Army Reserve or Army National Guard in their hometown area and essentially have a part-time military career. Active duty officers are assigned at various locations throughout the world. An officer can earn retirement through both programs after 20 years of service.

Military Science Courses (p. 168)

ROTC Scholarship Program

This program is designed to offer financial assistance to outstanding men and women entering the ROTC program or those who are currently enrolled. Each scholarship provides $23,000 annually in tuition and fees, a textbook and supplies allowance of up to $900, and pay of $250 per month for the period the scholarship is in effect. Three-year scholarships are available to outstanding cadets who are currently enrolled in ROTC and are completing their first year of college.

This program is also open to all qualified students who are not currently enrolled in Army ROTC but who are willing to join in their sophomore year. A similar two-year scholarship is available to sophomores. Two-year scholarships are also available at the Leadership Training Course.

Four-year scholarships are open to anyone entering ROTC as a first-year student. Application for scholarships must be made to Headquarters, U.S. Army Cadet Command, Fort Monroe, Virginia, by Aug. 15 before the senior year of high school for early selection, but no later than Dec. 1 for normal application. Application booklets are available from most high school guidance offices, or may be obtained from Cadet Command at the address above or from the Army ROTC web site.

Leadership Training Course

Students who have not considered the benefits of ROTC and a military commission until late in their sophomore year may attend a five-week Leadership Training Course at Fort Knox, Kentucky during the summer between the sophomore and junior years. Upon successful completion they are awarded "credit" for the Basic Course and enter the Advanced Course the beginning of their junior year. Special two-year scholarships are awarded to outstanding performers.

National Advanced Leadership Course

Formally enrolled students in pursuit of a commission must successfully complete a five-week training program normally conducted at Fort Lewis, Washington, between their junior and senior year. Focus is on evaluation of military leadership skills over a broad spectrum of training events. Students are paid for travel and attendance. Prerequisites are completion of the basic military science courses or their equivalent and MS 301 and MS 302.

Additional Training Opportunities

Volunteer activities include: U.S. Army Airborne School, U.S. Army Air Assault School, Ranger Club (study of small unit tactical operations), orienteering, formal military social affairs, rappelling, Marquis Guard (color guard), and trips to various military installations and historical battlefields.

Course Credit

Classes of 2018 and beyond

All MS course carry 0.25 credits, are recorded on the transcript, count in the GPA and may be used to fulfill graduation requirements.

Classes of 2016 and 2017

Credits earned in MS 101, MS 102, MS 201, MS 202, MS 301, and MS 302 are recorded on the transcript and count toward the GPA, but may not be used to fulfill the minimum course requirement for graduation. MS 401 and MS 402 may be used to fulfill two course credits toward the 32 course requirement for graduation in A.B. and B.S. science programs. In the case of B.S. engineering programs, MS 302 and MS 401 may be used to fulfill two free electives and MS 402 to satisfy one of the required Humanities/Social Science electives.

Leadership Laboratory

For all MS courses, a Leadership Laboratory is scheduled. The lab provides students the opportunity to demonstrate an understanding of the leadership process and develop fundamental military skills. Lab dates and times are included in the course syllabus.

During labs, instruction on a variety of subjects with military application provides the context within which students have opportunities to both teach and lead in a group setting. Responsibility is expanded as the student progresses through the military science program. In the senior year, students assume responsibility for the planning, preparation, and conduct of the laboratory. Leadership Laboratory is mandatory for all students enrolled in military science courses.

MUSIC

Department Head
Professor Stockton

The music department offers students from all disciplines opportunities to develop an understanding and appreciation of music through a wide range of courses and performance activities. Students may elect to pursue a major or minor in music, or to participate at whatever level their background and interest dictates. Faculty members are active performers and scholars who take a special interest in personalized instruction.

The curriculum includes offerings in theory, composition, performance, history, and literature. In addition to the more conventional areas of music study, the department offers opportunities to study world music traditions, jazz and popular styles, and electronic music. The Williams Center for the Arts includes rehearsal and practice facilities, an electronic music studio, a score and multimedia library, concert hall, and computer instruction facilities. Students have opportunities to perform in choral groups as well as jazz, brass, string, wind, and percussion ensembles. The artist-in-residence program brings noted artists from all over the world to interact with students through workshops and classes.

Music Courses (p. 169)

Music Major

Requirements

The major consists of a minimum of 10 courses:

MUS 103	Introduction to World Music Traditions
MUS 121	Music Theory I
MUS 201	Music History and Literature: 1600-1915
MUS 222	Music Theory II
MUS 323	Music Theory III
MUS 202	Music History and Literature: 1915 to Present
	Or
MUS 324	Twentieth Century Harmonic Practice
MUS	One elective in Musicology at or above the 300-level
MUS 491-492	Senior Project
	Or
MUS 495-496	Thesis
MUS 141	Applied Music Instruction
MUS 150-164	Ensemble participation
	Demonstrated piano proficiency

MUS 141: Four semesters of Applied Music Lessons.

MUS 150-164: Four semesters of Ensemble participation.

Music Minor

Requirements

The minor consists of a minimum of six courses:

MUS 103	Introduction to World Music Traditions
MUS 121	Music Theory I
MUS 201	Music History and Literature: 1600-1915
MUS 222	Music Theory II
MUS	One MUS elective
MUS 141	Applied Music Instruction
MUS 150-164	Ensemble participation
	Demonstrated piano proficiency

One MUS elective: At the 200 or higher level.

MUS 141: Two semesters of Applied Music Lessons.

MUS 150-164: Two semesters of Ensemble participation.

NEUROSCIENCE

Program Chair

Professor Gabel

Why do nerve cells die when you develop Alzheimer's disease? Does your brain change after you become dependent on heroin? Answers to these questions as well as many others is the goal of neuroscience, one of the hottest fields of study today. This interdisciplinary field explores the development, structure, and behavioral consequences of the nervous system.

The bachelor of science program, directed jointly by the psychology and biology departments, helps students understand nervous systems from a variety of scientific perspectives. Hands-on learning opportunities are emphasized through laboratory courses and student-directed research experiences. Although not required, students are encouraged to pursue independent study, advanced research, or honors.

Neuroscience Courses (p. 173)

Neuroscience, B.S. Major

Requirements

The major consists of a minimum of 17 courses:

BIOL 101	General Biology
BIOL 256/NEUR 256	Neurobiology
CHEM 121	General Chemistry I
CHEM 122	General Chemistry II
CHEM 221	Organic Chemistry I
NEUR 201	Introduction to Neuroscience
NEUR 401	Advanced Neuroscience
PHYS 111	General Physics-Mechanics and Thermodynamics
	And
PHYS 112	General Physics-Electricity, Magnetism, and Optics
	Or
PHYS 131	Physics I: Mechanics
	And
PHYS 133	Physics II: Electricity, Magnetism, and Waves
PSYC 110	Introduction to Psychological Science
PSYC 120	Quantitative Methods in Psychology
PSYC 323	Physiological Psychology

Five electives, at least two from each category:

Category A

PSYC 203	Design and Analysis I
PSYC 225	Psychopharmacology
PSYC 232	Abnormal Psychology
PSYC 234	
PSYC 236	Applied Behavior Analysis
PSYC 255	
PSYC 321	Learning
PSYC 322	Perception
PSYC 324	Comparative Psychology: Animal Behavior
PSYC 325	
MUS 255	Music and the Brain: Neuroscience of Music
NEUR 255	Music & the Brain: Neuroscience of Music
NEUR 275	Art, Neuroscience and Consciousness
PHIL 225	Philosophy of Mind
PHIL 230	Theories of Knowledge

Category B

BIOL 212	Developmental Biology
BIOL 213	Comparative Vertebrate Anatomy
BIOL 214	Neuroanatomy
BIOL 245	Immunology
BIOL 251	Human Physiology
BIOL 255	Molecular Genetics
BIOL 310	Aging and Age-Related Diseases
BIOL 314	Anatomy of Vision
BIOL 336	Evolutionary Genetics
CHEM 351	Biochemistry Survey
CM 151	Introduction to Computational Science

NEUR 351: Can count as either a category A or B elective.

One semester of a neuroscience research course (NEUR 391-392, NEUR 491-492, NEUR 495-496) may be used as an elective.

A neuroscience research course does not count towards either category.

For students considering graduate school in neuroscience or health professions school, a second semester of organic chemistry is recommended. Students interested in pursuing graduate school in behavioral neuroscience are encouraged to take PSYC 203 as one of their Category A electives.

Neuroscience majors may not minor in psychology and may not seek a second major (A.B. or B.S.) in either biology or psychology.

The Common Course of Study (p. 5) is required.

PHILOSOPHY

Department Head
Professor Panichas

The study of philosophy helps students to think critically, to understand and enjoy the literature of philosophy, and to make reasonable decisions relevant to the problems of contemporary life.

Courses include logic, philosophy of science, ethics, social and political philosophy, philosophy of mind, philosophy of art, and existentialism. All of the courses emphasize the precise, logical use of language and the exercise of careful judgment and judicious evaluation in thinking. Students are encouraged to broaden their study with special topic courses. Recent courses have included the aesthestics of films, death, and feminist philosophy. Individualized tutorials are available for selected students who wish to study a specific philosophical problem or philosopher in depth.

Majors are encouraged to consider course work in several related disciplines to give them a broad background in the humanities, the sciences, or both.

Philosophy Courses (p. 174)

Philosophy Major

Requirements

The major consists of a minimum of 10 courses:

PHIL 101	Introduction to Philosophy
	Either
PHIL 102	Basic Social Questions
	Or

PHIL 250	Ethics
PHIL 214	First Philosophers
PHIL 216	Modern Philosophy
PHIL	Two electives in Metaphysics/Epistemology/Logic/Language
PHIL	Two electives in Value Theory
PHIL	Two Philosophy electives

Electives: At least two of the six electives must be at the 300-level or above. Select from table below.

Philosophy Course Categories:

I	II	III
Mataphysics/ Epistemolgy/ Logic/ Language	Value Theory	History of Philosophy
PHIL 220, PHIL 225, PHIL 230	PHIL 240, PHIL 250, PHIL 260, PHIL 270	PHIL 236, PHIL 218
PHIL 300, PHIL 320	PHIL 340, PHIL 345, PHIL 350, PHIL 360	PHIL 310

Students wishing to major in philosophy and another subject should discuss with their advisers the possibility of courses in other departments or programs counting toward both majors.

Philosophy Minor

Requirements

The minor consists of a minimum of 6 courses:

At least six courses from among the offerings of the department.

The department strongly recommends that students pursuing a minor in philosophy take a course in logic and a course in the history of philosophy. Students with an interest in the minor should consult with a member of the department.

PHYSICS

Department Head

Associate Professor Nice

Physics is the study and analysis of physical systems with the view of uncovering the basic principles that govern their behavior. This involves a method of analysis by which complex physical problems are broken down into sets of relatively simple processes that are easier to understand.

Physics is applied to systems ranging from the microscopic structure of matter to the macroscopic structure of the universe. The same fundamental methodology may be used to study the structure of crystals and the density of liquids at high pressure, create numerical simulations of clusters of galaxies, or examine the relationship between structure and function of metal-bearing proteins and enzymes. For this reason, physicists can be found working in many different professions.

Courses are about equally divided between macroscopic and microscopic physics. Students may also develop an interdisciplinary program in such areas as material science, biophysics, or geophysics. Opportunities are provided for research on campus and at national facilities such as Arecibo Observatory.

Physics Courses (p. 176)

Physics, A.B. Major

Requirements

The program consists of a minimum of 10 major courses and 4 collateral courses:

PHYS 130	Relativity, Spacetime and Contemporary Physics
PHYS 131	Physics I: Mechanics
	Or
PHYS 151	Accelerated Physics I: Mechanics and Thermodynamics
PHYS 133	Physics II: Electricity, Magnetism, and Waves
	Or
PHYS 152	Accelerated Physics II: Electricity, Magnetism, and Optics
PHYS 215	Introduction to Quantum Physics
PHYS 218	Oscillatory and Wave Phenomena
MATH 161	Calculus I
MATH 162	Calculus II
MATH 263	Calculus III
MATH 264	Differential Equations with Linear Algebra
PHYS	Five PHYS electives

Nine of the ten Physics courses must be numbered greater than 110

In special circumstances, students who have taken advanced electrical and computer engineering or mechanical engineering courses in electromagnetic theory, electronics, dynamics, or thermodynamics may waive certain of these required courses with approval of the head of the physics department and the Academic Progress Committee.

Advanced courses from other science or engineering departments may be substituted for physics elective courses and up to two required physics courses with the approval of the head of the physics department and the Academic Progress Committee, when doing so will produce a coherent program of physics applied to an interdisciplinary field such as material science, biophysics, geophysics, etc.

The Common Course of Study (p. 5) is required.

Physics, B.S. Major (Classes of 2018 and beyond)

Requirements

The program consists of a minimum of 12 major courses and 5 collateral courses:

PHYS 130	Relativity, Spacetime and Contemporary Physics
PHYS 131	Physics I: Mechanics
	Or
PHYS 151	Accelerated Physics I: Mechanics and Thermodynamics
PHYS 133	Physics II: Electricity, Magnetism, and Waves
	Or
PHYS 152	Accelerated Physics II: Electricity, Magnetism, and Optics
PHYS 215	Introduction to Quantum Physics
PHYS 218	Oscillatory and Wave Phenomena
PHYS 327	Advanced Classical Mechanics
PHYS 335	Thermal Physics
PHYS 338	Advanced Physics Laboratory
PHYS 342	Electromagnetic Fields
PHYS 351	Quantum Theory
PHYS	Two PHYS electives
MATH 161	Calculus I
MATH 162	Calculus II
MATH 263	Calculus III
MATH 264	Differential Equations with Linear Algebra
	An approved MATH, CS, CM elective

In special circumstances, students who have taken advanced electrical and computer engineering or mechanical engineering courses in electromagnetic theory, electronics, dynamics, or thermodynamics may waive certain of these required courses with approval of the head of the physics department and the Academic Progress Committee.

Advanced courses from other science or engineering departments may be substituted for physics elective courses and up to two required physics courses with the approval of the head of the physics department and the Academic Progress Committee, when doing so will produce a coherent program of physics applied to an interdisciplinary field such as material science, biophysics, geophysics, etc.

The Common Course of Study (p. 5) is required.

Physics Major with an Astronomy Concentration

Requirements

Complete the requirements for either the A.B. or B.S. degree in Physics as noted above.

For the BS degree:

PHYS 304	Observational Astronomy
PHYS 308	Astrophysics

For the AB degree: The BS option or

PHYS 108	Astronomy: Stars, Galaxies and the Big Bang
	And
PHYS 304	Observational Astronomy
	Or
PHYS 104	Astronomy: The Solar System
	And
PHYS 308	Astrophysics

In special circumstances, students who have taken advanced electrical and computer engineering or mechanical engineering courses in electromagnetic theory, electronics, dynamics, or thermodynamics may waive certain of these required courses with approval of the head of the physics department and the Academic Progress Committee.

Advanced courses from other science or engineering departments may be substituted for physics elective courses and up to two required physics courses with the approval of the head of the physics department and the Academic Progress Committee, when doing so will produce a coherent program of physics applied to an interdisciplinary field such as material science, biophysics, geophysics, etc.

The Common Course of Study (p. 5) is required.

Physics Minor

Requirements

The minor consists of a minimum of six courses:

PHYS 131	Physics I: Mechanics
	Or
PHYS 151	Accelerated Physics I: Mechanics and Thermodynamics
PHYS 133	Physics II: Electricity, Magnetism, and Waves
	Or
PHYS 152	Accelerated Physics II: Electricity, Magnetism, and Optics
PHYS 215	Introduction to Quantum Physics
PHYS	Three PHYS electives

Three PHYS electives: Numbered 110 or above.

POLICY STUDIES

Program Chair
Professor Crain

Policy Studies major gives students the skills and institutional knowledge necessary for understanding policy processes, and provides a multidisciplinary course of study in the design, management, and evaluation of policies and institutions. Faculty affiliates represent all divisions of the college, and the program encourages students to combine coursework in engineering, the natural sciences, humanities, and the social sciences.

An integral part of the major is faculty-student collaboration on applied, real-world problems to address the political, technical, and economic factors relevant to a solution. Students work with an adviser to structure elective courses that relate to a theme of concentration and to develop research opportunities, internships, and, for qualified students, an honors thesis. Themes of concentration include:

Arts and Media Policy: including not-for-profit organizations, ethics, government's role in promoting and protecting culture, censorship, the licensing and regulation of the information sector, and privacy;

Economic Policy and Homeland Security: including fiscal, monetary and regulatory policy, workplace safety, product

liability, national defense, homeland security, natural disasters, emergency management, and privacy;

Science Policy: including intellectual and physical property rights, ethics, technology transfer, space, biomedical, and environmental;

Social Policy: including health care, education, poverty, family and children, consumer protection and safety, public retirement and welfare programs, criminal justice, housing and urban planning, human reproductive rights, civil rights, and human rights.

The major is useful as preparation for employment in business, government agencies, or NGOs; as a foundation for postgraduate professional schools in public policy, law, and business; and as preparation for graduate study in the social sciences.

Policy Studies Courses (p. 179)

Policy Studies Major

Requirements

The major consists of a minimum of 14 courses:

ECON 101	Principles of Economics
ECON 251	Intermediate Microeconomics
ECON 253	Fundamentals of Econometrics
GOVT 101	Introduction to United States Politics
	Or
GOVT 102	Introduction to International Politics
	Or
GOVT 103	Introduction to Comparative Politics
HIST 105	History of the Modern World
MATH 141	Differential Calculus and Economic Modeling
	Or
MATH 161	Calculus I
MATH 186	Applied Statistics
PSTD 251/EGRS 251	Introduction to Policy Studies
PSTD 300	Industry, Strategy, and Policy
PSTD 400	Policy Internship and Seminar
	Four Policy Studies theme electives

Four electives: selected from an approved list and relating to one of the following four themes: Arts and Media Policy, Economic Policy and Homeland Security, Science Policy, Social Policy.

A policy-oriented internship approved by the Policy Studies program chair is required. The internship should be tailored to a student's theme of concentration and typically will take place at the sponsor's site. Following the internship, students participate in a seminar (PSTD 400) to build on the lessons of the internship experience.

PSYCHOLOGY

Acting Department Head
Professor Vinchur

Psychology is the scientific study of behavior and of underlying mental and physiological processes. Courses are offered in a variety of areas, such as learning, perception, clinical, developmental, social, cognitive, psychophysiology and industrial/organizational.

The department's scientific orientation can be seen in the courses required of all majors and minors and in the orientation of the required core courses. Students begin with a survey of the field and of the basic research techniques used by psychologists.

As students progress, they study statistical analyses of data and more advanced research designs. Majors are encouraged to develop breadth by studying a variety of content areas and to develop depth through advanced-level courses.

Psychology Courses (p. 180)

Psychology, A.B. Major (Class of 2018)

Requirements

The major consists of a minimum of 10 courses:

PSYC 110	Introduction to Psychological Science
PSYC 120	Quantitative Methods in Psychology
PSYC 203	Design and Analysis I
PSYC	Two Laboratory electives
PSYC	One upper-level elective
PSYC	Four PSYC electives

Two Psychology Laboratory electives: Selected from 304-330

One upper-level Psychology elective: Selected from 335 or higher

It is recommended that A.B. students consider taking PSYC 304; PSYC 391-392; PSYC 491-492; or PSYC 495-496.

Seven Subdivisions:

All courses from PSYC 210 and above are to be distributed among at least four of the seven major subdivisions of psychology to achieve a broad foundation in the major.

Biological

PSYC 225	Psychopharmacology
PSYC 323	Physiological Psychology
PSYC 324	Comparative Psychology: Animal Behavior

Clinical

PSYC 231	Personality
PSYC 232	Abnormal Psychology
PSYC 337	Counseling Psychology

Cognitive/Learning

PSYC 210	Second Language Acquisition
PSYC 236	Applied Behavior Analysis
PSYC 242	Educational Psychology
PSYC 256	Cognitive Psychology I
PSYC 321	Learning
PSYC 322	Perception
PSYC 330	Cognitive Psychology II

Developmental

PSYC 230	Lifespan Development I
PSYC 328	Lifespan Development II

Industrial/ Organizational

PSYC 211	Industrial-Organizational Psychology
PSYC 226	Human Factors and Engineering Psychology
PSYC 335	Industrial Psychology
PSYC 336	Organizational Behavior

Methods

PSYC 304	Design and Analysis II
PSYC 339	Tests and Measurement
PSYC 340	History and Systems of Psychology

Social

PSYC 219	Cross-Cultural Psychology
PSYC 235	Social Psychology I
PSYC 240	Health Psychology
PSYC 248	Psychology of Gender
PSYC 327	Social Psychology II

Psychology, B.S. Major (Class of 2018)

Requirements

The program consists of a minimum of 12 major courses and 6 collateral courses:

PSYC 110	Introduction to Psychological Science
PSYC 120	Quantitative Methods in Psychology
PSYC 203	Design and Analysis I
PSYC	Three Laboratory electives
PSYC	One upper-level elective
PSYC	Five PSYC electives
MATH 125	Modeling and Differential Calculus
	Or
MATH 141	Differential Calculus and Economic Modeling
	Or
MATH 161	Calculus I
	Five courses in Natural Sciences

Three Psychology Laboratory electives: Selected from 304-330

One upper-level Psychology elective: Selected from 335 or higher

Five courses in Natural Sciences: Five courses in natural sciences outside the department to be selected on the basis of concentration interest (Biology, Chemistry, Computer Science, Geology, Mathematics 200 or above, or Physics);

It is strongly recommended that B.S. students consider taking PSYC 304; PSYC 491-492; or PSYC 495-496.

Seven Subdivisions:

All courses from PSYC 210 and above are to be distributed among at least four of the seven major subdivisions of psychology to achieve a broad foundation in the major.

Biological

PSYC 225	Psychopharmacology
PSYC 323	Physiological Psychology
PSYC 324	Comparative Psychology: Animal Behavior

Clinical

PSYC 231	Personality
PSYC 232	Abnormal Psychology
PSYC 337	Counseling Psychology

Cognitive/Learning

PSYC 210	Second Language Acquisition
PSYC 236	Applied Behavior Analysis
PSYC 242	Educational Psychology
PSYC 256	Cognitive Psychology I
PSYC 321	Learning
PSYC 322	Perception
PSYC 330	Cognitive Psychology II

Developmental

PSYC 230	Lifespan Development I
PSYC 328	Lifespan Development II

Industrial/ Organizational

PSYC 211	Industrial-Organizational Psychology
PSYC 226	Human Factors and Engineering Psychology
PSYC 335	Industrial Psychology
PSYC 336	Organizational Behavior

Methods

PSYC 304	Design and Analysis II
PSYC 339	Tests and Measurement
PSYC 340	History and Systems of Psychology

Social

PSYC 219	Cross-Cultural Psychology
PSYC 235	Social Psychology I
PSYC 240	Health Psychology
PSYC 248	Psychology of Gender
PSYC 327	Social Psychology II

Psychology, A.B. Major (Class of 2019 and beyond)

Requirements

The major consists of a minimum of 10 courses:

PSYC 110	Introduction to Psychological Science
PSYC 120	Quantitative Methods in Psychology
PSYC 203	Design and Analysis I
PSYC 490	Capstone Course in Psychology
PSYC	Two Laboratory electives
PSYC	Four PSYC electives

Two Psychology Laboratory electives: Selected from 304-330

It is recommended that A.B. students consider taking PSYC 304, PSYC 340, PSYC 391-392, PSYC 395-396, or PSYC 495-496.

Five Subdivisions:

All courses from PSYC 210 and above are to be distributed among at least four of the five major subdivisions of psychology to achieve a broad foundation in the major.

Applied

PSYC 211	Industrial-Organizational Psychology
PSYC 226	Human Factors and Engineering Psychology
PSYC 232	Abnormal Psychology
PSYC 334	
PSYC 337	Counseling Psychology
PSYC 339	Tests and Measurement
PSYC 342-343	Practicum in Psychology

Biological

PSYC 225	Psychopharmacology
PSYC 322	Perception
PSYC 323	Physiological Psychology
PSYC 324	Comparative Psychology: Animal Behavior

Cognitive/Learning

PSYC 210	Second Language Acquisition
PSYC 236	Applied Behavior Analysis
PSYC 256	Cognitive Psychology I

PSYC 321	Learning
PSYC 330	Cognitive Psychology II

Developmental/Educational

PSYC 230	Lifespan Development I
PSYC 242	Educational Psychology
PSYC 328	Lifespan Development II

Social/Personality

PSYC 219	Cross-Cultural Psychology
PSYC 231	Personality
PSYC 235	Social Psychology I
PSYC 240	Health Psychology
PSYC 248	Psychology of Gender
PSYC 327	Social Psychology II

Psychology, B.S. Major (Class of 2019 and beyond)

Requirements

The major consists of a minimum of 12 major courses and 5 collateral courses:

PSYC 110	Introduction to Psychological Science
PSYC 120	Quantitative Methods in Psychology
PSYC 203	Design and Analysis I
PSYC 490	Capstone Course in Psychology
PSYC	Three Laboratory electives
PSYC	Five PSYC electives
	Five courses in Natural Sciences

Three Psychology Laboratory electives: Selected from 304-330

Five courses in Natural Sciences: Five courses in natural sciences outside the department to be selected on the basis of concentration interest (Biology, Chemistry, Computer Science, Geology, Mathematics 200 or above, or Physics).

It is strongly recommended that B.S. students consider taking PSYC 304, PSYC 395-396, or PSYC 495-496.

Five Subdivisions:

All courses from PSYC 210 and above are to be distributed among at least four of the five major subdivisions of psychology to achieve a broad foundation in the major.

Applied

PSYC 211	Industrial-Organizational Psychology
PSYC 226	Human Factors and Engineering Psychology
PSYC 232	Abnormal Psychology
PSYC 334	Mood Disorders
PSYC 337	Counseling Psychology
PSYC 339	Tests and Measurement
PSYC 342-343	Practicum in Psychology

Biological

PSYC 225	Psychopharmacology
PSYC 322	Perception
PSYC 323	Physiological Psychology
PSYC 324	Comparative Psychology: Animal Behavior

Cognitive/Learning

PSYC 210	Second Language Acquisition
PSYC 236	Applied Behavior Analysis
PSYC 256	Cognitive Psychology I
PSYC 321	Learning
PSYC 330	Cognitive Psychology II

Developmental/Educational

PSYC 230	Lifespan Development I
PSYC 242	Educational Psychology
PSYC 328	Lifespan Development II

Social/Personality

PSYC 219	Cross-Cultural Psychology
PSYC 231	Personality
PSYC 235	Social Psychology I
PSYC 240	Health Psychology
PSYC 248	Psychology of Gender
PSYC 327	Social Psychology II

Psychology Minor

Requirements for the Minor

The minor consists of a minimum of six courses:

PSYC 110	Introduction to Psychological Science
PSYC 120	Quantitative Methods in Psychology
PSYC 203	Design and Analysis I
PSYC	Three PSYC electives

Three PSYC electives: Selected in consultation with the department.

RELIGION AND POLITICS

Religion and Politics is a coordinate major between the departments of government and law, and religious studies. The major proceeds under two assumptions. First, religious phenomena are a fundamental and often essential component of political analysis. Second, the political implications of religious beliefs, behavior, and institutions are important to the study of religion. In brief, this major gives students greater insight into political dynamics and enhances their ability to assess the impact that religious values have on politics.

Students may choose from two tracks - 1) American Politics and Theory: emphasis on religious study in the realm of American politics and theory, 2) International: emphasis on religious study in the international arena.

Religion and Politics Major

Requirements

The major consists of a minimum of 14 courses:

REL 101	Religions in World Cultures
REL 222	Interreligious Cooperation and Conflict
REL 240	Theories of Religion
REL 490	Senior Capstone
	Or
REL 495-496	Honors Thesis
GOVT 104	Introduction to Political Theory
GOVT 244	Modern Political Theory
GOVT	Three 200 or 300-level approved GOVT electives

And at least three additional approved REL electives:

Only one of which can be at the 100-level and at least one of which must be at the 300-level

One from:

GOVT 101	Introduction to United States Politics
GOVT 102	Introduction to International Politics
GOVT 103	Introduction to Comparative Politics

One Seminar from:

GOVT 401	Representation, Apportionment and Democratic Participation
GOVT 405	US Foreign Policy in a Changing World
GOVT 407	Law and Social Movements
GOVT 410	Personality and Supreme Court Decision Making
GOVT 412	Politics of European Integration
GOVT 414	Political Thought through Literature
GOVT 415	Nationalism in World Politics
GOVT 416	Critical Theory: Power and Resistance
GOVT 418	Democracy, Inclusion, Exclusion
	Or
GOVT 495-496	Thesis

Students writing an Honors Thesis will enroll either in REL 495 in the fall semester of their senior year and GOV 496/LAW 496 in the spring, or in GOV 495/LAW 495 in the fall semester and REL 496 in the spring. The Honors Thesis will be directed by a faculty member from either department, with at least one of the two readers being from the other department. No more than one semester of independent study is permitted.

RELIGIOUS STUDIES

Department Head
Professor Ziolkowski

The study of religions is a vital component in understanding the various cultures around the globe throughout history, up to and including the present. Courses introduce students to religions of the world, including--but not limited to--Hinduism, Buddhism, Judaism, Christianity, Islam, and religions of Africa. The academic study of religions is systematic and comparative, examining their historical development, including their texts, beliefs, and practices, and topics such as religious ethics, religion and society (e.g., politics, violence, medicine, and the environment), religion and literature, and philosophy of religion. Courses also introduce a range of theories and methods for studying religions, drawing on disciplines such as history, literature, anthropology, sociology, psychology, and gender studies.

Religious Studies Courses (p. 183)

Religious Studies Major

Requirements
The major consists of a minimum of nine courses:

REL 101	Religions in World Cultures
REL 240	Theories of Religion
REL 490	Senior Capstone

With the Department's approval students with a cumulative GPA of 3.00 or higher, and a major GPA of 3.20 or higher may elect to write and Honors Thesis (495/496) during their senior year.
Six additional approved REL electives:

The electives must include a 300-level elective, two courses in Transformations (Traditions and Practices), and at least one course in each of the three remaining non-Introductory domains of inquiry - Representations (Text and Contexts), Power and Difference, and Additional Department Electives chosen from the following Religious Studies Domains of Inquiry:
Introductory:

REL 101	Religions in World Cultures
REL 102	Contemporary Religious Issues
REL 103	Religion, Myth, and Fantasy
REL 104	Saints, Mystics, Ecstatics

Transformations (Traditions and Practices):

REL 211	Hinduism: Unities and Diversity
REL 212	Buddhism: From India to Asia and Beyond
REL 213	Judaism: Faith, Communities, Identity
REL 214	Christianity: From Jesus to the Third Millennium
REL 215	Islam: History, Faith, and Practice
REL 216	Religions in Africa: Contemporary and Historical Expressions
REL 231	Religions in American History and Culture
REL 232	Religions in Latin America

Representations (Texts and Contexts):

REL 201	The Biblical Imagination: Torah, Prophets, Writings
REL 202	Christian Scriptures
REL 203	Religion and the Literary Imagination
REL 204	India's Religious Texts: Sacred Word, Sacred Sound
REL 207	The Quran
REL 260	Global Muslim Literature and Film

Power and Difference:

REL 217	Latina/o Religions: Not Just Catholicism
REL 222	Interreligious Cooperation and Conflict
REL 225	Sex, Gender, and Religion
REL 228	Religion and Politics in Africa
REL 310	Sacrifice: Ritual and Violence
REL 303	Lived Religion in Context: Ethnographies of Africa and Asia
REL 305	Muhammad and Prophecy
REL 308	Visual Culture and Religious Identity

Additional Department Electives:

REL 223	Religious Healing and Health
REL 224	Religious Ethics
REL 250	Anthropology of Religion
REL 301	Philosophies of Religion
REL 304	Spirituality and Transformation: From Sufism to Self-Help
REL 306	Jewish Responses to the Holocaust
REL 307	Jews in Poland, Culture and Memory

Religious Studies Minor

Requirements
The minor consists of a minimum of five courses:

REL 101	Religions in World Cultures
	Four electives

Four electives: With at least three above the 100-level.

RUSSIAN AND EAST EUROPEAN STUDIES

Program Chair
Professor Sinkevic

The Russian and East European Studies major prepares students to engage meaningfully with one of the most important areas in the world. Majors learn about the history, culture, and present-day circumstances of life in the Russian Federation and a wide number of other states in the Balkans, the Caucasus region, Central Asia, and the European Union. Undergraduates have the

opportunity to read Tolstoy (both in translation and in the original Russian), to study an empire that covered a sixth of the globe, to see the other side of the Cold War, and to discuss current issues of human rights and state practices in a volatile and dynamic geopolitical space. Upon graduation, REES majors find that many institutions in the public and private sectors alike have a pressing need for well-trained college graduates with a deep knowledge of the region and a proficiency in one or more of the area's languages.

The REES major is emphatically interdisciplinary. Students are required to take courses in language, literature, history, and government and are encouraged to take courses on the region in other departments, such as art and religious studies, as they are offered. Majors are strongly advised to participate in a study-abroad program in the region.

Russian and East European Studies Courses (p. 183)

Russian and East European Studies Major

Requirements

Students must complete RUSS 112 or pass a proficiency test at an intermediate level in Russian or another East European language
The major consists of a minimum of nine courses:

REES 241/ART 241/HIST 241	History, Art and Culture of Russia and Eastern Europe

Six approved electives: At least two electives must be in the Humanities and at least two electives must be in the Social Sciences.
A Theory elective from:

HIST 206	The Politics and Practice of History
REL 240	Theories of Religion
GOVT 309	Scope and Methods of Political Science

A capstone elective from:

HIST 354	Seminar: World War I
REES 460	Reading and Research in Russian/ East European Studies
REES 495-496	Thesis

Additional major electives:

Six approved electives

Six additional electives selected in consultation with the program chair.

REES majors are strongly urged to participate in a study-abroad program in Russia or Eastern Europe during a summer, semester, or yearlong program as part of their studies.

Russian and East European Studies Minor

Requirements

The minor consists of a minimum of five courses:

Five electives

Five electives: From an approved list, of which at least two must be in humanities and two in social sciences.

THEATER

Department Head
Professor Westfall

Performance and academic inquiry, theater practice, interdisciplinary methods, and the study of the world's dramatic literature complement one another in the theater department's approach to a liberal arts education. Theater at Lafayette College includes both teaching and learning initiatives that help students apply theater ideas and practice to analyzing visual, textual, and performance modes of expression and understanding the world. Thus, students are encouraged to consider theater as an art form with social and political dimensions, discovering through research into its complex history and diverse traditions around the globe an aesthetic of performance that is firmly grounded in both theory and practice.

By emphasizing collaboration and faculty mentoring through theater productions that focus on student-centered learning and artistic growth, the theater department educates students in ways that will prepare them for graduate study and professional careers in theater and related fields. The department is committed to expanding the range and depth of its offerings by bringing theater artists to Lafayette for residencies, workshops, and master classes; such endeavors create valuable links between individual students and established theater artists. Professional theater internships, interim theater courses in New York and London, and faculty-led semesters abroad, for instance, push students to stretch the boundaries of their college experience, fostering connections between the education they receive in laboratory, classroom, and production at Lafayette to the professional theater and to the larger world.

In accord with the aims of a liberal arts education, the department encourages all Lafayette students, regardless of major or minor, to refine their theater knowledge and gain theater expertise by taking electives in theater and by becoming cast or crew members in departmental productions, which are open to all matriculating students. The department helps to shape and enrich campus life through its production season, which draws the vast majority of its audience from the Lafayette community.

Theater Courses (p. 190)

Theater Major

Requirements

The major consists of a minimum of eight courses and four practicums:

THTR 107	Introduction to Theater
THTR 120	Theater Performance Practicum
THTR 121	Theater Production Practicum
THTR 207	Theater History
	Two general theater electives
	One 300-level dramatic literature elective
	Two 300-level performance electives
THTR 400	Senior Project

THTR 120, THTR 121: Four semester of Theater Practicum THTR 120 or THTR 121, with at least one of each.

Electives are selected in consultation with the adviser or the Director of Theater. The adviser will encourage students to work with mentors through independent study and internships. However, no more than one semester of internship may be counted toward the major or minor.

Theater Minor

Requirements

The minor consists of a minimum of eight courses:

THTR 107	Introduction to Theater
THTR 120	Theater Performance Practicum
THTR 121	Theater Production Practicum
	Three general theater electives

THTR 120, THTR 121: Four semesters of Theater Practicum THTR 120 or THTR 121, with at least one of each.

Electives are selected in consultation with the adviser or the Director of Theater. The adviser will encourage students to work with mentors through independent study and internships. However, no more than one semester of internship may be counted toward the major or minor.

WOMEN'S AND GENDER STUDIES

Program Chair
Professor Armstrong

Women's and Gender Studies is an interdisciplinary program that employs gender as its central framework for inquiry and analysis. Women's and Gender Studies courses cross the traditional boundaries of academic departments and embrace a variety of approaches, resulting in a richly integrated learning experience. The Women's and Gender Studies Program welcomes all students from every discipline and offers a major degree, as well as a minor.

Feminist, anti-racist, and LGBTQ-positive, Women's and Gender Studies is committed to the study of difference and diversity in all their complexity. The program explores the interaction of gender with sexuality, race, social and economic status, religion, nation, ethnicity, age, and other markers of identity. Women's and Gender Studies is attuned to global perspectives, engaged with issues of social justice, and committed to the well-being of the communities in which we live and learn. To that end, the program also prioritizes student internships, Community-Based Learning experiences, and connections to the local and global community.

Women's and Gender Studies Courses (p. 192)

Women's and Gender Studies Major

Requirements
The major consists of a minimum of nine courses:

Core courses:

WGS 101	Introduction to Women's Studies
WGS 280	Feminist Theory

Capstone Experience:

One from:

WGS 320	Black Feminisms
WGS 340	Sexuality Studies
WGS 353	Single Motherhood (Community-Based Learning Course)
WGS 370-379	Special Topics Seminar in Women's and Gender Studies
WGS 390-391	Independent Study in Women's and Gender Studies
WGS 495-496	Thesis

Six approved electives:

Six approved electives

Two electives must be selected from different academic divisions.

Women's and Gender Studies Minor

Requirements
The minor consists of a minimum of five courses:

WGS 101	Introduction to Women's Studies
	Four approved electives

Including at least one 300-level or one of the following designed as a capstone experience:

Women's and Gender Studies Core and Elective Courses include:

Core: All WGS courses.

Electives: AFS 258, AFS 320, A&S 212, A&S 227, A&S 238, A&S 271, ECON 325, ENG 119, ENG 274, ENG 388, EVST 253, FAMS 255, FREN 441, HIST 226, HIST 368, IA 230, IA 320, MUS 240, PHIL 270, PSYC 248, REL 205, REL 225

INTERDISCIPLINARY STUDIES

Lafayette encourages students to integrate and evaluate the knowledge gained in many different courses and departments through a number of interdisciplinary academic programs.

Majors and minors: Nine major programs (Africana Studies, American Studies, Biochemistry, Environmental Science, Environmental Studies, International Affairs, Mathematics & Economics, Neuroscience, and Russian & East European Studies) and ten minor programs focusing on broadly organized interdisciplinary topics are offered within the A.B. curriculum. In addition, a student may develop an individual interdisciplinary A.B. program. Petitions for such majors must be endorsed by three faculty members representing the disciplines involved and must be approved by the Academic Progress Committee.

"Students can petition to add any such minors by completing a 'Petition to Committee on Academic Progress' form."

Aging Studies Minor

Coordinator: Professor Reynolds (Biology)
Requirements
The minor consists of a minimum of five courses:

AGS 201	Introduction to Aging Studies
AGS 490	
	Or
AGS 491	Senior Project: Internship in Aging Studies
	Three electives

Electives: From at least two different departments. Electives are to be selected from an approved list, allowing students to develop their own gerontology focused interest.

Architectural Studies Minor

Coordinator: Professor Mattison (Art), Associate Professor Veshosky (Civil and Environmental Engineering)
Requirements
The minor consists of a minimum of six courses:

ART 120	Architectural Design and Theory
ART 126	History of Architecture
	Four electives

Electives are to be selected from an approved list, with at least one from each of three perspectives: historical, design, and engineering.

Biotechnology/Bioengineering Minor

Coordinator: Associate Professor Yu (Electrical and Computer Engineering)

Requirements

The minor consists of a minimum of five courses:

BIOL 101	General Biology
	Four electives

Elective must include at least one from an approved list of natural science courses, and at least one from an approved list of engineering courses

Students are encouraged to take at least three courses from departments other than their own and pursue a bio-oriented independent study or honors thesis. It is the responsibility of the student to fulfill any prerequisites.

Computational Methods Minor

Coordinator: Associate Professor Liew (Computer Science)

Requirements

The minor consists of a minimum of five courses:

CS 104	Introduction to Game Programming
	Or
CS 105	Digital Media Computing
	Or
CS 106	Personal Robotics
	Or
CM 141	Introduction to Computational Media
	Or
CM 151	Introduction to Computational Science
CM 401	
	Three electives

Electives are to be selected from an approved list, allowing students to develop their own gerontology focused interest.

Documentary Storymaking

Coordinator: Associate Professor A. Smith (Film and Media Studies)

Requirements

The minor consists of a minimum of five courses:

DOC 150	Introduction to Documentary Storymaking
	DOC Legal and Ethical Questions
	Capstone
	And
	Two additional courses

The Legal and Ethical Questions and Capstone courses are under development. More information will be available shortly. Questions can be referred to Professor Smith.

Health Care and Society Minor

Requirements

The minor consists of a minimum of five courses which must include:

A&S 222	Medical Anthropology
PHIL 145	Bioethics
PSYC 240	Health Psychology
	Two electives

Electives are selected from an approved list of courses which includes the humanities, social sciences, and natural sciences.

Health and Life Sciences Minor

Requirements

The minor consists of a minimum of six courses:

Humanities and Social Science Majors:

BIOL 101	General Biology
BIOL 102	General Biology
INDS 211	Interdisciplinary Seminars in Life Sciences: Symposia on Biomedicine, Bioengineering, Biochemistry, and Environmental Science
	One course in Humanities or Social Sciences
	One interdisciplinary course elective
	Capstone elective or Department Honors

Humanities/Social Sciences course, Interdisciplinary course elective: Chosen from approved lists.

Natural Science and Engineering Majors:

BIOL 101	General Biology
	Or
BIOL 102	General Biology
INDS 211	Interdisciplinary Seminars in Life Sciences: Symposia on Biomedicine, Bioengineering, Biochemistry, and Environmental Science
	Two course in Humanities or Social Sciences
	One interdisciplinary course elective
	Capstone elective or Department Honors

Humanities/Social Sciences course, Interdisciplinary course elective: Chosen from approved lists.

Italian Studies Minor

Coordinator: Professor Cummings (Music)

Requirements

The minor consists of a minimum of six courses:

ART 223	Italian Renaissance Art
	Or
ART 226	Age of Michelangelo
CL 101	Survey of European Literature I
	Or
HIST 222	Emergence of Western Europe
MUS 260	[Italian] Music and [Italian] Identity
	Three electives

Electives: At least one elective must be at the 300-level. Electives are selected in consultation with the program coordinator.

Jewish Studies Minor

Coordinator: Professor Peleg (Governments and Law)

Requirements

The minor consists of a minimum of five courses:

REL 213	Judaism: Faith, Communities, Identity
	Four approved electives

Electives are to be selected from courses in both the humanities and social sciences from at least three departments.

Not more than two courses in Hebrew may be applied toward the minor requirements, both of which must be intermediate level.

Electives should be chosen in consultation with the Jewish Studies coordinator from the listing and from special courses offered in cooperation with the Berman Center for Jewish Studies.

Latin American and Caribbean Studies Minor

Coordinator: Associate Professor Hendrickson (Religious Studies)

Requirements

The minor consists of a minimum of six courses:

Course are selected in consultation with the program coordinator and must include and upper level elective, independent study, internship, or thesis and be directed by a faculty member affiliated with the minor.

Students are asked to demonstrate proficiency through the intermediate level in a language relevant to the study of Latin America and the Caribbean. Spanish is recommended.

Electives may be selected from:

A&S 203	
A&S 206	
A&S 207	
A&S 208	Mapping Identities: Race, Ethnicity, & Residential Segregation in 1920's Easton, PA
EGRS 480	Sustainable Solutions
GOVT 227	Latin American Politics
HIST 106	
HIST 245	Latin America: The Colonial Period
HIST 246	Latin America: The National Period
HIST 345	Colloquium: History of Argentina
HIST 368	Seminar in Latin American History
INDS 190	Politics & Culture of the Caribbean
INDS 185	Guatemala: Innovations in Development
INDS 187	Sustainable Approaches in the Developing World: Rural Honduras from the Mayans to Present
MUS 232	
REL 236	African Diasporic Religions in the Americas
SPAN 215	Spanish for Heritage Speakers
SPAN 304	Spanish American Civilization and Culture, 1492-1900
SPAN 314	Contemporary Spanish America and Hispanics in the U.S.
SPAN 317	Survey of Spanish American Literature I
SPAN 318	Survey of Spanish American Literature II
SPAN 370	Seminar on Translation
SPAN 421	Seminar in the Literature and Culture of the New World
SPAN 428	Seminar in Modern Spanish American Literature and Culture
SPAN 435	Research Seminar in Hispanic Literature and Civilization

Medieval, Renaissance, and Early Modern Studies Minor

Coordinators: Professor Duhl (Foreign Languages and Literatures), Professor Ziolkowski (Religious Studies)

Requirements

The minor consists of a minimum of five courses:

Students must complete an introductory, two intermediate and two advanced courses from an approved list.

Courses are selected in consultation with the adviser from one of three clusters: Medieval, Renaissance-Reformation, or 17th-18th Century.

Interim Program/On Campus

Lafayette College offers Interim semester courses that meet in January or May. Courses are offered in a compressed time frame and offer unique opportunities that are not always available in the regular semester. The offerings for each academic year are announced early in the fall semester. Courses listed below have been approved to be taught in the Interim Session. Occasionally other courses taught during the academic year are offered in the Interim.

Individual course descriptions can be found in each academic departments listing. Approved courses are listed below.

Interim Session/On Campus Courses

Examples of courses offered in the Interim on campus include:

A&S 208	Mapping Identities: Race, Ethnicity, & Residential Segregation in 1920's Easton, PA
A&S 255	Contemporary Society and the Cinema
ART 191	
ART 193	
ART 196	Basic Photography (Black and White)
ART 219	
ART 290	
ART 292	
BIOL 304	
BIOL 310	Aging and Age-Related Diseases
CHEM 476	
EDUC 250	Curriculum and Instruction
ENG 260	The New York Theater
HIST 234	Slavery, Civil War, and Reconstruction
INDS 151	
INDS 361	The Gothic Cathedral: Structural Rationalism
ME 482	Advanced Fluid Dynamics with Applications
MUS 193	
PSYC 250	

Interim Program/Study Abroad

Some of these courses are offered during January interim session; others are offered in May. The offerings for each academic year are announced in the summer prior to fall semester.

Interim Session/Study Abroad Courses

ENG 280	London and Dublin Theater

EGRS 191	Engineering in a Global and Societal Context
GEOL 150	The Geologic Evolution of the Hawaiian Islands
GEOL 160	Geology from A (Arches) to Z (Zion): The Geology of National Parks in the Western United States
GEOL 180	Iceland: Geology and Natural History of a Young Island
INDS 120	Inside the People's Republic of China
INDS 123	The Performing Arts Around the Globe: Focus on Bali, Indonesia & Sydney, Australia
INDS 127	Rock, Landform and Water Interactions: New Zealand 2017
INDS 128	China: An Ancient Civilization and New Global Power
INDS 130	Interconnections in Northeast Asia
INDS 135	Thailand and Myanmar: Challenges of Development
INDS 140	A History of Japanese Culture and Government, 400-1600 A.D.
INDS 145	India: Faces of Globalization-Impact and Challenges
INDS 150	Turkey: The Cradle of Civilizations
INDS 165	The Open Wall and the New Europe of the 21st Century: Berlin, Prague, and Munich
INDS 170	Modern Sub-Saharan Africa: Kenya and Tanzania
INDS 171	Madagascar-Lafayette Initiative for Malagasy Education (LIME)
INDS 172	Voices of South Africa: Cultural Diversity, Hegemony and Agency
INDS 173	Religion, Society
INDS 174	Global Senegal: Alternative Modalities
INDS 175	Back to the Roots of Western Civilization: Greece and Italy
INDS 177	Mexico Through the Centuries
INDS 180	The Colorful Sunset of the Habsburg Empire: An Apocalyptic Waltz
INDS 185	Guatemala: Innovations in Development
INDS 187	Sustainable Approaches in the Developing World: Rural Honduras from the Mayans to Present
INDS 190	Politics & Culture of the Caribbean
INDS 195	The History and Politics of Israel: The Peace Process and Internal Cleavages
INDS 200	The Land and Imaginative Landscape of Ireland
INDS 208	Exploring Peru's Indigenous Populations in the Modern Day
INDS 210	Exploring South America: Brazil, Argentina, and the Andes
INDS 214	Journey to Rome: Approaching and Exploring the Eternal City
INDS 215	Medieval Architecture in Northern Europe: Belgium, Germany, and the Netherlands
INDS 220	Italy: A Journey through Art, History, and Literature
INDS 224	The Cultures and Landscapes of Greece: Perspectives of Writer, Ancient and Modern
INDS 230	Paris, Provence, and the Midi: Cathedrals, Kings, and Pilgrims
INDS 245	Social, Economic and Ethical Issues in Health Care in the US and UK
INDS 250	French Commerce and Culture in the European Union: London, Paris, and Brussels
INDS 252	The Arabian Gulf and the Indian Ocean: Historical and Anthropological Perspectives
INDS 260	Scandinavia: Northern Lights (Kierkegaard, Ibsen, Strindberg)
INDS 270	A Moveable Feast: American Writers in Paris
INDS 371	Health Care Internship
INDS 275	Paris: An Introduction to the French Exception
INDS 280	The Three Faces of Russia: Imperial, Soviet, and Modern
MUS 195	Helsinki, Talinn, Budapest

Courses

Course Numbers: Courses are listed by three-digit numbers denoting progressive academic levels.

The 100-level courses are introductory or fundamental and are normally open to first-year students.

The 200-level courses are intermediate and are normally open to first- and second-year students following the first-level sequence, and may have prerequisites; 200 also designates sophomore engineering courses not normally open to first-year students, or courses open to students who have completed one year of college work or its equivalent in the subject.

The 300 series denotes advanced courses that have prerequisites or internships normally open to juniors and seniors. Independent Study and Special Topics are open only by permission of the department head.

The 400-level courses are designed for seniors or have 300-level course prerequisites. Thesis courses that are open only to honors candidates also bear 400 numbers.

AFS - AFRICANA STUDIES

AFS 101 - Ideas of Africa
The purpose of this course is to provide an introduction to the study of the African continent and its diversity of peoples, natural environments, and cultures.Students in this course are introduced to the geography of Africa and the importance of geography in the evolution of Africa's history. The course will cover ideas that have critical importance in African societies, such as construction and practice of kinship, age cohorts, clan and caste. Through scholarly works on selected regional histories as well as literary sources and contemporary narratives of identity written by African scholars and creative writers, students will be exposed to diverse interpretations of the lived 'African' experience, covering topics such as colonialism, nationality, ethnicity, "tribalism," gender, and class. The course situates the study of Africa in a global perspective of inter-regional and intra-regional movement of people, ideas and commodities, enabling students to see Africa in a world perspective, and provides a foundation for other more advanced studies of Africa and its diaspora communities that are offered in the AFS program. Students will work in groups to create a video on contemporary perceptions of Africa. [GM2]

Cross-Listed as: AFS 102. Instructor: Wilson-Fall.

AFS 102 - Introduction to Africana Studies
The purpose of this course is to introduce students to the interdisciplinary field of Africana Studies and to the foundational concepts and institutional experiences upon which the field is built. The course provides a basic understanding of the history of the field and how various American interest groups fought to establish and develop academic programs that focused on the study of Africa and its diaspora populations. Through the use of diverse sources including maps, YouTube videos, music, film, primary documents, and class anthropology texts, students learn about the diverse motivations and approaches in the U.S. for the study of Africa, and about national and international conditions that led to the establishment of the first African Studies and Black Studies programs in the U.S. and abroad. Required for all AFS majors who have entered the program from 2014 on. [SS, V]

Instructor: Staff.

AFS 105 - Reversing Sail
In this course students learn about the diverse communities of people of African descent throughout the world. What does the term 'diaspora' mean in the context of people of African descent around the world? Do all black people have the same concept of belonging to an African Diaspora? The class will cover different forms of black migration from the African continent and the conditions of peoples' emigration. We will discuss the scholarly debates about what constitutes slavery and other forms of unfree labor. Why did Africans' sell captives, and are there any critical differences between different kinds of unfree labor? Students learn about transoceanic movements of people (Atlantic, Western Indian Ocean), movements within Africa, and examples of black communities in Europe, for comparison. In this period of globalization, is there any cultural cross-fertilization between different black diaspora communities? Why or why not? The class also engages questions of what impact such communities have had on their host societies. Have they truly remained marginal? Have they affected cultural process in those societies, or not, and if so, how? Issues of culture, ethnicity, and identity will be explored in the diverse settings where we find the African Diaspora. [GM2]

Instructor: Staff.

AFS 211 - The Black Experience
In this course students learn about the experiences of the early generations of Africans who arrived to mainland North America as indentured servants, contract workers, captives, and slaves. The focus of the course is on the African beginnings of black people in America, how black identity evolved from disparate and diverse origins, and how people built a new culture from the seventeenth to the early nineteenth centuries. The African American community evolved early in the history of the mainland British American colonies. Their presence was essential to the development of American culture, thus the study of this community offers an important window through which to understand the United States, as well as broader issues of the African Diaspora. The course employs a strong interdisciplinary perspective. In addition to class readings, students will also be required to participate in a special research project in the manuscript division of the Skillman Library in assigned groups. [GM1, GM2]

Instructor: Staff.

AFS 216 - Religions in Africa: Contemporary and Historical Expressions
This course is an introduction to the study of traditional African religious systems, thought, and experience. The course explores the way African religions are related to different forms of social organization and conflict, notions of authority, and power. It also explores the ways African religious thought and practice have

been affected by and transformed through colonization, missionary activity, and the continent's integration into the global economy.

Instructor: Blunt.

AFS 228 - Religion and Politics in Africa
This course is a critical introduction to the study of politics and the way religious forces and discourses have shaped and continue to shape general notions of the good in African societies and nations. The course will begin with classic studies of institutions of social and moral order in Africa and will move through the way African religious and political systems came into articulation with the colonial and postcolonial state. The second half of the course will examine moral quandaries, like political corruption, and moral reform movements like Pentecostalism, against the backdrop of economic structural adjustment and the decreased sovereignty of African nations.

Instructor: Staff.

AFS 320 - Black Feminism
An interdisciplinary examination of twentieth-century Black feminist thought, especially interested in how Black women writers have troubled dominant definitions of "theory," "activism," and "feminism." Exploring fiction, poetry, theory, and music we will delve into important issues such as the politics of respectability and relationships among knowledge, consciousness, and empowerment. Topics will include hip-hop feminism, Black queer studies, Black women's health activism, violence, poetic imaginations, sexuality and desire, and friendship. In addition to considering artists' unique political and poetic aesthetics, we will also imagine possibilities for social justice emerging from intersections among readings.

Prerequisite: AFS 101, AFS 105, or WGS 101 or permission of instructor. Instructor: Staff.

AFS 330 - Cowboys in Africa: Social Transformation and Environmental Justice
Since the colonial era, countries in Africa have struggles with issues of governance, human rights and weak economies. Of these three, governance and economy were highly influenced by the frameworks, both ideological and structural, left behind by the colonial state. This course looks at how stewardship of the national territory, specifically rangelands, is affected by the dynamics described above by looking at case studies from West and East Africa. [GM2]

Instructor: Wilson-Fall.

AFS 380 - Africana Studies Internship
Provides opportunities for the practical application of theory and real-world problem-solving techniques. A limited number of students are placed in a community outreach center, business organization, or governmental agency to carry out an organized and supervised program of study and research under a designated internship sponsor. Interactive learning and research projects are selected to provide in-depth exposure to the creative analytical capacities, critical thinking, and problem-solving techniques necessary for finding solutions to actual concerns.

Prerequisite: AFS 101, AFS 211, or permission of instructor. Instructor: Staff.

AFS 390-391 - Independent Study
Independent study projects for juniors and seniors. Students must expect to do extensive reading in the AFS Independent Study course, and are required to meet on a regular basis with the instructor. [W]

Instructor: Staff.

AFS 400 - Capstone Seminar in Africana Studies
The purpose of this course is to enhance and broaden students' ability to carry out research on a selected African topic. Students are expected to draw on their previous AFS classes to develop a paper to be submitted at the end of the course, and the Capstone Course also provides an important learning experience for those who intend to submit for the Honors Thesis. This is a required course for all AFS majors and minors, and restricted to those students. Students will refine their skills in writing and research, and are required to organize information in support of an argument in a coherent and logical manner, using past courses to build on their chosen theme. The emphasis will be on applying concepts and terms from Africana Studies, and understanding the importance of compiling bibliographic sources that reflect various sides of debates in the subjects and topics that students are writing about. The class is focused on process, from the diverse ways of building a bibliography to organizing the paper. The goal of the course is for each student to write a final paper which reflects acquired skills and demonstrates understanding of themes in the history and cultural evolution of communities of African descent in the diaspora or on the continent. Students are asked to consider intersections of the global and local relative to their chosen subject. [W]

Prerequisite: AFS declared major or minor status, AFS 102 and AFS 101 or AFS 211. Instructor: Staff.

AFS 495-496 - Honors Thesis
An independent research project on a topic to be selected by the student and approved by the program coordinator. A student must enroll in this course for two consecutive semesters to graduate with honors. [One W credit only upon completion of both 495 and 496]

Instructor: Wilson-Fall.

AGS - AGING STUDIES

AGS 201 - Introduction to Aging Studies
Aging Studies or Gerontology is a multidisciplinary field with key contributions from psychology, biology, neuroscience, economics, sociology and multicultural studies, medicine and allied fields, engineering/technology, and public policy. This course introduces students to the field of gerontology. It provides a multidisciplinary overview of the different processes and perspectives related to human aging. Myths and realities of aging, models of successful aging, and the social, economic, health and policy implications of growing aging populations are examined. [GM1, SS, V]

Instructor: Bookwala.

AGS 491 - Senior Project: Internship in Aging Studies
This is a required internship course for students completing a minor in Aging Studies. Designed as a field placement course in an organization serving older adults, it will give students an experiential learning experience in the field of aging studies. [W]

Instructor: Staff.

AMS - AMERICAN STUDIES

AMS 150 - Introduction to American Studies
This course is a broad introduction to American Studies as a method of academic inquiry. It examines American personal and national identity through an interdisciplinary examination of American culture, with particular emphasis on issues of race, class, gender, and ethnicity. Students consider the ways in which various cultural forms--including novels, film, music, painting, sociological studies, laws, journalism, governmental, the built environment and the physical landscape itself--shape and are shaped by the cultural contexts and historical monuments in which they appear. This course must be taken in the first or second year. Normally closed to Juniors and Seniors.

Instructor: Staff. Offered: Fall and Spring semesters.

AMS 212 - The Middle East in the Mind of America, America in the Mind of the Middle East
This course covers a century of political and cultural interactions between one country (the United States) and a large, culturally, linguistically, and politically diverse region (the Middle East). The class studies, in particular, the variety of ways in which individuals, institutions and administrations in the United States and the Middle East have perceived of and imagined one another through the lens of academic articles, mainstream press, speeches, literature, personal histories and the visual arts. The course will entail analysis of perceptions and misperceptions as historically construed cultural categories. [SS, GM1, W]

Instructor: Goshgarian.

AMS 252 - Engineering America
This course presents modern engineering as a narrative of contemporary American society; breakthrough innovations that responded to societal needs, and to which society responded in art, literature, film and other forms. Students will learn about the breakthrough technological developments that underpin modern civilization, in historical and societal context; understand each innovation in engineering terms; appreciate the reflections of these breakthroughs in literature, art, and other societal products; and gain an understanding of the complex interrelationship of science, technology, and society. [W]

Instructor: Rossman.

AMS 254 - Cultures of Nature
This course is an interdisciplinary examination into the American relationship with nature. We will investigate how Americans have historically defined and currently conceive of concepts such as "nature," "wilderness," "environmental," and "green." The course will contrast and combine arts/humanities and scientific/technology perspectives, and it will merge active field-experience and field trips with the main topics and texts under discussion. Our texts will include diverse nature and environmental writings, films and visual culture, plus local physical landscapes and ecosystems. We will hike, paddle and camp, integrating site visits and activities in the Delaware River watershed with our critical explorations, so that the personal connection to place that is central to environmental literature, art, and science becomes an essential context for our understanding. [W]

Prerequisite: ENG 110. Instructor: Brandes, A. Smith.

AMS 255 - Sports in American Culture
This course will explore issues of race, gender, ethnicity, religion, and politics in American sports. We will examine not just the first athletes to break through barriers, but also the climate in which they were expected to perform and how their actions contributed to social change. Using a multidisciplinary approach, students will explore why sports have had such and impact in the United States. [H, SS]

Instructor: Belletto, Newman.

AMS 362 - Seminar in American Studies
Topics for this in-depth interdisciplinary seminar change by semester. Majors are strongly encouraged to take more than one seminar during their course of study. Multiple AMS 362 topics courses count as electives in the student's course of study to complete the major, and are the best and most intensive method of preparation for the Senior capstone experience, AMS 363. Recent seminar topics have included "Photography and Memory in American Culture," "The American Indian in American Culture," "Designs for Living: Environmentalism, Counterculture, and Utopias," "The 1920's", "Nature in American Culture." "American Censored," "America, a Hydraulic Society," and "The Beat Generation in American Culture." [SS, W]

Prerequisite: AMS 150. Instructor: Staff. Offered: Fall and Spring semesters.

AMS 363 - Senior Research Seminar
The purpose of this capstone research seminar is to allow students to do in-depth, interdisciplinary work on a topic of their own choosing and to integrate the diverse courses they have taken for the American Studies degree. AMS 363 provides a supportive, coordinated, workshop-based structure for students' original research on a major project or paper. The projects are based on original sources and must involve a combination or integration of at least two disciplines (such as art and literature, economics and sociology, or history and law). [W]

Prerequisite: AMS 150 and AMS 362. Instructor: Staff. Offered: Fall semester.

AMS 390-391 - Independent Study
Qualified students may develop, in consultation with a faculty member, a one-semester course directed to a particular theme or topic in American Studies.

Prerequisite: AMS 150 and AMS 362. Offered: 390/Fall, 391/Spring.

AMS 495-496 - Thesis
Students majoring in American Studies who wish to become candidates for honors register for the senior thesis. During the senior year, honors candidates pursue independent study culminating in a thesis that utilizes more than one discipline. Honors are awarded upon successful defense of the thesis in oral examination. [One W credit only upon completion of both 495 and 496]

Instructor: Staff. Offered: Fall and spring semesters.

ARB - ARABIC

ARB 101 - Elementary Arabic

In this content-based elementary language course, students will develop interpretive, interpersonal and presentational skills in spoken and classical Arabic. Participants develop mastery of the Arabic alphabet and sound system, learn to comprehend and compose novice=level written and visual texts, distinguish between formal and spoken forms, as well as some dialectal variation, and engage in person-to-person dialogue while developing an awareness of basic cultural aspects of social interaction in the Arab world. [H]

Instructor: Staff.

ART - ART

ART 101 - Introduction to Art History I
A survey of visual culture from prehistoric through the Middle Ages. The course is designed as an introduction to basic problems and terminology of art history, and to methods of analyzing and interpreting individual works of art. Emphasis is placed upon historical and cultural contexts, and upon the development of major styles. Recommended for first-year students and sophomores who are considering art as a major; open to all students. [GM1, H]

Instructor: Ahl, Sinkevic. Offered: Fall semester.

ART 102 - Introduction to Art History II
This course is organized like ART 101, but deals with painting, sculpture, and architecture from the Renaissance to the present. Recommended for first-year students and sophomores who are considering art as a major; open to all students. [H]

Instructor: Ahl, Mattison, Sinkevic. Offered: Spring semester.

ART 105 - New Media: Sculpture against the Digital Horizon
Through a series of reading/viewing/discussion sessions, this course will first examine issues and ideas that involve the use of new media methods and technologies in the contemporary practice of art. Second, through studio projects ranging from video art to social practice art to internet art, this course will serve as a laboratory from which experiments will be performed that investigate these ideas through students' own cultural production. [H, W]

Instructor: Gil.

ART 107 - The Dynamics of Sculpture
A foundation for basic sculptural techniques, materials, and creativity in the studio. Students examine sculpture from the past to the present as a means of developing their technical and creative skills, including drawing, then implement their knowledge through studio projects using such materials as clay, plaster, wood, and found objects. They are also trained in the use of basic power and hand tools. At least two field trips required. Open to all students with or without prior knowledge of sculpture. [H]

Instructor: Gil.

ART 109 - Drawing I
An introduction to various approaches to drawing, including the use of line, hatching, contour, and shading. More emphasis is placed on immediacy than on finishing technique. Human and other natural forms as well as inanimate objects are drawn in both experimental and disciplined ways. Open to all students. [H]

Instructor: Staff.

ART 111 - Beginning Printmaking
A study of, and studio experience in, the basic techniques of both monotype and intaglio printmaking. Students are instructed in the proper use of printmaking equipment and tools, including metal plates, acids, inks, grounds, and print papers. Development of visual discernment is stressed.

Instructor: Holton.

ART 114 - Beginning Painting
An introduction to acrylic, watercolor, and oil painting, evolving from basic studies to more involved problems in formal and expressive relationships. The achievement of a sense of life and meaning in relatively simple subject matter is emphasized. [H]

Instructor: Kerns. Offered: Fall and spring semesters.

ART 120 - Architectural Design and Theory
The course provides an introduction to the theoretical basis and process by which architects design buildings. Course work includes three or four design projects focusing on significant architectural issues such as urban revitalization, sustainable building, historic preservation, etc. Architectural drafting (by hand) and presentation techniques are developed. No prior background in architecture or drafting is required.

Instructor: Biondi.

ART 126 - History of Architecture
A survey of Renaissance, Baroque, Rococo, Neoclassical, Eclectic, and Modern architecture. Buildings and urban plans will be studied in relationship to the cultural, social, and structural character of each period. [H]

Instructor: Mattison. Offered: Spring semester.

ART 128 - Introduction to Asian Art
Introduction to Asian Art is an introductory survey of Chinese and Japanese art from their respective Neolithic periods through the 19th Century. The purpose of the course is to provide an historical framework from which an overall concept of the arts of China and Japan may be derived. [GM2, H]

Instructor: Staff.

ART 140 - Art and Architecture of World Traditions: Asia, Africa, the Americas, and Oceania
This course is designed to introduce students to works of art in various media developed in isolation from the European tradition. Lectures will focus on the major artistic traditions of South and Southeast Asia, the Islamic World, China, Japan, Oceania, the Americas, and Africa. Using visual arts as a tool, this course will introduce students to the diverse social customs, religions, and beliefs of peoples from these regions. [GM1, GM2, H]

Instructor: Furniss.

ART 150 - Video Art I
A digital media course, designed for those with little or no experience in time-based media art practices. Students explore how conceptual art, performance art, sound, animation, video and computer technology can be a basis for art making. Upon completion of the course, a student can expect to have a thorough understanding of video and sound editing, familiarity with

conceptual art practices and competency with digital video cameras.

Instructor: Skvirsky.

ART 155 - Digital Photography I
Creative expression, explorations of content and articulation of ideas will be emphasized. The course comprises technical lectures, laboratory demonstrations, slide lectures of historic and contemporary photography, and critiques of student work. Upon completion of the course, a student can expect to have a thorough understanding of the basics of digital photography-proper and consistent image exposure, basic Photoshop skills and competency with scanning and digital printing. [H]

Instructor: Staff.

ART 175 - Media Art I
In this class students will learn to use digital media as an art form while thinking about recent shifts in the tradition, practice, and purpose of image making. The class will be divided into three parts: photography, sound art, and the making of pod casts and video art. During the class we will experiment with using social media platforms to present the works we make. [GM1, H]

Instructor: Skvirsky.

ART 180 - Art in New York
This course introduces students to the wide range of activities and experiences in New York's Arts community. Through exhibits, lectures, and conversations with artists, the course provides experiences equally valuable to art students and artists. Though emphasis is placed on the historical development, elements, and process of making art, the primary focus will be experiential.

Instructor: Staff. Offered: Summer session.

ART 192 - Experiencing the Found Object
This course offers students an opportunity to understand how to manipulate and assemble found materials into exciting and convincing sculptural forms that transcend their original source into poetic visions. The Dada and Surrealists founded the Art of Assemblage at the beginning of the twentieth century. Since then many artists have assembled found objects-either natural or pre-fabricated-into structures that equal any other sculptural medium.

Instructor: Gil.

ART 196 - Basic Photography (Black and White)
This course introduces students to the techniques of film exposure, developing, contact printing, and proofing. In addition, the course exposes students to the aesthetics of black and white photography, presentation of work, and a brief history of the subject. Students should have their own cameras. Limited to 12 students.

Instructor: Staff. Offered: Interim Session.

ART 206 - Art Materials and Methods
Contemporary artistic practices incorporate many mediums and disciplines. This course is designed to introduce students to current practices within the context of historical traditions and artistic philosophies. Course assignments will include practical projects, classroom critiques as well as field trips and visiting scholars. Students will be introduced to a variety of mediums that utilize reproduction and assemblage through active involvement with image production using alternative media.

Prerequisite: ART 109 or permission of instructor. Instructor: Staff.

ART 209 - Drawing II
A continuation of Drawing I with greater emphasis on compositional relationships and the human figure. There is further exploration of various media and techniques. Drawings by artists of the past and present are studied. Problems associated with aesthetic quality are discussed.

Prerequisite: ART 109, or permission of department head. Instructor: Staff.

ART 212 - Intermediate Printmaking
Further study and studio experience in the more advanced aspects of intaglio printmaking. A strong involvement with the conceptual development of proof" states is also emphasized as well as the ability to recognize and evaluate relationships of line value and form through the intaglio printmaking processes."

Prerequisite: ART 111, or permission of instructor. Instructor: Holton.

ART 215 - The Land and the Global Environment
In this sequel to ART 107 students explore specific frameworks and concepts. This course will explore unique and innovative approaches for using art as a catalyst to explore the interrelationships of the physical, biological, cultural, technological systems in our environment through a multidisciplinary approach. Students complete projects to reflect an understanding of these areas using a variety of materials including found objects and natural materials. Students' technical skills in the use of materials and tolls are expanded. [H]

Instructor: Gil.

ART 216 - Byzantine Art
An exploration of the art and architecture of Eastern Europe, Balkan, Asian, and Mediterranean countries during the period of Byzantine rule (343-1453). Works of architecture, sculpture, and painting as well as illuminated manuscripts, icons, and liturgical objects are examined in terms of both their iconography and style. Their significance within the historical, social, religious, and economic context in which they were produced is explored. [W]

Prerequisite: ART 101. Instructor: Sinkevic.

ART 218 - Intermediate Painting
Intermediate study in painting methodology. Technical instruction in acrylic, oil, and egg tempera. Investigations into figurative and abstract modes of painting, with emphasis on individual preference. Critiques are regularly scheduled. [H]

Prerequisite: ART 114, or permission of instructor. Instructor: Kerns.

ART 221 - Ancient Art
A study of the architectural and artistic achievements of the ancient civilizations around the Mediterranean: Egyptian, Minoan, Mycenaean, Greek, and Roman. The monuments are analyzed in terms of style, technique, function, patronage, and influence. [W]

Prerequisite: ART 101 or ART 102, or permission of instructor. Instructor: Sinkevic.

ART 222 - Medieval Art

An analysis of major works of art and architecture from the Early Christian period to the Late Gothic era. Concentration is extended beyond the traditional art forms of painting, sculpture, and architecture to include those specific to the Middle Ages: manuscript illumination, ivory carving, stained glass, and tapestries. [W]

Prerequisite: ART 101 or ART 102, or permission of instructor. Instructor: Sinkevic.

ART 223 - Italian Renaissance Art
A study of the art and architecture of Florence, Rome, Siena, and environs from the late thirteenth to the late fifteenth centuries. The works are analyzed in terms of style, technique, function, and patronage. [H, W]

Prerequisite: ART 101 or ART 102, or permission of instructor. Instructor: Ahl. Offered: Fall semester, alternate years.

ART 224 - Baroque Art
A study of seventeenth-century European painting, sculpture, and architecture, focussing on the most important masters of the day: Caravaggio, Bernini, Poussin, Rembrandt, and Rubens. The works are analyzed in terms of style, technique, function, and patronage. [W]

Prerequisite: ART 101 or ART 102, or permission of instructor. Instructor: Ahl.

ART 226 - Age of Michelangelo
A study of sixteenth-century painting, sculpture, and architecture, focusing on the most transcendent artists of the age: Michelangelo, Leonardo da Vinci, Raphael, and Titian. [H, W]

Prerequisite: ART 101 or ART 102, or permission of instructor. Instructor: Ahl.

ART 231 - American Art
A study of American architecture, painting, photography, and sculpture from colonial times to 1900. American art is considered relative both to European developments and to indigenous conditions and attitudes. [H]

Prerequisite: ART 102, or permission of instructor. Instructor: Mattison.

ART 233 - Nineteenth-Century Painting and Sculpture
A study of important developments in European art from the time of the French Revolution through Post-Impressionism. Visual culture is related to the social and political attitudes of the period. [H]

Prerequisite: ART 102, or permission of instructor. Instructor: Mattison.

ART 234 - Modern Art
A study of major trends in modern European and American art. Expressionism, Cubism, abstraction, Surrealism, and more recent developments are emphasized, as are their relation to cultural, social, and political attitudes of the period. [H]

Prerequisite: ART 102, or permission of instructor. Instructor: Mattison.

ART 235 - African American Art
A study focusing on African American art and its aesthetic and philosophical origins, including a survey of various art forms such as sculpture, masks, pottery, and architectural structures. Discussions concern the African diaspora and the resulting distribution of Afrocentric creative elements throughout Europe and the Western Hemisphere- the Americas and Cuba, etc.

Prerequisite: ART 101 or ART 102, or permission of instructor. Instructor: Holton. Offered: Fall semester.

ART 240 - Japanese Art and Architecture
This course is an introductory survey to the artistic and architectural tradition of Japan from Neolithic times to the present. The course will focus on the cultural, social, and political movements that informed Japanese artistic and architectural changes over time, as well as the profound impact that the mainland (China, Korea, and indirectly, India) had on its religious, social, cultural, and artistic development. [GM2, H]

Instructor: Furniss.

ART 241 - History, Art and Culture of Russia and Eastern Europe
This course introduces students to the major issues addressed by scholars of Russia and Eastern Europe in a number of different disciplines: history, art, literature, government, economics, religious studies, and music. Each week, we treat a different era of history, reading literature, viewing slides, listening to music, and discussing social and political developments. Students will read the Great Russian writers, examine religious culture and architecture, and learn about life in Russia and Eastern Europe today. [H, SS]

Cross-Listed as: HIST 241, REES 241. Instructor: Sanborn, Sinkevic.

ART 242 - Chinese Art and Architecture
This course is an introductory survey of Chinese art and architecture from Neolithic to modern times. Emphasis will be placed on the dynamic processes-cultural, social, political, economic, etc.-that contributed to artistic and architectural developments and changes over time. [GM2, H]

Instructor: Furniss.

ART 250 - Art and Environment
While one view of art making would suggest elite tools and materials available at a premium through specialty shops, many artists from all over the world-for reasons of politics, philosophy, economics, environmental concerns or conceptual relevance to the given idea-have engaged with found objects and materials to create beautiful, compelling, and revolutionary works of art. In this course we will explore artists and art practices that function in this manner and investigate through studio practice ideas and methods for producing such work. Our investigations will focus on artists whose work is involved with environmental concerns, broadly defined. We will explore and produce work that engages with environment in a social, political, and cultural context. [H]

Prerequisite: Any 100-level Studio Art or Environmental Studies course. Cross-Listed as: EVST 250. Instructor: Gil.

ART 255 - Digital Photography II
In this intermediate course, students will refine both their aesthetic and technical digital photography skills. Studio assignments are designed to develop students' individual styles, contextualize photography in terms of its history, its relationship to other art mediums and its cultural implications. In addition to studio assignments and group critiques, there will also be slide

lectures, technical demonstrations, reading and writing assignments. [H]

Prerequisite: ART 155 or permission of the instructor. Instructor: Skvirsky.

ART 275 - Art, Neuroscience and Consciousness
Art and science share a long history of common iedas and practice. We hope to develop the students' sense of connected history as well as the current intersection between the fields by exploring various perspectives about visual processes, perception, self creativity and consciousness through readings, discussion and studio/lab projects. Students will benefit from the rare opportunity to intensively study the interconnection between two disciplines.

Instructor: Kerns, Reynolds.

ART 306 - Capstone: Senior Studio Seminar
This fall semester course is designed as a capstone experience for Art majors with a concentration in studio art. Students are expected to engage and complete a semester long project as well as participate in critiques, discussions, film screenings, and field trips. During their studio art studies, students have explored a wide range of methodologies-research, material investigation and conceptual inquiry-for creative production. This course brings studio practice into dialogue with art theory in order to contextualize contemporary art in a holistic way that gives students' the experience of working as professional artists. [H]

Prerequisite: ART 206. Instructor: Staff.

ART 339 - Advanced Painting
Advanced study of the types and combinations of pictorial space through the techniques of composition and modern structural concepts. Emphasis is placed on the dynamic relationships of the subject to the expressive network of formal elements: color, rhythm, value, scale, and form. [H]

Prerequisite: ART 109, or ART 218. Instructor: Kerns.

ART 340 - Seminar in Art History
A study of particular periods, movements, and artists that relates theoretical, historical, and formal approaches, such as protest art, abstract expressionism, Picasso studies, installation and video art and 15th-century Italian painting. Topics vary according to the specialty of the professor. Open to juniors and seniors who have completed ART 101 and ART 102 and at least two intermediate-level art history courses.

Instructor: Staff. Offered: Spring semester.

ART 341 - Seminar in Studio Theory and Methods
This course examines decisions and actions that define the working process of individual artists. In a project-driven format, painting, printmaking, sculpture, graphic design, or special other studio work is addressed as a broadly expanded category of contemporary art making. Includes filed trips, visiting artists, and regularly scheduled critiques.

Prerequisite: ART 206. Instructor: Staff.

ART 344 - Internships
Students majoring in art may take an approved internship at a museum, gallery, or related institution. The internship includes reading assignments, art-related work experience, and a written report on selected activities.

Instructor: Staff.

ART 390-391 - Independent Study in Studio Art
Advanced independent study with regularly scheduled critiques. Individual projects in painting, printmaking, sculpture, graphic design, or special work in portfolio development and presentation may be proposed. For junior and senior art majors and minors. Hours to be arranged.

Prerequisite: Permission of instructor. Instructor: Staff.

ART 392-393 - Independent Study in Art History
Advanced independent study and research in art history with individually designed research programs done in consultation with a member of the art history faculty. For junior and senior art majors and minors. Hours to be arranged.

Instructor: Staff. Offered: Spring and fall semesters.

ART 495-496 - Thesis in Art History
Majors with a strong performance in art history are invited to become candidates for departmental honors during second semester of junior year. During the senior year, candidates conduct research in a specialized field of art history under the guidance of art history faculty. The project culminates in a written thesis and an oral defense. [One W credit only upon completion of both 495 and 496]

Prerequisite: ART 101, ART 102, or ART 125, ART 126, and three intermediate or advanced courses in art history. Instructor: Staff.

ART 497-498 - Thesis in Studio Art
Majors with a strong performance in studio art are invited to become candidates for departmental honors during the second semester of their junior year. In their senior year, candidates conduct research in a specialized field of studio art under the guidance of the studio art faculty. The project culminates in a body of work, a written thesis, and an oral defense.

Prerequisite: ART 109, ART 214, and ART 338 or ART 339; or ART 103, ART 107, and ART 215, or ART 103, ART 111, and ART 212. Instructor: Staff.

A&S - ANTHROPOLOGY AND SOCIOLOGY

A&S 102 - Cultural Anthropology
By offering in-depth study of selected cultures to illustrate general organizing principles of society, the course provides students with skills appropriate to the understanding of foreign cultures and our own. Included are consideration of government, law, economics, and religion, and their role in understanding social change, stratification, language, and social conflict. [SS]

Instructor: Staff.

A&S 103 - Introduction to Sociology
This course takes a social scientific approach to the study of human social relationships. Its purpose is to introduce the basic concepts, theoretical orientations, and methods of the sociological perspective. Topic areas include the socialization of personality, culture, urbanization, alienation, deviance, inequality, and the rationalization of society. [SS]

Instructor: Staff.

A&S 200 - Research Methods and Design

This course focuses on analyzing and conducting empirical research in anthropology and sociology. We cover logic of research design and applications of quantitative and qualitative methods. Students who complete this course successfully will be prepared to conduct their own research and to evaluate other research in the social sciences.

Prerequisite: A&S 102 and A&S 103. Instructor: Lee.

A&S 201 - Culture and the Environment
We will study how humans have shaped the environment and how the environment has shaped us, utilizing theories from anthropology that provide insight into our relationships and interactions with the worlds around us and help us understand environmental issues. Topics include relationships with "nature", knowledge about environments and how we use it, interactions with plants and animals, and intersections of the environment with race, class, gender, and ethnicity. Cases from around the world will be examined. [W]

Instructor: Fortwangler.

A&S 202 - Anthropology of the Middle East and North Africa
This course focuses on the anthropology of the Middle East and North Africa, analyzing how earlier conceptualizations of the "Orient" have shifted to more modern academic definitions of "area." We will explore different themes-both historical and contemporary-in the sociocultural analysis of the MENA region. Students will critically engage with ethnographic accounts and debates about various MENA countries/communities, including in the diaspora, in order to understand the sociocultural diversity and complexity of Arab and Muslim life.

Prerequisite: A&S 102 or A&S 103. Instructor: Vora.

A&S 204 - European Communities
Although most people think of Europe in terms of "national" cultures it is the local community whether urban or rural that teaches its members a way of acting in and seeing the world. This course considers some of the general cultural variations that characterize European communities and some possible explanations (historical ecological) for that variation and then proceeds to a series of community studies of a small number of cultures. [W]

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: A. Smith.

A&S 205 - African Modernities
This course provides a critical engagement with contemporary ethnography in the African context. The class highlights texts that expand our sense of anthropological research while challenging us to conceptualize "Africa" in new ways. We will examine how diverse African social worlds have actively shaped and been altered by the forces and forms of modernity, ranging from colonialism to popular culture, development, the nation-state, and globalization. The class underscores the complexity of everyday life across an astonishingly dynamic and diverse continent. [GM2, V]

Prerequisite: A&S 102 or A&S 103 or permission of instructor. Instructor: Bissell.

A&S 208 - Mapping Identities: Race, Ethnicity, & Residential Segregation in 1920's Easton, PA
This course offers students an introduction to anthropological understandings of race, ethnicity, and class and mapping methodologies while conducting concentrated hands-on research on an Easton neighborhood, Syrian Town, circa 1920. Students will learn by doing: theories of race, class, and ethnic relations will be elucidated through their analysis and mapping of census sheets from 1920. [GM1]

Prerequisite: A&S 102 or A&S 103 or permission of instructor. Instructor: Smith/Clark.

A&S 209 - Selected Studies in Ethnography
This course focuses on ethnography as the key narrative form of anthropological research while foregrounding critical issues in a specific ethnographic area (for example, Africa, South or East Asia, the Middle Easat). Descriptions of current offerings are available through the departmental office or through the Registrar's Office.

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Staff.

A&S 210 - Contemporary American Society
This course provides a critical understanding and analysis of modern American society, culture, and state. The approach is interpretive and thematic, examining individualism, community, ethnicity, work and leisure, technology, politics, the state, etc. The course builds on introductory level perspectives, applying them in a more detailed and focused manner.

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Staff.

A&S 211 - Symbolic Interaction
This course covers sociological perspectives on social psychological issues dealing with emotions, the formation of a self-concept, impression management and conformity. Particular emphasis is paid to understanding the social influences on individual and social behavior through a microsociological perspective.

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Shulman.

A&S 212 - Sex and Gender: A Cross-Cultural View
Students explore the variety of ways that cultures assign roles on the basis of gender by in-depth consideration of several contemporary societies. Students also consider the evolution of gender roles, and the way in which Western perceptions of these roles may have contributed to explanatory models in the social sciences. [GM1, SS, W]

Prerequisite: A&S 102, A&S 103, or permission of instructor. Instructor: Staff.

A&S 213 - Introduction to Legal Anthropology
This course investigates key anthropological questions through the lens of law systems, legal argumentation, and people's interactions with these thoughts and forms. Rather than taking as given the hegemonic power that legal structures might hold over people's lives, this course questions how people use, abuse, subvert, and leverage the legal structures in which they find themselves, while paying attention to how law constructs power. Broadly, we will be investigating how law matters in everyday lives.

Instructor: Staff.

A&S 214 - Race and Ethnic Relations
This course highlights issues of race and ethnicity in multiple contexts, with a focus on the U.S. It explores the limits of race and ethnicity as scientific categories and their legacy as powerful social constructions, with a special focus on the legacy of slavery. As social constructions, race and ethnicity are often elusive, shifting, and negotiable principles. Students explore how such fluid principles can have such lasting effects and consider their sometimes hidden links to economic status.

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Smith.

A&S 215 - Occupations and Professions
This course focuses on the sociological study of occupations and professions in modern societies. Among topics to be discussed are the social meaning of work; the concept of career; and the process of professionalization. Special attention is given to the study of occupational groups as a means of exploring some basic social problems and issues of American society.

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Staff.

A&S 216 - Class, Status, and Power
This course focuses on the development, application and redefinition of the concept of social class as related to contemporary society. Power and status relations, social mobility, and mass society will be topics of special interest. [W]

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Schneiderman.

A&S 217 - Poverty in America
This course considers the nature, causes, and consequences of poverty in America, primarily from a sociological perspective. It examines the measurement, scope, demographics, and dynamics of poverty in the U.S., as well as factors closely connected to poverty, such as low-wage work, neighborhood, family structure, education, violence, and crime. In this course, the experiences of the urban poor will be of particular interest. [GM1, SS]

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Kissane.

A&S 218 - Political Sociology
This course is devoted to an examination of the social causes and consequences of various types of power distributions within or between societies, and with the political and social conflicts that lead to changes in the distribution of power. Such sociological theorists of political power as Weber, Marx, Tocqueville, Michels, and Simmel are examined in detail. [W]

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Schneiderman.

A&S 219 - American Communities: Cities, Suburbs, and Towns
This course traces the development and significance of urban communities in America. Topics include city growth and industrialization, suburban sprawl, urban villages, and post-industrial electronic cottages." Attention is also given to how regional shifts and changes in social organization environment and technology have transformed America's urban landscape."

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Lee.

A&S 220 - Who Gets What and Why
This course uses sociological perspectives to examine the nature and mechanisms of social inequality in the United States and abroad. Specific topics may include distributions of income, wealth, and political power; discrimination in the work place; disparities in health outcomes; impacts of the media and educational system; extreme wealth; and global stratification. Special attention will be paid to how inequality is patterned by race, class, and gender, including the intersections of these social groups. [GM1, SS]

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Kissane.

A&S 221 - Social Welfare Policy and the Safety Net
The term "safety net" commonly refers to a range of public and non-governmental programs and policies aimed at alleviating poverty or protecting individuals and families from experiencing distress and hardship. This course uses a sociological perspective to examine the development, nature, and implications of social welfare policies and programs in the United States. [GM1, SS, W]

Prerequisite: A&S 102, A&S 103, or permission of instructor. Instructor: Kissane.

A&S 222 - Medical Anthropology
This course explores, through ethnographic studies of other cultures and constant comparison with our own, the various ways in which illness is defined, explained, and treated. We will examine both the influence of culture on medical beliefs and practices, and the degree to which an anthropological view of medicine reveals central features of any sociocultural system. [SS]

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Bissell.

A&S 223 - The Anthropology of Politics
The cultural dimensions of power will be examined in a comparative framework, exploring in depth a non-Western setting such as village Mexico or Africa and Western settings such as the Mafia or college committees. The emphasis is on how individuals use power within their culture, be it a village or an office.

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Staff.

A&S 224 - Self, Society, and Culture
What are the principal ways in which the individual is shaped by the surrounding social and cultural world? Each semester we will pose this question in relation to a particular foreign culture in order to: (1) learn how anthropological models and theories interpret and/or explain this relationship and (2) find an anthropological route into that culture.

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Staff.

A&S 225 - Deviance
This course examines social deviancy with a particular focus with competing theoretical explanations of deviant behaviors such as corporate crime, delinquency, sex work, substance abuse and violent crime. Attention will be given to the normative, symbolic processes through which individuals and acts become defined as deviant. [V]

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Shulman.

A&S 227 - The Family
The family is the most universal of all institutionalized human groups and yet, in our own society, seems fragile and unstable. A primary theme throughout the course is in the changing forms and functions of the family with emphasis on contemporary society. Consideration will be given to class, ethnic and life-style variations in family form. [SS]

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Kissane.

A&S 228 - Alienation
The last century was a century of release" from the traditional bonds of community-family place class and religion. The paradox of that release (as yet unresolved) is that this new freedom from traditional social forms was accompanied by alienation-the estrangement of individuals from each other from the world of objects from the world of thought and from themselves. [W]"

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Schneiderman.

A&S 229 - Sociology of Sex and Gender
This course examines theoretical and empirical approaches to the sociology of sex and gender, focusing primarily on women's and men's experiences in contemporary American society. We will explore the ways that gender intersects with race, ethnicity, social class, and sexuality and pay special attention to how major institutions in society-such as education, the media, the workplace, and the family-are pivotal sites for the maintenance and reproduction of gender roles, differentiation, and inequities. [GM1, SS, W]

Prerequisite: A&S 102 or A&S 103. Instructor: Kissane.

A&S 230 - Social Memory
Shared representations of the past both reflect and shape social identities. Because societies are heterogeneous, differing views of the past coexist, and history itself can become a battleground. What are the outcomes of clashes over the interpretation of past events? How are distinct visions of the past preserved over the generations? Through a rigorous schedule of readings and writing, culminating in a final research project, students consider the many ways in which the past enters everyday lives and may even shape the future. [W]

Prerequisite: A&S 102 or A&S 103. Instructor: Smith.

A&S 231 - Anthropology of Education
This class examines education, broadly conceived, in various locations around the world. Topics include race and diversity, citizenship, colonialism, classroom power relations, planning and administration, globalization, and gender. The course also considers educational venues as "field sites" for conducting ethnography, and asks students to employ a transnational perspective in order to understand how changes here in the U.S. impact other parts of the world, and vice versa. [GM1, GM2, SS]

Prerequisite: A&S 102 or A&S 103. Instructor: Vora.

A&S 232 - Magic, Science, and Religion
The course deals with systems of thought addressing such questions as: Do forestworshipping pygmies think in ways that are fundamentally different from quark- hunting physicists? Magic, science and religion will be compared as competing ways of explaining reality.

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Staff.

A&S 233 - Anthropology of the City
This course centers on cities as sites and subjects of anthropological inquiry. Across the globe, urbanization has increasingly defined the landscape of modern life. What makes the metropolis meaningful, and how do spatial forms shape social practices? In what sense does the cultural milieu of the city-material and symbolic, dynamic and diverse-challenge us to critically re-imagine anthropology? How are social identities shaped by the everyday experience of urban communities, commodities, and cultural forms?[SS, W]

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Bissell.

A&S 234 - Fantasy
This course investigates how fantasy shapes the human condition. Rather than assuming fantasy to be superfluous to everyday life we explore how fantasy impacts people's lives, decisions, and perceptions of the world. Within these topics, we will pay close attention to how and when "reality" or "realism" is attributed, asking: what power is involved in this labeling? What is described as less than real and how does it matter in people's everyday lives?

Instructor: Staff.

A&S 235 - Business and Society
This course explores the impact of business upon our culture and the role of business in modern society. Of special interest are the growth and development of capitalism and business thought, the influence of the corporation, and the role of management in society. Case materials are utilized extensively.

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Lee.

A&S 236 - Sociology of Knowledge
The central focus of this course will be upon an examination of the social creation of knowledge and the consequences of knowledge for social organization. Definitions of knowledge will be drawn from such sociological theorists as Weber, Marx, Mannheim, Scheler, and Durkheim.

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Lee.

A&S 237 - The Sociology of Consumerism and Marketing
This course will introduce students to sociological perspectives on marketing and examine patterns of consumer behavior. We will analyze how consumers are influenced to buy and societal consequences of contemporary large-scale patterns of consumerism. [V]

Prerequisite: A&S 102 or A&S 103 or permission of instructor. Instructor: Shulman.

A&S 238 - Gender and Popular Culture
This course examines the intersection of gender and popular culture from an anthropoligical point of view. We consider how popular culture-comics, films, TV programs, performances, etc.-

challenge or substantiate gendered norms in various cultural contexts. Given that daily lives in any culture are awash in popular culture, we focus on pop culture to ask how difference and power are socially constructed, and what effect these constructions have on gendered identities.

Prerequisite: A&S 102 or A&S 103 or permission instructor. Instructor: Staff.

A&S 239 - Social and Cultural Change
This history course will focus on theories of change. Consideration will be given to evolutionary and diffusionist perspectives. More recent neo-evolutionary, structural-functional and other current social and cultural approaches to the processes of change will be considered. [W]

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Schneiderman.

A&S 240 - Cognition and Society
Why do we stomp on coakroaches yet marvel at butterflies? What guidelines do societies rely upon to decide when a person's class or race or age or gender or sexuality is morally and legally relevant? How are personal memories and historical narratives connected to the politics of identity? Drawing upon major sociological, anthropological, and psychological traditions, this course examines socio-cognitive relations within specific contexts of perceiving, reasoning, classifying, framing, time reckoning, and meaning assigning.

Prerequisite: A&S 102 or A&S 103 or permission of instructor. Instructor: Danna.

A&S 241 - Racial Formations in Postcolonial
Soccer hooligans in Italy shout racial slurs at players with darker skin tones; thugs attack refugee housing in Sweden; and "suburban" youth of the postcolonial African diaspora riot for days across France. This course explores the contours of contemporary European racial formations, tracing continuities with prior eras as well as zones of rupture. Course materials include a rich suite of ethnographic studies, with an emphasis on French and German examples [W]

Prerequisite: A&S 102 or A&S 103 or permission of instructor. Instructor: Smith.

A&S 242 - Transnationalisms
This course investigates anthropological research on the transnational movement of people, things, money, and ideas. Examining many different cultural contexts, we explore transnational movement and connections to see how they are facilitated, impeded, and described. Although this course is concerned with global flows, each example is grounded in uniquely local contexts. [W]

Prerequisite: A&S 102 or A&S 103 or permission of instructor. Instructor: Staff.

A&S 243 - Asian America
In this course, we will explore the diversity of Asian/Pacific groups in the Americas, their trajectories of migration, racialization, and community formation. In addition to focusing on People's everyday lived experiences, we will also discuss multiple approaches to "Asian America" as a topic of scholarship and activism. We will be paying close attention to the ways that Asian American identities are not only about race and ethnicity, but also gender, generation, sexuality, and class. [GM1, SS]

Prerequisite: A&S 102 or A&S 103. Instructor: Vora.

A&S 244 - Rebuilding Shattered Worlds through Recollection: Engaged Anthropology and Oral Testimony
This course explores the politics of place and memory through a close look at "Syrian Town," a once-thriving multi-ethnic neighborhood in Easton, PA, demolished in the 1960s. How have former residents coped with the destruction of their community? What role does recollection play in rebuilding shattered worlds here and elsewhere? Students will consider these questions while developing interview and ethnographic research skills. [SS, W]

Prerequisite: A&S 102 or A&S 103 or permission of instructor. Instructor: Smith.

A&S 245 - Mass Communications and Society
This course is designed to give students an overview of mass media theory and research rooted in a number of ideological perspectives of society. Topics include the rise of mass communications, the audience, media effects, news ideologies, the sponsor, mass media politics, and new communications technologies. The goal is to provide detailed understanding of the social, cultural, economic, organizational, and political forces that have shaped our contemporary mass media.

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Staff.

A&S 246 - Childhood
This course will challenge you to think about childhood as a diverse global experience by exploring a set of fundamental questions: how do definitions of childhood vary across history, culture, and scholarly discipline? In what sense do children's daily lives differ from place to place, and how are race, class, and gender linked to discourses and experiences of childhood? How do children stand in as symbols for broader political and cultural concerns? The course will explore these questions by considering the ways childhood is constructed and experienced in relation to such topics as education, labor, migration, human rights, violence, consumerism, and media.

Prerequisite: A&S 102 or A&S 103 or permission of instructor. Instructor: Campoamor.

A&S 247 - Organizations in Action
This course is designed to give students a better understanding of today's organizational world through the lens of organizational theory. Topics include the rise and nature of bureaucracy, the evolution of managerial ideologies, theories of leadership and decision making, organizational culture, technological and ideological determinism, and the influence of the environment. Theory is related to practice through the examination of specific case studies.

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Shulman.

A&S 250 - Anthropology of Religion
As the United States and European colonial powers expanded into places like Africa, Native North America, Melanesia, and Australia (to name a few), different national traditions of anthropology developed an ever evolving toolbox of approaches and techniques for understanding the religious lives of Euro-

American Others. This course is an introduction to this "toolbox" of anthropological theories and methods for studying religion from the Victorian era to the present. The course will also attend to voices in the discipline critical of the way anthropology constructs "religion" as an abject of analysis. [SS]

Prerequisite: A&S 102 or A&S 103, or REL 101. Instructor: Blunt.

A&S 254 - Law, Culture, and Society
This course explores law in a global context from an anthropological perspective. We will examine law not as a distinct and autonomous sphere of human activity, but rather as a diffuse set of institutions, practices, and positions that shape and are shaped by the diverse cultures and societies in which they are situated. Through our discussion we will interrogate how law functions, and examine how various legal systems reveal the cultural assumptions upon which they are founded.

Prerequisite: A&S 102 or A&S 103. Instructor: May.

A&S 255 - Contemporary Society and the Cinema
This course examines the place of movies in shaping and changing popular culture in contemporary societies. Between two and four movies will be seen and discussed each week. These include American- and British-made films, as well as films made in France, Germany, Italy, Spain, and Japan. The purpose of the course is to expose students to a variety of cultural responses to similar genre, and to see how one culture influences the cinematic traditions of another culture.

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Schneiderman. Offered: Interim Session.

A&S 258 - The Anthropology of Violence
Violence often plays a role in social change as well as in the maintenance of social institutions. This course examines violence in its immediate, structural, and symbolic forms as a force that dissolves as well as consolidates the bounds of self and community. The class takes a cross-cultural approach to topics such as warfare, terrorism, torture, policies of neglect and exploitation, media depictions of violence, violence in religious ritual, and nonviolent alternatives to conflict.

Prerequisite: A&S 102 or A&S 103 or permission of instructor. Instructor: Staff.

A&S 259 - Sociology of Disaster
This course examines a variety of disasters from those that are "man-made," to "natural disasters." Societal responses to disasters, ranging from moral and political protest movements, on the one hand, to legal actions and legislative efforts on the other, will be examined, along with the scientific and technological responses to these disasters, and the ethical issues that these spawned. [SS, V, W]

Prerequisite: A&S 102 or A&S 103. Instructor: Schneiderman.

A&S 263 - Latin American Ethnography
Despite celebrations of regional economic growth, the majority of Latin Americans continue to live in poverty. With an estimated 80% of the Latin American population residing in cities, urban ethnography has become increasingly important. This course explores the contours of urban inequality of Latin America, and among Latin American migrants, focusing on the relationship between broader social and political forces and everyday life. Topics include race, class, gender, public space, violence, labor, informality, and resistance.

Prerequisite: A&S 102 or A&S 103. Instructor: Campoamor.

A&S 264 - Development, Aid, Activism
This course considers the meanings and effects of development in a world characterized by historically-grounded social, political,and economic inequalities. How have specific peoples or regions been defined as "in need"? What complex sociocultural dynamics are at play when outside actors-government aid agencies, NGOs, individual volunteers, etc.-enter a community to aid its member? And how is the context of development changing, as "aid" is currently often activated via digital media and activist campaigns?

Prerequisite: A&S 102 or A&S 103. Instructor: Campoamor.

A&S 265 - Sociology of Sports
This course investigates organized sport as an institution and cultural phenomenon from a sociological perspective. Through such critical study, students will gain a greater understanding of American culture, social inequality, and societal institutions. Much of the course focuses on race, class, and gender and how sports both reflect and perpetuate status inequities. We also explore relationships among sports and education, politics, and adolescent culture and delve into social problems in contemporary sports (e.g., doping). [SS]

Prerequisite: A&S 102 or A&S 103. Instructor: Kissane.

A&S 315 - Food, Culture, and Sustainable Societies
We ask, critically, what sustainable and just mean in relation to food and why it matters - and what "culture" has to do with it. To do so we merge well-established studies and work in the anthropology of food with (1) environmental studies of alternative food systems and urban gardening/farming. (2) studies from political ecology engaging a range of analysis on food, (3) critical food studies, which considers race/class/gender/globalism in the context of food.

Prerequisite: A&S 102 or A&S 103. Instructor: Staff.

A&S 342 - Theories of Society
The Upper-level course provides an intensive grounding in broad range of anthropological and sociological theory. The course addresses the development of social theory since the 19th century. Over the course of the semester, students will explore the limitations and uses of different social theories, applying what they are learning as they pursue an extended research project in consultation with the instructors. The course serves as a capstone and is required of all majors. [W]

Prerequisite: A&S 102 or A&S 103, or permission of instructor(s). Instructor: Staff.

A&S 351/380 - Special Topics Seminar
A seminar devoted to a subject to be selected by the instructor. Announcement of the proposed subject will be made in advance of each seminar. The course will place a responsibility upon the student for independent study, research, and reporting.

Prerequisite: A&S 102 or A&S 103, or permission of instructor. Instructor: Staff.

A&S 359 - Sociology of Humor

In this course we will analyze humor from a sociological perspective. Humor is a quintessentially social phenomenon and thus a powerful mode for understanding the social world. Humor serves many important social functions, including: social cohesion, social consolation, liberation, or transcendence, and maintenance of moral order. Through theoretical discussion of empirical examples, we will come to understand the socio-cultural dynamics of humor and the social functions of funniness.

Prerequisite: A&S 102 or A&S 103. Instructor: Danna.

A&S 390-391 - Independent Reading and Research
Individual investigation of a topic under the supervision of an adviser.

Prerequisite: Permission of instructor. Instructor: Staff.

A&S 495-496 - Thesis
Under the guidance of a staff member, the student writes a thesis based on an approved project in a specialized field of anthropology or sociology. If at the first semester's end the project has honors potential the student applies to continue toward graduation with honors. After completing the thesis the student takes an oral examination on it and its field. [One W credit only upon completion of both 495 and 496]

Instructor: Staff.

ASIA - ASIAN STUDIES

ASIA 101 - Introduction to Asian Studies
This course introduces the traditions and modern development of Asia with special attention to theoretical and methodological issues. The approach is interdisciplinary, covering subject areas such as history, culture, art, literature, music, religion, economics, politics, and law. The course offers an introduction to the region and provides an important foundation for students interested in taking more specialized courses. [GM1, GM2]

Instructor: Staff.

ASIA 270 - Introduction to Contemporary Chinese Cinema
Ever since film was introduced in China at the end of the nineteenth century, it has played a crucial role in China's quest for modernity, while also serving as a major form of mass communication. Despite facing warfare, censorship, competition from Hollywood, and other obstacles over the last century, today the Chinese film industry is on of the most vibrant in the world. This course introduces students to the history, genres, and transnational reach of Chinese cinema since 1980, through analyzing representative films from mainland China, Hong Kong, and Taiwan. Chinese cinema will be examined not only through artistic lenses, but also those of commerce and industry. All films have English subtitles. No knowledge of Chinese language will be necessary. Pre-req: ASIA 101

Instructor: Staff.

ASIA 390-391 - Independent Study
Open to Asian Studies majors or minors. Students select a specific area of interest for research in consultation with a faculty member from the Asian Studies program. Students confer regularly with the faculty member on their work and prepare an essay on an approved subject. Open to other qualified students with permission of the Program Coordinator.

Instructor: Staff.

ASIA 490 - Capstone
Students who major in Asian Studies develop a capstone project during the senior year under the direction of a faculty member in the program. [W]

Prerequisite: Students must be Asian Studies majors. Instructor: Staff.

ASIA 495-496 - Honors Thesis
Asian Studies majors who wish to pursue honors should inform their faculty advisers by the end of the second semester of the junior year. Honors work involves a guided program of independent research culminating in a thesis on a topic to be selected by the student in consultation with his or her adviser. Honors candidates enroll in 496 only upon successfully completing ASIA 495. [One W credit only upon completion of both 495 and 496]

Instructor: Staff.

BIOL - BIOLOGY

BIOL 101 - General Biology
An introduction to the scientific study of life and basic biological principles. Emphasis is on the properties of living systems, their variety, their relationships in space and time to each other, evolution and the environment. Lecture/ laboratory. Course 101 is not a prerequisite for 102. [NS]

Instructor: Staff. Offered: Fall.

BIOL 102 - General Biology
An introduction to the scientific study of life and basic biological principles. Emphasis is on the properties of living systems, their variety, their relationships in space and time to each other, evolution and the environment. Lecture/ laboratory. Course 101 is not a prerequisite for 102. [NS]

Instructor: Staff. Offered: Spring.

BIOL 106 - A Modeling Based Approach to Biology
Biological modeling is the use of methods to investigate complex, real-world problems so that predictions can be made about what may occur under a variety of conditions. This is an interdisciplinary course that combines biology, modeling and computation, and is intended to introduce students to complex real-world problems and issues that require an interdisciplinary focus, awareness and approaches to generate reasonable solutions to biological problems. [NS]

Prerequisite: MATH 161. Instructor: Kurt, Liew.

BIOL 110 - Edible Ethics
In this Science Technology in Social Context (STSC) course, we will explore interactions between agricultural production, environmental quality, and human well-being. In addition to covering the science, technology, and ecology of food production, we will also discuss many important philosophical and ethical issues relating to food production and consumption such as pesticide usage, genetically modified food, animal welfare, and veganism. This course will enable identification of value conflicts and provide a framework for discussing them. [STSC, V, W]

Instructor: Rothenberger.

BIOL 201 - Invertebrates and World Health
An introduction to the major invertebrate phyla which cause or are vectors for human disease, often in the third world. We will study the natural history, phylogeny/systematic, anatomy, life cycles, and public health concerns for human populations at risk for disease caused or vectored by protists, cnidarians helminthes, nematodes, mollusks, chelicerates and insects. Lecture/laboratory

Prerequisite: BIOL 101-BIOL 102. Instructor: Holliday.

BIOL 212 - Developmental Biology
A study of developmental processes at the cellular and molecular level and description of the stages through which an organism gains complexity. The laboratory features living vertebrate, invertebrate and plant examples of the processes discussed in lecture, as well as a student-designed research project.

Prerequisite: BIOL 101-BIOL 102 or NEUR 201 or permission of instructor. Instructor: Staff.

BIOL 213 - Comparative Vertebrate Anatomy
This course explores the structure and function of vertebrate animals. Emphasis is placed on the form/function relationship, the evolution of anatomical specialization, and the comparative method.

Prerequisite: BIOL 101-BIOL 102, or permission of instructor. Lecture/laboratory/independent laboratory.. Instructor: Dearworth.

BIOL 214 - Neuroanatomy
An in-depth exploration of the vertebrate nervous system with emphasis on mammals and humans. Lectures detail the structure and function of the brain and spinal cord. The laboratory includes dissection, examination of prepared slides and other materials, and work with computer resources. In the experiential portion of the course, students use classical anatomical and modern molecular techniques to study the brain.

Prerequisite: BIOL 101, and BIOL 102 or NEUR 201. Instructor: Dearworth.

BIOL 215 - Phytopathology
Plant diseases cause economic losses that exceed billions of dollars annually. This course is designed to introduce you to fundamental aspects underlying the biology of plant diseases caused by infectious organisms. In this course, we will discuss the concept of plant disease and its causal agents, the mechanisms employed by plant pathogens to colonize the host, the methods utilized by the plant to defend itself against pathogen attack, and the societal cost of plant diseases. [W]

Prerequisite: BIOL 101-BIOL 102. Instructor: Ospina-Giraldo.

BIOL 224 - Plant Form, Function, and Adaption
This course will cover the general structure and organization of the plant body and the varied architectural alternatives that plants have evolved with respect to both form and function of growth and reproduction in each of the major terrestrial and aquatic biomes. The course is comprised of lectures, discussions, laboratories, guided and independent investigations, presentations, and field trips. Lecture and laboratory are integrated in the time allotted for this class.

Prerequisite: BIOL 101 and BIOL 102 or permission of the instructor. Instructor: Rothenberger.

BIOL 225 - Microbiology
The biology of microorganisms, emphasizing prokaryotic structure, growth and cultivation, metabolism, genetics and gene regulation. Lecture topics include bacteria-to-bacteria signaling, biofilms, secretion, and microbial diversity. Lectures are supplemented with readings from the primary literature. Laboratory exercises instruct studens on research techniques and provide ample time for open-ended exploration. [W]

Prerequisite: BIOL 101-BIOL 102. Instructor: Caslake.

BIOL 231 - Ecology
A study of the relationships between organisms and their environment emphasizing basic ecological principles and methods. Laboratory and field exercises illustrate the theoretical concepts discussed in lecture and are writing-intensive. Lecture/discussion/laboratory. [W]

Prerequisite: BIOL 101-BIOL 102, or permission of instructor. Instructor: Waters.

BIOL 234 - Environmental Biology
While recognizing the interrelatedness among different areas of environmental science, this course focuses on how biological and ecological applications relate to environmental issues. Emphasis is on how the human population impacts ecosystem function, giving attention both to population regulation mechanisms and to disruption/conservation of ecosystem processes. Laboratory exercises focus on classical applied ecology as well as field excursions targeting policy and management issues. Satisfies core component of Environmental Science minor. Lecture/laboratory.

Prerequisite: BIOL 101, BIOL 102. Instructor: Waters.

BIOL 235 - Evolutionary Biology
An introduction to the principles of organic and molecular evolution. Topics include: genetic variation, natural selection, speciation, adaptation, diversification, biogeography, molecular evolution, and the mechanisms underlying each. Laboratory includes experimentation, computer simulation, and relevant reading/presentation of current primary literature in the field. Lecture/discussion/laboratory.

Prerequisite: BIOL 101 or BIOL 102, both preferred. Instructor: Leibel. Offered: Fall or spring semester.

BIOL 245 - Immunology
This course examines the immune system at the cellular and molecular level. After examining the basic architecture of the immune system, the course explores the specificity that allows your body to recognize and respond against a virtual unlimited number of potential pathogens. Additionally, the course investigates the development of vaccines and the inappropriate immune responses that lead to allergies and autoimmune disease. Lecture/laboratory.

Prerequisite: BIOL 101-BIOL 102, or permission of instructor. Instructor: Kurt.

BIOL 251 - Human Physiology
This course uses a systems approach to human physiology. The functions of the major human organ systems and the physiological mechanisms by which these functions are controlled are considered. In addition to the lectures, there is a weekly laboratory section. Lecture/laboratory

Prerequisite: BIOL 101-BIOL 102, or permission of instructor. Instructor: Butler.

BIOL 255 - Molecular Genetics
This course focuses on the study of the hereditary principles that govern cellular processes, organismal development, biological diversity, and the evolutionary changes in populations. The goal of this course is to provide an in-depth understanding of these principles, from both Mendelian and molecular perspectives. Emphasis will be placed on the analysis of the experimental work that, over the years, has led to the current status of the discipline of Genetics. By identifying and discussing the most important aspects of a particular experiment (why it was conducted; which results were obtained), students are expected to establish the link between a concept and the scientific research supporting it. In the laboratory component of this course, model organisms will be utilized to help students become familiar with current methods of genetic analysis.

Prerequisite: BIOL 101; CHEM 121, CHEM 122. Instructor: Staff.

BIOL 256 - Neurobiology
This course examines the field of neuroscience from a cellular and molecular perspective, with the neuron and neural networks as the focus of discussion and experimentation. After an intensive look at neuronal cell biology and signaling, the course examines the cellular basis of higher-order functions, such as sensation, behavior, and memory. Lecture/discussion/laboratory.

Prerequisite: BIOL 101 and NEUR 201. Cross-Listed as: NEUR 256. Instructor: Reynolds.

BIOL 270 - Special Topics
Depending upon student and staff interests, one or more specialized areas of biology may be offered.

Prerequisite: BIOL 101, BIOL 102. Instructor: Staff.

BIOL 271 - Marine Biology
An introductory study of the natural history, physiology, and ecological relationships of marine plants and animals. Major emphasis is placed on plant and animal adaptations to marine environments, factors influencing primary production, food webs, fisheries, and the effects of marine pollution. In addition to the lectures, a film is presented each week. Lecture/film.

Prerequisite: BIOL 101-BIOL 102, or permission of instructor. Instructor: Holliday.

BIOL 272 - Conservation Biology
This course provides students with an introduction to the scientific basis of modern conservation biology and the application of these principles to conservations problems around the world.To understand the complexities involved in making conservation decisions, we will read from many sources,have class and small group discussions, and engage in debate. The objective of the laboratory portion of this course is to provide students with practical, problem-solving experiences in conservation biology beyond the classroom. Lecture/laboratory. [W]

Prerequisite: BIOL 101, BIOL 102 or permission of instructor. Instructor: Rothenberger.

BIOL 274 - Introduction to Bioinformatics

The integration of genomic and information technologies makes many once thought unattainable scientific pursuits possible such as the human genome project. The era of bioinformatics has arrived. Fusing experimental and computational methods in studying complex biological questions becomes a routine process for today's biologists. This course provides a comprehensive overview of bioinformatics-the application of computational and information sciences in studying biology. The focus is to learn prevalent computational approaches used byresearch biologists.

Prerequisite: BIOL 101 or BIOL 102 or permission of instructor. Instructor: Ho.

BIOL 275 - Behavioral Ecology

This course explores both the proximate causal mechanisms (e.g., hormone levels, developmental conditions) and ultimate consequences (e.g., effects on survival or reproduction) of animal behaviors as they relate to navigating a complex and ever-changing environment. Topics include predator-prey interactions, relationships between habitat and optimal foraging strategies, sexual selection, navigation within physically variable environments, and a wide variety of social interactions. Laboratory involves both indoor and outdoor observations and experiments.

Prerequisite: BIOL 231 is recommended. Instructor: Butler.

BIOL 277 - Cell Biology
This course covers structure, function, and chemistry of cells, organelles, and membranes. Specific topics include cellular energetics, information flow in cells, cytoskeletal structure and functions, signal transduction mechanisms and cellular aspects of the immune response, and cancer. Students read selected topics of current importance in cell biology and present oral and written reports. Lecture/seminar/discussion/computer simulation.

Prerequisite: BIOL 101-BIOL 102, and permission of instructor. Instructor: Kurt.

BIOL 308 - Comparative Animal Physiology
In this seminar animal species are treated as variables in the study of the diversity of adaptations to physiological problems presented by the environment (e.g., salt and water balance, temperature regulation, circulation, respiration). After an initial series of lectures, students present papers from the scientific literature and lead ensuing discussions. In addition, several laboratory exercises and films demonstrate basic physiological processes in invertebrates.

Prerequisite: BIOL 251 or permission of instructor. Instructor: Holliday.

BIOL 310 - Aging and Age-Related Diseases
In this course, we will study aging as a developmental process defined by changes in the anatomy, physiology, and biochemistry of the brain as well as age-associated changes in behavior. We will also examine the biological basis of neurological disorders, such as Alzheimer's disease, associated with the brain's aging process. The basis for our learning will be the formation of questions, discussions and review of the current literature, and field experiences with aging populations. [W]

Prerequisite: BIOL 212, BIOL 255, BIOL 256, or permission of instructor. Instructor: Reynolds.

BIOL 314 - Anatomy of Vision

An exploration of the conceptual approaches and modern experimental techniques used in functional morphology. Through a combination of anatomy, physiology, biomechanics, and biophysics, students explore the functional and evolutionary bases of vision in vertegrate animals. Practicum provides students an opportunity to critique primary literature and develop projects.

Prerequisite: BIOL 213, or BIOL 214 or NEUR 201 or permission of instructor. Instructor: Dearworth.

BIOL 317 - Physiology of Extreme Animals
In this class, we will explore the specialized physiological processes animals have developed to meet environmental challenges, including being tolerant to drought, heat, low oxygen levels, freezing, and lack of food. After examining general physiological adaptations, we will use case studies from "extreme" animals for further exploration. Along with minimal lecturing, we will synthesize the primary literature while developing skills essential to professional scientists, including communication science, constructing research proposals, and defending opinions orally.

Prerequisite: BIOL 231, BIOL 251 or permission of instructor. Instructor: Butler.

BIOL 332 - Advanced Aquatic Ecology
Students gain familiarity with function and structure of freshwater ecosystems and ecological analysis of biota and abiotic parameters beyond the intermediate level by examining complex interrelationships and synthesizing findings according to theoretical models. Laboratory/practicum and lecture/seminar are fused by offering this course on our "floating laboratory" pontoon boat at Merrill Creek Reservoir, NJ. Students acquire skills and master techniques by interfacing with naturalists at MCR, enabling them to design, develop, propose and execute a research project with recommendations for environmental management, culminating in presentations to an open Program at the MCR Nature Center.

Prerequisite: BIOL 231, BIOL 234, BIOL 271 or BIOL 272 Knowledge of statistics is highly recommended. Instructor: Waters. Offered: Fall or spring semester.

BIOL 336 - Evolutionary Genetics
This course introduces students to topics in population genetics and molecular evolution, with particular emphasis on the experimental quantitation of genetic variation, molecular systematics, and the molecular evolution of genes. The main focus is to give students direct experience in the critical reading, evaluation, presentation, and discussion of primary literature in the field of evolutionary genetics.

Prerequisite: BIOL 101 and/or BIOL 102 and at least one of the following: BIOL 235, BIOL 255, CHEM 351. Instructor: Leibel.

BIOL 338 - Biological Pattern Formation
In this course we discuss the formation and function of living patterns, such as concentric spots, body axis gradients, spirals, evenly spaced spots, ruffles, stripes, traveling waves, branches, and networks. Students gain experience in searching, presenting and critiquing primary research literature.

Prerequisite: BIOL 101 and BIOL 102 or permission of instructor. Instructor: Edlund.

BIOL 340 - Molecular Medicine
This course covers the methods used to elucidate the molecular component of human disease. Readings and discussion focus on the primary literature of diseases inherited as defects in single genes, those most amenable to gene therapy. Disease management, therapeutic protocols, federal oversight of gene-based therapy, and personal genetic medicine are discussed. Lecture/discussion/seminar. [S]

Prerequisite: BIOL 255 or permission of instructor. Instructor: Caslake.

BIOL 341 - Environmental Issues in Aquatic Ecosystems
In this course, students will learn about major global environmental issues in freshwater, marine, and estuarine ecosystems. Students are expected to critically read, evaluate, present, and discuss current events and primary literature. Examples of some topics include chronic effects of nutrient over-enrichment, chemical environmental contaminants, harmful algae, overfishing, and biological invaders. In the practicum, students will be introduced to laboratory and field techniques that aquatic ecologists often use to assess and find practical solutions to water quality problems. Lecture/practicum/discussion.[W]

Prerequisite: BIOL 231, BIOL 234, BIOL 271, BIOL 272, CHEM 252 or CE 321. Instructor: Rothenberger.

BIOL 342 - Botany and Biodiversity
This course reviews principles of plant biology-form and function from cells to organisms-in the context of how plants impact ecosystem structure. Emphasis is on terrestrial vascular plants, with focus on both conifers and angiosperms, in particular as they relate to local and broad-scale patterns of biological diversity. Practicum includes field identifications using the concept of pattern recognition, application of GIS tools to mapping plant distributions, and applying primary literature to investigate controversies of plant invasions, plant pests and botanical pharmaceuticals. Students choose a topic for scientific study and presentation.

Prerequisite: One of the following: BIOL 224, BIOL 231, BIOL 234. Instructor: Waters.

BIOL 345 - Infectious Disease
Extended exposure to immunology (following BIOL 245) covering various aspects of human pathogens and how the immune system handles them. Vaccines either in use, in trials, or under development are explored for each of the pathogens. Students read primary research articles and participate in discussions. Practicum provides hands-on opportunity to explore aspects of vaccine development.
Lecture/practicum/discussion/seminar.

Prerequisite: BIOL 245. Instructor: Kurt.

BIOL 350 - Genomics
This course focuses on particular aspects of the structure and function of genomes. Topics covered in Genomics include approaches to studying genomes, anatomies of eukaryotic nuclear and prokaryotic genomes, synthesis of the transcriptome and proteome, regulation of genome activity, how genomes replicate and evolve, and the evolutionary relationships between genomes as determined by molecular phylogenetics. Using primary research literature, students analyze a specific topic in depth and present their findings in oral and written reports.

Prerequisite: BIOL 255. Instructor: Ospina-Giraldo.

BIOL 356 - Biomedical Informatics

This course focuses on using genomic information, statistics and computational methods to study the relation between genomic variations and diseases. Students will learn major biomedical informatics approaches in translating the fount of genomic information into promising actionable treatment options through lectures, journal discussions, and project presentations. Major topics include human genome, genomic variations, genome-wide association study (GWAS), cancer genomics, microarray technology, next generation sequencing, pharmacogenomics, and personalized medicine.

Prerequisite: BIOL 101 and BIOL 102, preferably BIOL 255 or BIOL 336, or permissions of instructor. Instructor: Staff.

BIOL 351-380 - Special Topics
Dependent upon student and staff interests, one or more specialized areas of biology are examined.

Prerequisite: BIOL 101-BIOL 102, and other courses as specified by instructor. Instructor: Staff. Offered: Fall and spring semesters.

BIOL 401-404 - Independent Research
A limited number of juniors and seniors may conduct an in-depth investigation of a particular topic in biology under the supervision of a faculty mentor. Hours by arrangement.

Prerequisite: Permission of faculty mentor and department head. Instructor: Staff. Offered: Fall and spring semesters.

BIOL 490 - Capstone in Biology
This capstone course for Biology majors, is a culminating experience for seniors to integrate their learning. Students discuss how prior courses informed and altered their understanding of at least three of these five concepts: evolution; biological molecule structure and function; information flow, exchange, and storage; matter/energy pathways and transformations; and systems biology. In addition to metacognitive reflection, this course emphasizes higher-order thinking, communication skills, and societal problem-solving abilities through meaningful connections among different courses.

Prerequisite: Open only to Biology majors with senior standing. Instructor: Caslake, Waters.

BIOL 495-496 - Thesis
Majors with strong academic records and research potential are invited to become candidates for departmental honors toward the end of the first semester of their junior year. The courses consist of an original laboratory investigation and culminate in a thesis submitted at the end of the senior year and defended before the department staff and guests they may invite. Hours by arrangement. [one W credit only upon completion of both 495 and 496]

Prerequisite: Permission of faculty mentor and department head. Instructor: Staff. Offered: Fall and spring semesters.

CE - Civil and Environmental Engineering

CE 201 - Civil Engineering Computing
This course provides students with an introduction to computer use within the civil engineering profession and how the computer is a tool for engineering problem solving using computer-aided design (CAD) and geographical information systems (GIS) for civil engineering systems.

Prerequisite: MATH 162, CE 271. Corequisite: CE 271. Instructor: Staff.

CE 203 - Envisioning a Sustainable World
In this seminar-style course, students explore the concept of sustainability, the relationships between the natural and built environment, and the sustainable and/or unsustainable aspects of large-scale systems (energy, water, food, transportation, buildings, etc.) that support society. Students research aspects of sustainable systems and/or participate in applied projects in the campus and local community. [STSC, V]

Instructor: Staff.

CE 251 - Fluid Mechanics
Basic principles of fluid mechanics. Topics include fluid properties, hydrostatics, and fluid flow concepts including continuity, energy, and momentum. Dimensional analysis is also covered. Applications include open channel flow, pipe systems, and fluid flow measurements. Lecture/laboratory.

Prerequisite: ES 226. Instructor: Staff. Offered: Fall semester.

CE 271 - Civil Engineering Land Development-Surveying
An introductory course in engineering measurement through surveying techniques. Topics include fundamentals of surveying, statistical analysis, project management, and technical writing all of which are applied throughout the course in a series of field survey projects. Laboratory work includes surveying field work, CAD, project management, and an CAD-based civil engineering applications. Lecture/laboratory

Prerequisite: MATH 161, MATH 162; and ES 101.. Instructor: Ruggles. Offered: Fall semester.

CE 311 - Structural Analysis and Steel Design
This course covers both classic determinate structural analysis and the design of steel structures. Topics include loads, load paths, tributary areas, degree of determinacy, stability, approximate methods of indeterminate structural analysis, trusses, cables, arches, influence lines, deflections of trusses and frames by various methods, the principle of virtual work, introduction to force methods of indeterminate structural analysis, structural optimization, steel tension members, bolted and welded connections, steel columns, beams, and beam-columns.

Prerequisite: ES 230. Instructor: Kurtz. Offered: Fall semester.

CE 321 - Introduction to Environmental Engineering and Science
This course introduces the student to applications of engineering principles to a variety of environmental topics. The topics will revolve around local issues within the Bushkill Watershed, therefore we will adopt a watershed approach to better understand the various topics. Topics include environmental chemistry, hydrology, risk assessment, water supply and pollution control, solid and hazardous wastes, and environmental management. Laboratories consist of field trips, computer modeling exercises, sample collection, and chemical analysis methods.

Prerequisite: MATH 162, CHEM 121. Instructor: Kney.

CE 325 - Sustainable Environmental Management

Sustainable environmental management is currently one of the essential elements in product design and facilities management. At the facility level, environmental management means everything from manifesting hazardous waste, to redesigning a product, to installing air pollution control equipment. Key considerations include economics, long-term liability, and public perception, both in the USA and globally. The emphasis in this course is on management, policy, and technological solutions that can promote sustainability with a focus on manufacturing facilities.[W]

Prerequisite: Sophomore standing. Instructor: Staff.

CE 331 - Civil Engineering Project Management
This course addresses management of civil engineering projects, including planning and feasibility studies, environmental assessments, resource development, design, construction, and other types of projects in which civil engineers are involved. Topics include definition and scheduling of project tasks and resource management. The course also provides an overview of the concepts and analytical techniques of engineering economics, including present and annual worth analysis, capitalized cost analysis, rate of return analysis, cost/benefit analysis, and sensitivity analysis. The course introduces students to software packages used in project management and economic analysis. Lecture.

Prerequisite: Sophomore Standing. Instructor: Staff. Offered: Fall semester.

CE 341 - Introduction to Transportation Systems
Technical and policy related aspects of transportation systems. Topics include traffic analysis and control, traffic flow theory, geometric design, capacity analysis and level of service, transportation demand analysis, and transportation planning. Computer applications. Design projects include oral presentations and written reports. Lecture/discussion.

Prerequisite: MATH 264 and junior or senior standing in engineering. Instructor: Staff. Offered: Fall semester.

CE 351 - Water Resources Engineering
An introductory course in hydraulics, hydrology, and water resources engineering. Topics include groundwater and surface water supply, flow measurements, flow and pressure losses in pipe systems, probablility concepts in design, open channel design including storm sewers and culverts, pump design, and detention basis design. Written laboratory and design reports are required.

Prerequisite: CE 251. Instructor: Staff. Offered: Spring semester.

CE 361 - Geotechnical Engineering
An introductory course in soil mechanics and geotechnical engineering. Studies include the classification, permeability, consolidation, and strength of soils in lecture and laboratory settings. Written reports for laboratory and design results are required. Discussion of traditional design methods in foundation engineering is included. Lecture/laboratory. [W]

Prerequisite: ES 230 and CE 251 (corequisite) or permission of instructor. Corequisite: CE 251. Instructor: Staff. Offered: Fall semester.

CE 390-391 - Independent Study or Research
Independent study or research projects selected based on the background and interests of the student. An outline of the proposed work is submitted for approval by the department head and the faculty member who serves as adviser. A final paper presenting the results of the work is required. Hours arranged.

Instructor: Staff. Offered: 390/Fall, 391/Spring.

CE 392-393 - Independent Study
This independent study is intended to prepare students and ultimately have them compete in the ASCE Mid-Atlantic Geo Wall competition. Preparation for the competition will include learning the fundamentals of mechanically-stabilized earth (MSE) wall design using the Federal Highway Administration (FHWA) Simplified Method that is the current standard of practice. 1/2 credit course.

Instructor: Staff.

CE 395-396 - Special Topics
This course considers recent advances and/or subjects of current interest to students and faculty. The special topic(s) for a given semester are announced prior to registration.

Instructor: Staff. Offered: 395/Fall, 396/Spring.

CE 411 - Advanced Design: Steel Bridge
This is a course in advanced engineering decision-making, as students design and fabricate a steel bridge according to the rules of the National Students Steel Bridge Competition. Conceptual design: computer-based parametric optimization studies and prototype connection testing. Preliminary design: the selection of bridge members and geometry to safely support loads. Detail design: 3-D solid modeling, drafting, and dimensioning of shop drawings. Bridge fabrication will require fine attention to detail and troubleshooting skills.

Prerequisite: CE 311; Senior standing or permission of instructor. Instructor: Kurtz.

CE 412 - Advanced Structural Analysis
Analysis of forces and deflections in indeterminate beams, frames, and trusses. Topics include energy methods, slope-deflection, moment distribution, direct stiffness, and the matrix analysis method. Computer applications. Lecture.

Prerequisite: CE 311. Instructor: Staff. Offered: As needed.

CE 413 - Design of Concrete Structures
This course focuses on the mechanics and design of components of reinforced concrete structures and builds upon the knowledge gained in CE 311. Extensive use of the ACI 318 design code is made. Topics include concrete and reinforcement properties, slender beams, deep beams, T-beams, shear, torsion, columns, one- and two-way slabs, walls, footings, and reinforcement splicing and development lengths. Introduction to prestressed concrete structures.

Prerequisite: CE 311. Instructor: Staff.

CE 414 - Structural Dynamics
This course considers the analysis and design of structures subjected to time-dependent loads. Included is the formulation of dynamic models for single and multiple degree of freedom systems. Deterministic and stochastic responses to shock and environmental loadings (earthquakes, winds, and waves) are

developed. Emphasis is given to design applications using existing codes and commercially available structural software.

Prerequisite: CE 311. Instructor: Staff. Offered: As needed.

CE 415 - Timber, Masonry, and Advanced Steel Design
This course covers the design of timber structures, masonry structures, and advanced topics in structural steel design. Timber topics include the physical properties of wood, allowable design stresses, diaphragms, shear walls, beam design, P-M interaction, and fasteners. Masonry topics include pilasters, walls, and lintels. Steel design topics include connections, plate girders, composite construction, plate girder bridges, and the analysis and design of highway bridges.

Prerequisite: CE 311. Instructor: Kurtz.

CE 416 - Highway Bridge Design
Students will apply prerequisite structural engineering knowledge to design components of common highway bridges in accordance with the ASSHTO LRFD Bridge Design Specification. Topic coverage includes (1) structural analysis techniques for moving loads (influence lines) and distribution of traffic loads, (2) the design of superstructure components (concrete desk systems and girders of various materials [steel, concrete, and timber]), (3) the design of substructure components (reinforced concrete abutments/piers and support bearings), and (4) bridge load rating.

Prerequisite: CE 311. Instructor: Mante.

CE 421 - Hydrology
Introduction to engineering hydrology, primarily dealing with surface waters. Topics include hydrologic cycle, frequency analysis, rainfall/runoff relationships, routing, and storm water management and design. Design problems using current hydrological computer models are assigned. Lecture.

Prerequisite: CE 251. Instructor: Staff. Offered: Fall semester in alternate years.

CE 422 - Environmental Site Assessment
Introduction to preliminary site investigations for environmental hazards. Topics include identification of wetlands, title searches, air photo interpretation for environmental hazards, visual site surveys, operation of environment monitors, current EPA regulations regarding site assessment and investigation, and sampling of surface materials. Lecture/discussion/laboratory.

Prerequisite: CHEM 121, and permission of instructor. Instructor: Staff.

CE 423 - Water Quality
Basic chemical principles and applications to the analysis and understanding of aqueous environmental chemistry in natural waters and waste waters. Modeling of dissolved oxygen, nutrients, temperature, and toxic substances with applications to rivers, lakes, estuaries, and coastal waters. Lecture/laboratory.

Prerequisite: CHEM 121; CE 251, CE 321. Instructor: Staff. Offered: Spring semester, alternate years.

CE 424 - Groundwater Hydrology
Analysis of groundwater flow and contaminant transport in the subsurface. Topics covered include geologic and physical factors affecting the movement of water and contaminants, sources of pollution, mathematical formulation and solution of groundwater flow and transport problems, remediation methods, and an introduction to computer simulation models. Lecture.

Prerequisite: CE 251; MATH 264, or permission of instructor. Instructor: Staff. Offered: Spring semester in alternate years.

CE 425 - Water Supply and Pollution Control
Application of basic principles to the design of water and wastewater systems. Process design and equipment selection for water and wastewater treatment facilities. Lecture/discussion.

Prerequisite: CE 321, CE 251. Instructor: Staff. Offered: Fall semester in alternate years.

CE 431 - Construction Management
This course addresses the concepts and techniques used in effectively managing construction projects. Topics include work breakdown systems, critical path scheduling, cost estimating, budgeting, monitoring and reporting progress, change orders,quality management, labor relations, and relevant legal and regulatory issues. Students develop capabilities with software packages used in cost estimating, scheduling and budgeting, reporting, and document management.

Prerequisite: CE 331. Instructor: Staff. Offered: Spring semester in alternate years.

CE 442 - Urban Transportation Planning
Study of the transportation planning, design, and impact estimation process, including population changes affecting demand and mobility needs, transportation demand and supply analysis, service policy variables, and estimation of air pollution and energy use impacts. Computer applications. Student projects include impact studies of new facilities and system analysis to meet specific transportation requirements. Lecture/discussion.

Prerequisite: CE 341, or permission of the instructor. Instructor: Staff. Offered: Fall semester in alternate years.

CE 444 - Civil Infrastructure Systems Management
This course presents an integrated approach to the management of civil infrastructure systems. Students examine the many aspects of performance and different management approaches in the context of available tools, new technologies, institutional issues, and resource constraints.

Instructor: Sanford Bernhardt.

CE 451 - Open Channel Hydraulics
Application of fluid mechanics principles to flow in open channels. Uniform, gradually varied, rapidly varied, and unsteady flow conditions are analyzed and applied to a variety of practical problems. Both laboratory and computer models are employed. Lecture/ discussion.

Prerequisite: CE 251. Instructor: Staff. Offered: Fall semester in alternate years.

CE 461 - Foundations and Earth Pressures
This course focuses on the application of the basic principles of soil mechanics to the design of foundations and earth retaining structures. Shallow footings, mat foundations, deep foundations, cantilever retaining walls, and sheet pile walls are studied. Includes the use of design software for foundations and walls. Lecture/discussion

Prerequisite: CE 361. Instructor: McGuire. Offered: Spring semester in alternate years.

CE 462 - Slope Stability and Ground Improvement
This course applies the basic principles of soil mechanics to the analysis of the stability of slopes, walls, dams, and levees.The use of various ground improvement technologies, including geotextile reinforcement, to improve stability and solve construction problems are considered. Includes significant use of computers for analysis. Oral presentation and written reports are required. Lecture/discussion

Prerequisite: CE 361. Instructor: McGuire. Offered: Spring semester in alternate years.

CE 464 - Environmental Geophysics
Introduction to the geophysical techniques used to study large- and small-scale features and processes of the Earth. Emphasis is placed on the fundamental principles of gravity, magnetism, seismology, heat transfer, and electrical methods as they apply to environmental problems. Lectures, laboratory, and field exercises.

Instructor: Staff.

CE 471 - Advanced Civil Engineering Analysis
A study of the analytical and design methods used in solving certain civil engineering problems. Lecture/discussion.

Prerequisite: Senior standing in Civil Engineering or permission of instructor. Instructor: Staff. Offered: As needed.

CE 472 - Civil Engineering Capstone Design I
Students work in teams to complete two projects in two different areas of civil engineering and initiate a third project to be completed during the subsequent semester in Design II - CE 473. The projects are intended to provide design experience in varying areas of the civil engineering discipline. The content of this course will expose students to open-ended design problems (i.e. problems with more than one possible "answer") and provide an opportunity for students to utilize many of the skills learned in previous courses within the civil engineering discipline. [W]

Prerequisite: Senior standing and completion of all required 200 and 300 level courses. Instructor: Staff.

CE 473 - Civil Engineering Capstone Design II
Students work in teams to complete two projects in two different areas of civil engineering and initiate a third project to be completed during the subsequent semester in Design II - CE 473. The projects are intended to provide design experience in varying areas of the civil engineering discipline. The content of this course will expose students to open-ended design problems (i.e. problems with more than once possible "answer") and provide an opportunity for students to utilize many of the skills learned in previous courses within the civil engineering discipline.

Prerequisite: Senior standing and completion of all required 200 and 300 level CE courses. Instructor: Staff.

CE 481 - Advanced Surveying
The application of current surveying methods in the civil engineering field. Topics include Global Positioning Systems (GPS), Geographical Information Systems (GIS), and advanced topics in surveying such as remote sensing, the fundamentals of photogrammetry, and methods of precise measurements. Lecture/ laboratory.

Prerequisite: CE 271. Instructor: Staff. Offered: Fall semester in alternate years.

CE 495-496 - Thesis
This program is designed in accordance with the honors program of the College. Enrollment is limited to seniors. [One W credit only upon completion of both 495 and 496]

Instructor: Staff. Offered: 495/Fall, 496/Spring.

CHE - CHEMICAL ENGINEERING

CHE 209 - Indigo: A World of Blues
Dip white fabric in the muddy-colored indigo dye vat and the cloth emerges green, then slowly turns azure, cobalt or sapphire before your eyes. The chemistry behind this reaction will be revealed-and practiced-in the course. This mysterious dye has an intriguing history, and we will study its societal and environmental impact. We will learn about the equipment used in producing indigo dye, and the three sources of indigo. The course culminates with the design of an indigo production facility. [STSC]

Instructor: Piergiovanni.

CHE 211 - Material and Energy Balances
Mathematical analysis of steady-state flow processes including those with chemical reactions. Emphasis on general principles and techniques used in problem solving. Material and enthalpy balances as applied to physical and chemical systems. Heats of reaction. Recycle and purging. Digital and graphical procedures. Lecture/recitation.

Prerequisite: CHEM 121. Instructor: Staff.

CHE 222 - Thermodynamics
Fundamental thermodynamic relationships and their application to non-reactive chemical engineering systems. Equations of state involving ideal and non-ideal behavior. Estimation and use of thermodynamic properties. Analysis of open systems. Lecture/Problem-solving.

Prerequisite: CHEM 122. Corequisite: MATH 263. Instructor: Staff.

CHE 311 - Transport Phenomena
Unified treatment of continuum descriptions of momentum, heat, and mass transfer and analogies among the three.Evaluation and use of transport coefficients. Shell balances and equations of change. Molecular (laminar) transport and introduction to convective transport. Lecture/Problem Solving.

Prerequisite: CHE 211, MATH 264. Instructor: Staff. Offered: Fall semester.

CHE 312 - Experimental Design I
Statistical analysis of data from laboratory experiments which illustrate the basic principles of thermodynamic and transport properties. Emphasis on laboratory safety, statistical analysis of data, and technical writing. Lecture/laboratory. [W]

Corequisite: CHE 311. Instructor: Staff. Offered: Fall semester.

CHE 314 - Chemical Engineering Computing
Applications of high-level computer languages, spreadsheets, software, and computer operating systems as tools for engineering problem solving. Lecture/ laboratory.

Prerequisite: CHE 211. Instructor: Staff.

CHE 321 - Applied Fluid Mechanics and Heat Transfer
Analysis of fluid flow in complex geometries and porous media; unsteady heat conduction, convection, and heat exchange. Analysis and design of driving forces. Introduction to integrated fluid flow-heat transfer processes.

Prerequisite: CHE 311. Instructor: Staff. Offered: Spring semester.

CHE 322 - Experimental Design II
Statistical design of laboratory experiments which illustrate the principles of fluid flow and heat transfer culminating in integrated separations processes in pilot-scale equipment. Emphasis on statistical experimental design and analysis of data, instrumental analysis, technical writing, and oral presentations. Lecture/Laboratory.

Corequisite: CHE 321, CHE 323, CHE 324. Instructor: Staff. Offered: Spring semester.

CHE 323 - Fluid Phase and Reaction Equilibria
Application of fundamental thermodynamic relationships to phase and reaction equilibria in chemical and biological systems. Solution thermodynamics; solid, liquid, vapor equilibria for ideal and nonideal systems; prediction of equilibrium data; chemical reaction equilibria for ideal and nonideal systems. Lecture/Problem-solving

Prerequisite: CHE 222. Instructor: Staff.

CHE 324 - Process Control
Analysis of dynamic process and control systems including controllers, measuring elements, control elements, and system components. Design of controlled systems. Analytical and experimental evaluation of process dynamics. Dynamic simulation and stability analysis. Lecture/problem period.

Prerequisite: MATH 264, CHE 211. Instructor: Staff. Offered: Spring semester.

CHE 331 - Polymers
Formation, structure, and properties of polymers. Thermoplastic and thermosetting polymers; stereospecific structures; polymer solutions and solvent resistance; chain conformation; molecular weight; morphology; transitions; condensation polymerization; free radical and nonradical addition polymerization; copolymerization; rubber elasticity; viscous flow; viscoelasticity. Lecture/laboratory.

Prerequisite: ES 231, or permission of instructor. Instructor: Staff.

CHE 334 - Chemical Processes in Environmental Engineering
Principal chemical processes in environmental engineering for wastewater treatment, air pollution control, and solid waste management. Chemical, physical, and mathematical principles used in defining, quantifying, and measuring environmental quality. Engineering fundamentals governing the operation and design of pollution control devices. Lecture/Problem Solving.

Prerequisite: Permission of instructor. Instructor: Staff.

CHE 337 - Biochemical Engineering
Introduction to prokaryotic and eukaryotic cells, cell metabolism, and genetic engineering. Mathematical modeling of enzyme kinetics and its importance in reactor design. Large- scale fermentation, such as bioreactor design and scale-up, cellular and membrane transport processes, growth media development, sterilization procedures, and protein purification. Lecture/recitation/ laboratory.

Prerequisite: CHEM 221, or permission of instructor. Instructor: Staff.

CHE 341 - Green Engineering
An introduction to the concept of environmentally conscious process development and the application of green engineering principles to the chemical process industry. Students are challenged to rethink the classical chemical process in order to satisfy regulatory and policy issues, balance process economics and environmental performance, and develop a refined sense of sustainability with respect to the wider chemical industry.

Prerequisite: CHEM 121 and CHEM 122 or permission of instructor. Instructor: Staff.

CHE 344 - Interfacial Phenomena
Chemistry, physics, and engineering of nanoscopic systems dominated by interfacial behavior. Equilibrium interfacial thermodynamics, capillary interactions, and surface forces in disperse systems. Electrical double layer and electrokinetic phenomena. Emerging applications including bionanotechnology and smart materials illustrated using seminars in current literature and laboratory experiences. Lecture/Seminar/Laboratory

Prerequisite: MATH 161; CHEM 121; or permission of instructor. Instructor: Staff.

CHE 347 - Micro-and Nano-Fabrication
This course introduces the theory and technology employed in micro-and nano-fabrication, focusing on the basic processing techniques used to manufacture electrical, mechanical, and fluidic devices. Through lectures, labs, and interactive discussions, students shall gain an understanding of how these conventional and emerging processing techniques are being applied to today's devices, with a particular focus on microfluidics applications. Students will have an opportunity to design and test a microfluidic device developed using soft-lithography techniques.

Prerequisite: MATH 162, CHEM 121 and PHYS 131 or permission of instructor. Instructor: Staff.

CHE 360 - Drug Delivery
Mathematical analysis of transport phenomena in biological systems, including pharmacokinetic modeling, diffusion and kinetics of biochemical reactions. Analysis of current drug delivery systems through problem solving, discussion of peer-reviewed literature, and laboratory experiences. Lecture/recitation/laboratory.

Prerequisite: MATH 161. Instructor: Staff.

CHE 386 - Composites
This course introduces students to the structure, properties, and processing of engineering composite materials. The emphasis is on the modeling and understanding the behavior of fiber reinforced materials. Topics to be discussed include: selection of fiber and matrix materials, strength and stiffness of fiber reinforced composites, elastic stress-strain relationships, laminated composites, fatigue and impact properties, composite-environment interactions, and the experimental characterization of composites.

Prerequisite: MATH 264. Instructor: Staff.

CHE 390-391 - Independent Study in Chemical Engineering
An opportunity for selected students to engage in an individualized learning experience for a wide range of technical topics. Before registering, a proposal for the work must be submitted to a faculty member who serves as the adviser and to the department head for approval. Each student is required to submit a course portfolio, detailed in the syllabus, and present a summary of the work completed in both a paper and oral presentation.

Instructor: Staff.

CHE 392-393 - Independent Research in Chemical Engineering
An opportunity for selected students to engage in a high quality, hands-on, independent research experience. Before registering, a research proposal must be submitted to a faculty member who serves as the adviser and to the department head for approval. Each student is required to submit a course portfolio, detailed in the syllabus, and present a summary of project results in both a paper and oral presentation.

Instructor: Staff.

CHE 411 - Mass Transfer, Separations, and Bioseparations
Unit operations of chemical engineering pertaining to mass transfer and separations processes. Staged and continuous equilibrium separations including multi-component distillation, gas absorption/stripping and liquid extraction. Rate-based separations such as chromatography and membrane systems. Lecture/Problem Solving.

Prerequisite: CHE 311. Corequisite: CHE 323. Instructor: Staff.

CHE 412 - Integrated Chemical Engineering
Principles of separation processes, mass transfer, reaction kinetics in developed and emerging applications illustrated by multi-scale laboratory experiments. Emphasis on analysis of safe practices, hazards analysis, kinetic data, computer simulation, technical writing, and oral presentation. Lecture/Laboratory.

Corequisite: CHE 411, CHE 413. Instructor: Staff. Offered: Fall semester.

CHE 413 - Reaction Kinetics and Reactor Design
The kinetics of reacting systems and the design of chemical reactors. Analysis of rate data; multistep reaction mechanisms, enzymatic reactions, catalysis and heterogeneous processes; design of single phase isothermal reactors, multiple-phase reactors, non-isothermal reactors, and nonideal reactors. Lecture/recitation.

Prerequisite: CHE 323. Instructor: Staff.

CHE 415 - Design Analysis
Quantitative study of current processes. Analysis and flowsheet layout of typical systems; safety, health, environmental, quality control, and ethical concerns in design; economic factors in estimation, design, construction, and operation of process equipment. Lecture/recitation.

Prerequisite: CHE 324. Corequisite: CHE 411 and CHE 413. Instructor: Staff. Offered: Fall semester.

CHE 416 - Green Design Analysis
One of the central roles of chemical engineers is to design and operate chemical processes yielding chemical products that meet customer specifications. Metrics for success include profit, but increasingly also incorporates sustainability. This course provides students with the fundamental tools needed for process design and practicing the principles of green engineering. Specific topics will include regulations and safety, heuristics, simulation software, economics, impact assessment, and life cycle analysis.

Prerequisite: CHE 324, CHE 411. Instructor: Staff. Offered: Fall semester.

CHE 422 - Design Synthesis
This capstone design course provides opportunities for the application of all prior course work in the resolution of an industrially realistic or derived chemical process design problem in a team format. Teams demonstrate a practical ability to define the required technical challenge, develop relevant criteria to evaluate alternatives, and present the resolution of the technical challenge in both oral and written formats.[W]

Prerequisite: CHE 415. Instructor: Staff. Offered: Spring semester.

CHE 495-496 - Thesis
This program is designed and operated in accordance with the requirements of the Honors program as administered by the Academic Progress- Committee. [One W credit only upon completion of both 495 and 496]

Prerequisite: Senior standing.. Instructor: Staff.

CHEM - CHEMISTRY

CHEM 102 - A Chemical Perspective
Designed for non-science students. After a coverage of basic principles, a case study approach is used to examine societal problems caused, influenced, or solved by chemistry. Background information and rationale are discussed as well as the chemistry in-volved. Specific topics will vary from year to year depending on the interests of students and staff. The laboratory emphasizes the scientific approach with experiments using consumer products. Lecture/laboratory. Students who have credit for CHEM 121 or CHEM 122 may not take 102 for credit. Students who have credit for 102 may not take CHEM 121 for credit. [NS]

Instructor: Staff. Offered: Fall and spring semester.

CHEM 104 - Living in an Organic World
Organic Chemistry is fundamental to life on Planet Earth. Fuel, food, cosmetics, clothing, plants, animals, pharmaceuticals, drugs, alcohol, and the basic biological processes of life itself, from reproduction to birth, and every day thereafter, are all aspects of organic chemistry. After an introduction to the structural fundamentals and diversity of organic molecules, this course will focus on the role organic chemistry plays in our daily lives and our continued existence as carbon-based life forms. [STSC]

Prerequisite: Any Lab Science course. Instructor: Nutaitis.

CHEM 106 - Chemistry of the Environment
An introduction to the chemical principles relevant to understanding environmental problems that result from chemical environmental pollutants, and the development of technological approaches to resolving them. Historical case-studies as well as contemporary environmental issues are considered by

understanding the relevant chemistry, the analysis of appropriate scientific data and models, as well as technological solutions, societal impacts, and regulatory approaches and challenges necessary to overcome these environmental problems. [STSC]

Prerequisite: Any Lab Science Course. Instructor: Husic.

CHEM 121 - General Chemistry I
Introduction to the principles of atomic and molecular structure, stoichiometry, chemical bonding, and thermochemistry, using quantitative and qualitative problem solving approaches. Laboratory work illustrates these fundamental principles and emphasizes the development of laboratory skills. [NS]

Instructor: Staff.

CHEM 122 - General Chemistry II
Introduction to intermolecular forces, physical properties of solutions, acid/base chemistry, kinetics, equilibria, thermodynamics and electrochemistry, using quantitative and qualitative problem solving approaches. Laboratory work illustrates these fundamental principles and emphasizes the development of laboratory skills. [NS]

Prerequisite: CHEM 121. Instructor: Staff.

CHEM 212 - Inorganic Chemistry I
Introduces the theories of atomic structure and bonding in main-group and solid-state compounds. Common techniques for characterizing inorganic compounds such as NMR, IR and Mass Spectrometry are discussed. Descriptive chemistry of main group elements is examined. Conductivity, and magnetism, superconductivity and an introduction to bio-inorganic chemistry are additional topics in the course. In lieu of the laboratory students have a project on a topic of their choice. Serves as an advanced chemistry elective for Biochemistry majors.

Prerequisite: CHEM 122. Instructor: Nataro.

CHEM 213 - Inorganic Chemistry I with Laboratory
Same as CHEM 212 plus one three-hour laboratory per week, which includes experience in the synthesis, purification, and characterization (infrared and electronic spectroscopy, magnetic susceptibility, NMR, cyclic voltammetry, and x-ray powder diffraction) and properties of inorganic compounds.

Prerequisite: CHEM 122. Instructor: Nataro. Offered: Spring semester.

CHEM 221 - Organic Chemistry I
General aspects of organic chemistry including nomenclature, structure, reactions, synthesis, and spectroscopy are surveyed. This course is intended to prepare students for a career in chemistry or biochemistry, as well as the medical and engineering professions. Lecture/laboratory.

Prerequisite: CHEM 122 or CHEM 213. Instructor: Griffith, Nutaitis, Swails. Offered: Fall.

CHEM 222 - Organic Chemistry II
General aspects of organic chemistry including nomenclature, structure, reactions, synthesis, and spectroscopy are surveyed. This course is intended to prepare students for a career in chemistry or biochemistry, as well as the medical and engineering professions. Lecture/laboratory.

Prerequisite: CHEM 221. Instructor: Griffith, Nutaitis, Swails. Offered: Spring.

CHEM 231 - Analytical Chemistry I
A thorough study of the fundamental techniques and theoretical background of classical volumetric and gravimetric analysis together with some instrumental analytical methods such as colorimetry, potentiometry, and separation techniques. Lecture/laboratory.

Prerequisite: CHEM 122 or CHEM 213. Instructor: Galloway. Offered: Fall semester.

CHEM 252 - Environmental Chemistry
This course discusses the chemical principles underlying natural processes and the ways in which human activity affects those processes. Sources, sinks, and interactions of important environmental compounds are investigated.

Prerequisite: CHEM 122. Instructor: Galloway, Mylon. Offered: Fall semester.

CHEM 311 - Elementary Physical Chemistry
A one-semester course designed primarily for A.B. majors and premedical students. A study of gas properties, thermodynamics, elementary quantum mechanics, kinetics, and lasers.

Prerequisite: CHEM 122 or CHEM 213; PHYS 112; MATH 125, MATH 141, or MATH 161. Instructor: Haug, Mylon, Szarko. Offered: Fall or spring semester.

CHEM 323 - Physical Chemistry I without Lab
A study of classical thermodynamics, equilibria, ideal and real gases, and solutions.

Prerequisite: PHYS 112, PHYS 122, or PHYS 131; MATH 162; CHEM 122. Instructor: Haug, Mylon, Szarko. Offered: Fall semester.

CHEM 324 - Physical Chemistry II without Lab
This course covers quantum mechanics, spectroscopy, and kinetics.

Prerequisite: PHYS 112, PHYS 122, or PHYS 131; MATH 162; CHEM 122. Instructor: Haug, Mylon, Szarko. Offered: Spring semester.

CHEM 325 - Physical Chemistry I with Lab
A study of classical thermodynamics, equilibria, ideal and real gases, and solutions. The laboratory focuses on the thermodynamics of phase changes, solution formation, and chemical reactions. Lecture/laboratory.

Prerequisite: PHYS 112, PHYS 122, or PHYS 131; MATH 162; CHEM 122. Instructor: Haug, Mylon, Szarko. Offered: Fall semester.

CHEM 326 - Physical Chemistry II with Lab
This course covers quantum mechanics, spectroscopy, and kinetics. The laboratory utilizes techniques in IR and UV-VIS absorption and fluorescence spectroscopy, to investigate concepts in quantum mechanics, spectroscopy, and kinetics. Lecture/laboratory.

Prerequisite: PHYS 112, PHYS 122, or PHYS 131; MATH 162; CHEM 122. Instructor: Haug, Mylon, Szarko. Offered: Spring semester.

CHEM 332 - Analytical Chemistry II

A study of advanced optical, electroanalytical, chromatographic, and other instrumental methods of analysis. Lecture/laboratory. [W]

Prerequisite: CHEM 221, CHEM 231, and CHEM 311 or CHEM 325, CHEM 326. Instructor: Galloway. Offered: Spring semester.

CHEM 342 - Advanced Organic Chemistry
This course builds upon the basic concepts and reactions of organic chemistry. Topics to be included are the effect of structure on chemical reactivity, molecular orbital theory as applied to organic molecules, heterocyclic chemistry, natural products chemistry, and the application of computers to organic chemistry. Lecture.

Prerequisite: CHEM 222. Instructor: Nutaitis.

CHEM 351 - Biochemistry Survey
This course provides an understanding of structure, function, and metabolism of biological molecules including proteins, carbohydrates, lipids, and nucleic acids. Other topics include enzyme catalysis, bioenergetics, metabolic control mechanisms, and information transfer at the molecular level.

Prerequisite: CHEM 222. Instructor: Hines, Husic. Offered: Fall semester.

CHEM 352 - Experimental Biochemistry
This course provides laboratory experience and a theoretical analysis of modern preparative, analytical, and physical techniques utilized for the study of proteins, nucleic acids, polysaccharides, membranes, and organelles. Lecture/laboratory.

Prerequisite: CHEM 351. Instructor: Husic.

CHEM 390 - Independent Study
This course can either be an independent research project or a study of one or more advanced topics in chemistry based on the interests of the student and faculty member. This course does not count as an advanced chemistry elective, or fulfill the research requirement of the B.S. Chemistry or B.S. Biochemistry major. Course may be repeated for credit.

Instructor: Staff.

CHEM 391 - Independent Study
This course can either be an independent research project or a study of one or more advanced topics in chemistry based on the interests of the student and faculty member, and will involve a significant writing component. This course does not count as an advanced chemistry elective or fulfill the research requirement of the B.S. Chemistry or B.S. Biochemistry major. [W]

Prerequisite: Permission of instructor. Instructor: Staff.

CHEM 392 - Independent Research
A research project carried out under the guidance of a faculty member. A formal presentation to the chemistry department is required. Fulfills the research requirement for B.S. Chemistry and B.S. Biochemistry majors. Course may be repeated for credit.

Prerequisite: Permission of instructor. Instructor: Staff.

CHEM 394 - Independent Research
A research project carried out under the guidance of a faculty member. A formal presentation to the chemistry department is required. Fulfills the research requirement for B.S. Chemistry and B.S. Biochemistry majors. [W]

Prerequisite: Permission of instructor. Instructor: Staff.

CHEM 431 - Inorganic Chemistry II
This course uses molecular orbital theory to explain the electronic structure and reactivity of inorganic complexes. Topics include symmetry and its applications to bonding and spectroscopy, electronic spectroscopy of transition-metal complexes, mechanisms of substitution and redox processes, organometallic and multinuclear NMR. [W]

Prerequisite: CHEM 213, CHEM 311, or CHEM 324, CHEM 325 or CHEM 325, CHEM 326. MATH 162. Instructor: Nataro. Offered: Fall semester.

CHEM 440 - Structure Determination by Physical Methods
Use of infrared, ultraviolet, nuclear magnetic resonance, mass spectrometry, and computational methods in the determination of the structures of organic molecules. These methods also have application to the problems of inorganic chemistry. Lecture/laboratory.

Prerequisite: CHEM 311, or CHEM 323, CHEM 324 or CHEM 325, CHEM 326. Instructor: Staff.

CHEM 452 - Topics in Advanced Biochemistry
This course covers a variety of topics with emphasis on the molecular basis of human disease, new areas of biochemical research, and advances in biotechnology. Topics may include immunobiochemistry, molecular mechanisms of cellular signal transduction, advanced topics in metabolism, chemical carcinogenesis, and the physical basis of biochemical methodology.

Prerequisite: CHEM 351. Instructor: Hines, Husic. Offered: Spring semester.

CHEM 462 - Advanced Physical Chemistry
A study of one or more selected topics of current interest in physical chemistry. Dependent upon staff, topics may include advanced spectroscopy, computational chemistry, materials chemistry, or statistical thermodynamics.

Prerequisite: The topics and prerequisites (CHEM 323 or CHEM 324) depending on topics, or permission of instructor) for a given semester will be announced before registration. Instructor: Haug, Mylon, Szarko.

CHEM 470-480 - Special Topics
Dependent upon staff and student interest, one or more special topics in chemistry are examined.

Instructor: Staff.

CHEM 495-496 - Thesis
A student may register for this course after meeting with department staff and finding a faculty member who agrees to act as his or her research adviser. Discussion of research areas with the faculty and preliminary work involving literature searching and planning should be completed before the beginning of the senior year. Research in some areas requires certain prerequisite courses. CHEM 496 [One W credit only upon completion of both 495 and 496]

Instructor: Staff. Offered: 495/Fall,496/Spring.

CHN - CHINESE

CHN 101 - Elementary Chinese I
The course aims to develop fundamental listening, speaking, reading, and writing abilities in Mandarin Chinese. Students examine approximately 250 new words and more than 30 grammar patterns. Mastery of Pinyin pronunciation is an essential part, and students are trained with computer-based exercises, especially character typing. Class activities may also include practicing calligraphy, singing songs in Chinese, making dumplings, and film shows to enhance students´ understanding of Chinese language and culture. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department.

Instructor: Yang, Luo.

CHN 102 - Elementary Chinese II
This course will help students continue to develop fundamental skills in listening, speaking, reading, and writing skills in Mandarin Chinese, based on CHN 101 class training or equivalents. Students will learn 200 new words and more than 30 new grammar patterns. Mastery of Pinyin pronunciation is still an essential part, and students are to be trained with more frequent computer-based exercises. Class activities also include a calligraphy competition and a Chinese movie show to enhance students' understanding of Chinese culture. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [H]

Prerequisite: CHN 101 or equivalent proficiency. Instructor: Yang, Luo.

CHN 111 - Intermediate Chinese I
Review and expansion of basic grammar and vocabulary and continued development of familiarity with Chinese characters. Attention to developing reading and conversational skills and a deeper understanding of the diverse cultures of the Chinese people. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [H]

Prerequisite: CHN 102 or equivalent proficiency. Instructor: Yang, Luo.

CHN 112 - Intermediate Chinese II
Review and expansion of basic grammar and vocabulary and continued development of familiarity with Chinese characters. Attention to developing reading and conversational skills and a deeper understanding of the diverse cultures of the Chinese people. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [GM2, H]

Prerequisite: CHN 111 or equivalent proficiency. Instructor: Yang, Luo.

CHN 211 - Advanced Chinese I
Through a diversity of materials on various topics, students will concentrate on greatly expanding their skills in understanding and using modern Chinese in a broad variety of cultural contexts. The course is open to students who have successfully completed four semesters of Mandarin at Lafayette or who can demonstrate equivalent proficiency. Students will receive advanced training in four skills (listening, speaking, reading, and writing). Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [H,GM2]

Prerequisite: CHN 112 or equivalent proficiency. Instructor: Yang, Luo.

CHN 212 - Advanced Chinese II
Through a diversity of materials on various topics, students will concentrate on greatly expanding their skills in understanding and using modern Chinese in a broad variety of cultural contexts. The course is open to students who have successfully completed five semesters of Mandarin at Lafayette or who can demonstrate equivalent proficiency. As a continuation of CHN 211 or its equivalent, students in CHN 212 will receive advanced training in four skills (listening, speaking, reading, and writing). [H, GM2]

Prerequisite: CHN 211 or equivalent proficiency. Instructor: Yang, Luo.

CHN 231 - Chinese Civilization
This course presents selected topics of Chinese civilization from the Neolithic age down to the twenty-first century. It explores the origin, transformation, and continuity of this long-standing culture, discussing varied aspects in philosophy, religion, political institutions, and literature and arts. Students also explore certain areas of Chinese culture that are becoming transnational interests, such as Chinese food, Zen, and martial arts films. No prior knowledge of China or the Chinese language is required. All works are read in English translations.

Instructor: Yang, Luo.

CHN 290-291 - Independent Study in Chinese
These courses are intended to expand the student's basic capabilities in the four linguistic skills - listening, speaking, reading, and writing. Enrichment of written grammar review with emphasis on the expansion of vocabulary and stylistics. Examination of cultural and contemporary issues through use of texts, films, television, music, and the Internet.

Prerequisite: CHN 211 or equivalent proficiency. Instructor: Yang, Luo.

CHN 311 - Contemporary China I
Through a delivery of authentic materials in various media such as newspapers and periodicals, this course greatly expands students' Mandarin proficiency in all four skills while deepening their understanding of the social and cultural issues facing China today. Students' language skills will be enhanced through intensive reading, discussion, presentation, debate, and essay writing. The course is open to students who have successfully completed six semesters of Mandarin Lafayette or who can demonstrate equivalent proficiency.

Prerequisite: CHN 212 or equivalent proficiency. Instructor: Yang,Luo.

CHN 312 - Contemporary China II
Through a delivery of authentic materials in various media such as newspapers and periodicals, this course greatly expands students' Mandarin proficiency in all four skills while deepening their understanding of the social and cultural issues facing China today. Students' language skills will be enhanced through intensive reading, discussion, presentation, debate, and essay writing. The course is open to students who have successfully

completed six semesters of Mandarin Lafayette or who can demonstrate equivalent proficiency.

Prerequisite: CHN 212 or equivalent proficiency. Instructor: Yang, Luo.

CL - COMPARATIVE LITERATURE

CL 101 - Survey of European Literature I
Study of the most significant figures and their works in European literary history, exclusive of English. The course aims to acquaint students with the classics in the literatures of Greece, Rome, Italy, Spain, France, Germany, Russia, and other countries in English translation. No knowledge of foreign languages required. Open to all students. Lecture. [H, V, W]

Instructor: Duhl, Pribic.

CL 102 - Survey of European Literature II
Study of the most significant figures and their works in European literary history, exclusive of English. The course aims to acquaint students with the classics in the literatures of Greece, Rome, Italy, Spain, France, Germany, Russia, and other countries in English translation. No knowledge of foreign languages required. Open to all students. Lecture. [H, V, W]

Instructor: Duhl, Pribic.

CL 121 - Greek Literature in English
A study of the Greek perfection of diverse genres of literature through close reading (usually of entire works) in Epic, Lyric, Tragedy, Old Comedy, History, Philosophical Dialogue. Relationship of literature to historical and cultural forces, particularly in the fifth-century polis of Athens. The notion of a classic" in literature. Open to all students."

Instructor: Dubischar.

CL 142 - Masterworks of German Literature and Film
In this course, important themes, styles, and cultural issues are examined within the context of German literature and film. Selected readings cover the major periods of literary history, and the film versions of these texts represent all stages of film history, with works from the 1920s and 1930s to the present. Since all readings are available in translation and all films have English sub-titles, knowledge of German is not required.

Instructor: McDonald.

CL 161 - Literary Masters of Tsarist Russia
After centuries of standing on the periphery of the European literary world, Russian authors burst onto the scene early in the nineteenth century and provided some of the richest, most influential texts in world literature. This course will give you the opportunity to read these great works and famous authors, from early Romantic poets, such as Alexander Pushkin and Mikhail Lermontov, to later novelist, such as Leo Tolstoy and Fyodor Dostoevsky, to masters of short stories, such as Anton Chekhov. [H, GM2, V, W]

Instructor: Staff.

CL 162 - Soviet and Russian Literature: Avant-garde to Putin

This course offers a survey of 19th century to contemporary Russian literature. We will analyze texts published around the time of the Russian revolution, Stalin, the Cold War and finally Putin. Particular attention will be paid to the representation of women, ethnic and religious minorities, and political dissidents. In addition to learning about the aesthetic trends and innovations in Russian literature, we will explore literature's power to reflect social reality and to embody political protest. [GM2, H, W]

Instructor: Levantovskaya.

CL 225 - Special Topics in Comparative Literature
This course introduces the methodology of comparative literature and the problems of translation to advanced literature students. Students should have completed at least two courses in literature given by Foreign Languages and Literatures or the English department. A reading knowledge of one foreign language is strongly recommended.

Instructor: Staff. Offered: As needed.

CL 301 - French Cinema in English
French cinematographers and their works have often stood in contrast to large-scale, epic Hollywood productions. This is not to say that the two traditions are totally distinct: cross-fertilization has occurred in both directions. The French have produced a number of cinematographic masterpieces, and many of their most successful films have been recast for an American audience. In this course, we will examine five distinct genres: 1) the French New Wave with films by Truffaut (The Last Metro), Rohmer (Claire's Knee), Godard (Breathless), and Lelouch (A Man and a Woman); 2) the French Film Noir, with films by Chabrol (The Butcher), Clouzot (Les Diaboliqies), and Malle (Elevator to the Gallows); the Historical Epic, with films by Rappeneau (Cyrano), Chereau (Queen Margot), Vigne (The Return of Martin Guerre); Comedies, with films by Veber (The Dinner Game), Serreau (Three Men and a Baby), and Jeunet (Amelie); and Political Films with films by Renoir (La Grande Illusion), Malle (Au Revoir les Enfants), and Resnais (Hiroshima Mon Amour). [H]

Instructor: Lalande. Offered: Summer.

CL 351 - Special Topics in Literature in Translation
Study of a genre or special topic in foreign literatures in translation. Seminar content is broad in scope and may span several centuries. In addition to the literature, theoretical readings are discussed, and a final research paper is required.

Prerequisite: At least two literature courses in English or a foreign language. Instructor: Staff. Offered: As needed.

CL 460 - Reading and Research in Comparative Literature
This course is designed to give advanced students the opportunity to investigate intensively an area of special interest. Students are required to meet with the instructor periodically throughout the semester and to submit a scholarly paper, as well as to take an oral examination at the conclusion of the course.

Prerequisite: Two literature courses in Foreign Languages and Literatures or English. Instructor: Staff.

CLSS - CLASSICS

CLSS 103 - Classical Mythology
Definitions, sources, and interpretations of myth as a cognitive system in ancient and modern culture. Survey of major divinities, mortals, myths, hero-legends, and cycles of saga, chiefly Greek. Their function in Greco-Roman civilization, their enduring power

in Western culture, and their influence upon Western intellectual and artistic achievement. Open to all students. [H]

Instructor: Dubischar.

CLSS 220 - From Aeschylus to Woody Allen: Greek Tragedy and Beyond
Greek tragedy is one of the most powerful, complex, and influential literary forms of all times. This course will introduce the Athenian institutional framework that made Greek tragedy possible; thoroughly familiarize students with representative works of the three Athenian playwrights Aeschylus, Sophocles, and Euripides; trace how Greek tragedy has inspired later dramatists and filmmakers in their work; enhance "deep learning" by providing the opportunity to stage and direct select scenes from Greek tragedy. [H]

Instructor: Dubischar.

CLSS 230 - Insiders and Outsiders in Ancient Rome
An investigation of how residents of ancient Rome from diverse origins and different social statuses would have portrayed life in that great, sprawling city: what was most distinctive about how their society was organized, how did people of different statuses and backgrounds inter-relate, and how did public and private civic institutions shape their experiences? An interdisciplinary approach to reconstructing ancient attitudes, critiques, and justifications regarding the many ways of experiencing Roman identity. [GM1, GM2, H]

Instructor: Staff.

CLSS 320 - Greeks and Barbarians
In the Persian Wars, Greek city-states twice defended themselves against the invading 'Barbarian' forces of the Persian Empire (490 and 480/79). Students in this course will be introduced to ancient Near Eastern politics and culture from a Persian (not Greek!) perspective, will analyze Western literary and filmic representations of the Persian Wars, and will acquire critical awareness of the cognitive and psychological processes (beneficial or harmful) behind formations of collective identity, stereotypes, and Us vs. Them world views. [H, GM1, V]

Prerequisite: At lease one CLSS, HIST or LAT course, or permission of instructor. Instructor: Dubischar.

CLSS 330 - Virgilian Myth and Roman Culture
This course explores the Aeneid, an Odyssey and Iliad combined, to explain how it provides a mythic metahistory of the creation of ancient Roman-Italian identity. Virgil's epic symbolically reflects and defines how that identity was shaped through contacts with other cultures-notable those of Etruria, Greece, Carthage, and the Hellenized Middle East-and further reflects and defines how Augustus consolidated an ideologically and politically unified Italian state. Other readings help to illuminate the cultural context. [GM2, H]

Prerequisite: Any CLSS, Latin, Greek, or History course or permission of instructor. Instructor: Rosa.

CLSS 351 - Special Topics in Classical Literature in Translation
From the wide chronological, thematic, and generic range of ancient classical literature, students will explore in-depth a special topic in Classical literature in translation and essential accompanying secondary literature. The course work entails, first, extensive readings of ancient literature and modern scholarship; second, writing assignments of various types that will eventually lead to a clearly-argued final essay. This course is recommended for, but not restricted to, students pursuing a minor or self-designed major in Classical Civilization.

Prerequisite: Two courses, of which at least one was at the 200-level in Classical Civilization (CLSS) or related fields, such as ancient art, ancient philosophy, or the religions of the ancient world. Instructor: Staff.

CLSS 460 - Reading and Research in Classical Literature
From the wide chronological, thematic, and generic range of ancient classical literature, students will choose-in consultation with the instructor-a topic for their own research. The course work will entail, first, extensive and intensive readings of ancient literature and modern scholarship; second, student research that will lead to a research paper. This course may, and oftentimes will, function as a capstone course for students pursuing a self-designed Classical Civilization major.

Prerequisite: Three courses, of which at least two were at the 200-level or higher, in Classical Civilization (CLSS) or related fields, such as ancient art, ancient philosophy, or the rligions of the ancient world. Instructor: Staff.

CM - COMPUTATIONAL METHODS

CM 106 - A Modeling Based Approach to Biology
Biological modeling is the use of methods to investigate complex, real-world problems so that predictions can be made about what may occur under a variety of conditions. This is an interdisciplinary course that combines biology, modeling and computation, and is intended to introduce students to complex real-world problems and issues that require an interdisciplinary focus, awareness and approaches to generate reasonable solutions to biological problems. [NS]

Prerequisite: MATH 161. Instructor: Kurt, Liew.

CM 141 - Introduction to Computational Media
This course introduces students to the basics of computing and teaches them how to write small programs. The course is centered around the manipulation of images and media files. Students will learn how to write small applications to control and display visual and audio information.

Prerequisite: MATH 125. Instructor: Staff.

CM 151 - Introduction to Computational Science
Computational science concentrates on the effective use of computer software, hardware and mathematics to solve problems in science. The goal of this course is to teach science and engineering majors how to develop tailored, flexible, and efficient working environments built from small programs (scripts) written in the easy-to-learn, very high-level language Python. Students will learn to use existing applications and tools for automating simulation, data analysis, and visualization, and for steering simulations and computational experiments. [NS]

Prerequisite: MATH 161 and one of the following: MATH 162, ECON 101, introductory science major elective. Instructor: Staff.

CM 160 - Games as Models of the Natural World
This class will explore board and card games as models of the natural world to foster a deeper understanding of the complex

behaviors seen in the world around us. Students will examine existing games and learn techniques of game design for creating their own models of the natural world. Students are required to have taken one lab science course and will need to know basic math concepts like fractions, but the primary requirement is creativity. [STSC]

Prerequisite: One NS Lab Science course. Instructor: Pfaffmann.

CM 261 - Introduction to Numerical Computing for Engineers
This course will teach engineering students how to solve engineering problems using numerical computing methods and techniques. The course will use examples and applications from different engineering problems, particularly those in chemical, civil and mechanical engineering. Students will learn how to program using the MATLAB programming environment.

Prerequisite: MATH 161, MATH 162. Not open to students who have credit for CM 151. Instructor: Staff.

CM 390-391 - Independent Study
Independent study projects for qualified juniors and seniors.

Instructor: Staff.

CS - COMPUTER SCIENCE

CS 104 - Introduction to Game Programming
This course provides hands-on experience developing computer games. The course covers the basic techniques of game programming, including graphics, events, controls, animations, and intelligent behaviors. Students learn the concepts and skills of object oriented programming by designing and implementing a sequence of computer games. No prior knowledge in programming and computer games if required. A good understanding of algebra and geometry is strongly recommended. [NS, lecture/lab]

Instructor: Xia.

CS 105 - Digital Media Computing
Digital media processing forms a basic block in technologies underlying today's successful media, social and publishing companies. This course covers various techniques for the creation and manipulation of multimedia, including pictures, sounds, texts, and movies. Students learn the concepts and skills of object-oriented programming by designing and implementing a series of digital effects. No prior background or experience in programming is required. [NS, lecture/lab]

Instructor: Sadovnik.

CS 106 - Personal Robotics
Robots are increasingly common, from factory floors to virtual robots on the internet. This course provides hands-on experience in programming robots, both physical and virtual, with an emphasis on artificial intelligence. No prior background or experience in programming is required. Lecture/Lab. [NS]

Instructor: Pfaffmann.

CS 150 - Data Structures and Algorithms
This course continues the development of object oriented approaches to the design and implementation of software systems. Students will learn to analyze problems, algorithms and develop object-oriented solutions to problems. Students will also learn to use multiple data structures and the accompanying algorithms to store, index and retrieve data. [W]

Prerequisite: CS 104, CS 105 or CS 106. Instructor: Liew.

CS 200 - Computers and Society
This course examines the computer's cultural context: the managerial, political, legal, ethical, psychological, and philosophical implications of computing. The laboratory focuses on the World Wide Web. [W, V]

Instructor: Pfaffmann.

CS 202 - Analysis of Algorithms
The design and analysis of algorithms and their complexity. This course studies techniques for measuring algorithm complexity, fundamental algorithms and data structures, intractable problems, and algorithm-design techniques.

Prerequisite: CS 150 and MATH 182. Instructor: Xia.

CS 203 - Computer Organization
A study of digital logic, computer components, internal and external memory, instruction sets, interrupts, micro- and macroprogramming. Lecture/laboratory.

Prerequisite: CS 150. Instructor: Pfaffmann.

CS 205 - Software Engineering
The analysis, design, implementation, and maintenance strategies appropriate for large software projects. Lecture/laboratory. Permission of department head required.

Prerequisite: CS 150. Instructor: Pfaffmann.

CS 301 - Principles of Programming Languages
An introduction to the theory of the design and implementation of contemporary programming languages. Topics include the study of programming language syntax and semantics, translators, and imperative, functional, logic and object-oriented language paradigms.

Prerequisite: CS 202, CS 203. Instructor: Xia.

CS 303 - Theory of Computation
An introduction to the theoretical foundations of computer science and formal models of computation. Topics will include formal languages, finite automata, computability, and undecidability.

Prerequisite: CS 202 and PHIL 200. Instructor: Xia.

CS 305 - Computer Networks
The implementation and use of computer networks. Topics include the ISO reference model, communication protocols, local-area and wide-area networks, and satellite communications.

Prerequisite: CS 203 or ECE 313. Corequisite: CS 205. Instructor: Staff.

CS 320 - Database Management Systems
This course examines the organization, design, and implementation of database management systems.

Prerequisite: CS 205. Corequisite: CS 202. Instructor: Ordille.

CS 390-394 - Independent Study and Research

Independent study projects for juniors and seniors. Hours arranged. Permission of department head required.

Instructor: Staff.

CS 401 - Computer Graphics
The creation and use of graphical information and user interfaces.

Prerequisite: CS 202, CS 205; MATH 162. Instructor: Xia.

CS 406 - Operating Systems
An in-depth study of operating systems, covering such topics as concurrent processes, memory management, input/output and file systems, and resource allocation.

Prerequisite: CS 203 or ECE 313. Corequisite: CS 205. Instructor: Staff.

CS 410-415 - Special Topics
This course considers recent advances and/or subjects of current interest in computer science.

Prerequisite: Prerequisites vary according to the topic.. Instructor: Staff.

CS 420 - Artificial Intelligence
An introduction to the study of intelligence as computation. Topics include problem-solving techniques, heuristic searches and knowledge representation.

Prerequisite: CS 202, CS 205. Instructor: Liew.

CS 470 - Senior Project
In this course, students work in teams on the analysis, design, and implementation of a large-scale software project.

Prerequisite: Senior standing and either CS 320 or CS 305. Instructor: Staff.

CS 495-496 - Senior Thesis
A two-semester, independent research project on a topic selected by the student and approved by the department. A student must undertake such a program for two semesters to graduate with honors. [One W credit only upon completion of both 495 and 496]

Instructor: Staff.

DOC - Documentary Storymaking

DOC 150 - Introduction to Documentary Storymaking
This course is an introduction to digital documentary storymaking. It merges the critical study of documentary media with the hands-on construction of documentary stories waiting to be found in local communities. Working with tools of the documentary arts-video, still images, audio, writing-students will acquire the foundational skills of media production and effective story telling while absorbing and analyzing rich examples of documentary story telling over time and place. [H]

Instructor: Staff.

ECE - Electrical and Computer Engineering

ECE 211 - Digital Circuits I
This course introduces the analysis and design of digital circuits. Topics include: combinational circuit analysis and design, number representations and codes, addition circuits, analysis and design of synchronous circuits, programmable logic array, programmable array logic and field-programmable gate array (FPGA). The course includes a design project using an FPGA.

Instructor: Nestor, Watkins. Offered: Fall semester.

ECE 212 - Digital Circuits II
This course covers the design of digital systems using a microcontroller, and field programmable gate array. Topics include: register transfers; special-purpose computer architecture; microcontroller architecture, instructions, and interfacing; assembly language programming; C programming. Lecture/discussion/ laboratory.

Prerequisite: ECE 211. Instructor: Watkins. Offered: Spring semester.

ECE 221 - Basic Electric Circuit Analysis
Introduces students to concepts, ideas, and techniques that are fundamental to the analysis of linear electrical circuit models. Circuit analysis techniques are derived from Kirchhoff's Laws and topics covered include DC circuits, AC circuits, RC/RL circuits, operational amplifier circuits, and AC power calculations. Laboratory exercises reinforce theories presented in lectures. Lecture/laboratory.

Prerequisite: MATH 162. Instructor: Yu. Offered: Spring semester.

ECE 313 - Computer Organization
The features of a digital computer are examined at various levels. Topics include: CPU architecture and instruction sets (machine level), the microprogramming level, virtual memory (operating system level), the assembly language level. Lecture/discussion.

Prerequisite: ECE 211. Instructor: Nestor. Offered: Spring semester.

ECE 322 - Introduction to Solid State Devices and Circuits
The course begins with discussion of semiconductor devices to obtain their volt-ampere behavior. First order models for the devices are developed and used to analyze both analog and digital circuits. The use of computer-aided design programs is presented. Required of junior electrical engineering students. Lecture/discussion/laboratory.

Prerequisite: ECE 221 and pre/corequisite: MATH 264. Corequisite: ECE 331. Instructor: Wey. Offered: Fall semester.

ECE 323 - Analysis and Design of Solid State Circuits
The course continues to develop the topics introduced in ECE 322 with emphasis placed on more complex circuits used in analog and digital applications. Extensive use is made of simulation programs as an aid in the design process. Required of junior electrical engineering students. Lecture/discussion/ laboratory.

Prerequisite: ECE 322. Instructor: Wey. Offered: Spring semester.

ECE 331 - Signals and Systems
Fourier, Laplace, and Z-transforms are developed and applied to the analysis of electrical circuits. Transient and frequency

characteristics of transfunctions are discussed. Required of junior electrical engineering students. Lecture/ discussion.

Prerequisite: ECE 221, and Pre/corequisite: MATH 264. Instructor: Jouny. Offered: Fall semester.

ECE 332 - Communications Systems
This course is devoted to a study of systems used to transmit information. Continuous (Analog) and Discrete (Digital) Systems, and the principles of frequency division and time division multiplexing are treated. The effect of noise on the various systems is investigated. Required of junior electrical engineering students. Lecture/discussion.

Prerequisite: ECE 331. Instructor: Jouny. Offered: Spring semester.

ECE 341 - Engineering Electromagnetics
Maxwell's Equations in integral and differential forms are introduced to describe the propagation of electromagnetic waves in a variety of media. Necessary vector integration and differentiation techniques are developed. Required of junior electrical and computer engineering majors. Lecture.

Prerequisite: MATH 264; PHYS 133. Instructor: Wallace. Offered: Fall semester.

ECE 390-392 - Independent Study or Research
An opportunity for selected students to undertake independent study or research projects during the senior year. Each student is required to submit work or demonstrate a project embodying the results of the study or research. The proposal for this work is submitted to a faculty adviser and is also submitted to the department head for approval. This work may be substituted for certain technical courses normally required. Hours by arrangement.

Instructor: Staff. Offered: Each semester.

ECE 393-399 - Special Topics
These courses consider recent advances and/or subjects of current interest to students and members of the staff. The special topic for a given semester will be announced prior to registration.

Prerequisite: Senior standing in electrical engineering. Instructor: Staff.

ECE 414 - Embedded Systems
This course covers the design of stand-alone digital systems utilizing embedded microcontrollers. Both software and hardware are covered. Topics include microcontroller architecture, peripheral functionality and utilization, performance and power consumption, hardware interfacing, interrupts, and real-time operating systems.

Prerequisite: ECE 212 (formerly ECE 313). Instructor: Watkins.

ECE 415 - Computer Arithmetic Circuits
This course introduces algorithms and computing circuits which are applicable to performing addition, subtraction, multiplication, and division. The design trade-offs encountered in the development of an Arithmetic Logic Unit for a digital computer are considered. Both fixed-point and floating-point arithmetic are covered. Lecture/discussion.

Prerequisite: ECE 212. Instructor: Staff. Offered: Spring semester.

ECE 417 - Digital ControlSystems
Control systems using digital logic/computers are studied. Analytic techniques employing Z transforms and state variables are developed. Response, performance, stability, and algorithm design are also covered. Lecture/ discussion.

Prerequisite: ECE 212 and ECE 331. Instructor: Yu, Jouny. Offered: Spring semester.

ECE 424 - Analog Integrated Circuit Design
This course covers the design of electronic integrated circuits and subsystems for use in optical, wireless, and wired communication systems. Topics include analog-to-digital and digital-to-analog conversion, anti-alias, and reconstruction filter design, clock and data recovery using Phase-Locked Loop (PLL) based systems. An IC design project is an integral part of the course.

Prerequisite: ECE 323, ECE 332. Instructor: Wey.

ECE 425 - VLSI Circuit Design
Introduces the design of Very Large Scale Integrated circuits, with emphasis on digital CMOS design. Topics include MOS transistor theory, basic IC processing, static and dynamic CMOS, VLSI system organization, and CAD tools for design and simulation. Students design projects to be fabricated and returned the following semester. Lecture/ discussion/laboratory.

Prerequisite: ECE 322. Instructor: Nestor. Offered: Fall semester.

ECE 426 - VLSI System Design
Topics include test and design for testability, gate arrays, hardware description and languages, advanced CAD techniques, gallium arsenide, and BiCMOS. Students design, fabricate, and test projects. Lecture/laboratory.

Prerequisite: ECE 425. Instructor: Nestor.

ECE 427 - Sensors and Electronic Systems
Devices and interface electronics used to sense quantities such as light, temperature, and motion are discussed. A general overview of sensor performance characterization is presented and mathematical modeling techniques are developed, leading to interface electronics topologies and application specific sensor applications.

Prerequisite: ECE 322, ECE 331. Instructor: Wey.

ECE 433 - Industrial Electronics and Control Systems
Feedback control systems are studied in both the frequency and time domain. Topics include detailed system modeling, stability and error analysis, design to meet specifications, and discussion of system integration in a manufacturing environment. Lecture/discussion/ laboratory.

Prerequisite: ECE 331. Instructor: Yu. Offered: Fall semester.

ECE 434 - Digital Signal Processing
This course covers discrete fourier transforms (DFT and FFT), the sampling theorem and its consequences, Z transforms theory, recursive digital systems, and digital filter design. Lab involves implementation of digital signal processing algorithms in real time using DSP hardware. Lecture/laboratory.

Prerequisite: ECE 331, ECE 212. Instructor: Jouny. Offered: Fall semester.

ECE 435 - Speech and Image Processing

Introduces interactive information systems utilizing sight and sound. Speech processing, recognition, synthesis, and coding, as well as image understanding and compression technologies, are discussed. Acquaints students with speech production, extraction of recognizable phonic features, recognition of speech templates, edge detection, and image understanding. Lecture.

Prerequisite: ECE 331. Instructor: Jouny. Offered: Spring semester.

ECE 436 - Communications Networks
This course introduces computer communications and data networks. The course includes background material in probability and queuing theory, a description of all seven OSI (Open Systems Interconnections) layers with protocols, applications of data networks, and a brief introduction of ISDN technology. Students will animate and evaluate the performance of hypothetical topologies of communications networks. Lecture. Not open to students having taken CS 403.

Prerequisite: ECE 331. Instructor: Jouny. Offered: Spring semester.

ECE 437 - Biomedical System Modeling and Analysis
This course introduces the use of engineering techniques to simulate and analyze biomedical systems and applications in medicine. Major physiologic functions, such as nerve action potentials, skeletal muscle contraction, human vision system, cardiovascular system, respiratory system, endocrine system, kidney, and prosthetic devices, are modeled by electrical circuits or differential equations and simulated using computer software.

Prerequisite: MATH 264, PHYS 131, ECE 331; or permission of instructor. Not open to students who have taken ME 489.. Instructor: Yu.

ECE 442 - Applied Optoelectronics
This course develops a basic understanding of optoelectronic materials, devices, and systems. Topics include light sources and photodetectors, and the propagation of light within various media and optical elements. Prerequisite: ECE 341

Instructor: Staff. Offered: Fall semester.

ECE 444 - Introduction to Fiber Optics
Fundamentals of fiber optic communication and sensor systems are discussed, including a mathematical description of light propagation within dielectric waveguides. Optical fiber fabrication, attenuation, and dispersion mechanisms are considered, and optical sources, detectors, and connectors covered. Advanced topics include specialty fibers, coherent communications, WDM, solitons, optical amplifiers, and fiber optic networks. Lecture.

Prerequisite: ECE 341, ECE 442. Instructor: Staff. Offered: Spring semester.

ECE 445 - Physics of Semiconductor Devices
This course presents a quantitative analysis of both bipolar and field effect transistors. The device equations are developed from fundamental physical processes such as carrier densities, transport processes, and generation-recombination mechanisms. Required of senior Electrical and Computer Engineering majors. Lecture.

Prerequisite: ECE 341, ECE 322. Instructor: Staff.

ECE 446 - Microwave Systems
Analysis and design of modern microwave systems such as satellite and cellular communications and radar. Devices, circuits, and subsystems are presented with an emphasis on theory of operation and impact on overall performance. Application of technologies to the current microwave communications industry is covered. Students complete a design project using modern microwave CAD software (Ansoft Serenade or Agilent Advanced Design System and Sonnet) and theory presented in class.

Prerequisite: ECE 341. Instructor: Wallace.

ECE 450 - Introduction to Electrical Machinery
A study of rotating electrical machinery including synchronous, asynchronous single, and polyphase machines. A basic approach is used in the development of a thorough understanding of the operation of a single component, and of these components as part of a system. The basic principles of energy conversion are considered. Lecture.

Prerequisite: ECE 331. Instructor: Yu. Offered: Fall semester.

ECE 451 - Introduction to Electrical Power Systems
This course deals with the elements of the transmission and distribution of electrical power. Starting with transmission lines, the course will develop the general representation of power systems. Load flow studies and the economic operation of power systems are treated. Finally, symmetrical components, transients and system stability are considered. Lecture/discussion.

Prerequisite: ECE 331. Instructor: Jouny. Offered: Spring semester.

ECE 491 - Senior Project
This course uses a data network to introduce students to team project work. Course topics include computer networks from the physical layer to communication protocols. A representative network is designed and realized in the laboratory. Students work in teams; different teams design sub-systems of the network. Lecture/laboratory.

Prerequisite: Senior standing in Electrical and Computer Engineering. Instructor: Nestor.

ECE 492 - Electrical and Computer Engineering Design Laboratory II
In this course individual or team design projects are completed. The course includes both laboratory and library work. Initial proposals, progress reports, and final design documents are required. Projects can cover the entire spectrum of activities within electrical engineering. Laboratory. [W]

Prerequisite: ECE 491. Instructor: Yu. Offered: Spring semester.

ECE 495-496 - Thesis
This program is designed in accordance with the honors program of the College. Enrollment is limited to seniors. These courses may not be used for electrical and computer engineering or computer science credits. [One W credit only upon completion of both 495 and 496]

Instructor: Staff.

ECON - ECONOMICS

ECON 101 - Principles of Economics

An introduction to economics stressing the fundamental and central concepts in economics and discussing methods and topics that engage economists. Topics include supply and demand analysis, determination of prices, output and profits, distribution of income, determination of real GDP, and fiscal and monetary policy. Offered every semester. [SS]

Instructor: Staff.

ECON 202 - Environmental Economics
This course is designed to give students a better understanding of how the environment and the economy interact and how public policy can be used to shape this interaction. The course begins by sketching out the flows of natural resources associated with economic activity and how the environmental effects produced by these flows are valued. The course then proceeds to show how market economies affect the environment. Particular emphasis is placed on the environmental damage generated by market economies and how public policy can best be used to address this damage.

Prerequisite: ECON 101. Cross-Listed as: EVST 202. Instructor: Staff.

ECON 210 - International Economics
This course examines the causes and consequences of international economic integration. It explores the forces that shape the pattern of international trade as well as the welfare effects of such trade. It also studies the policies that governments can use to regulate trade. Finally, it analyzes how international economic integration impacts aggregate economic performance by introducing concepts such as exchange rates and the balance of payments.

Prerequisite: ECON 101.. Instructor: Staff.

ECON 223 - Money and Banking
This course analyzes the financial and monetary systems in the United States. We will cover a variety of topics including the role of money in the financial system, the structure of financial institutions, types of financial instruments, monetary policy and the macroeconomic implications of those policies both domestically and internationally. Finally, the course explores the connections between financial markets and the Federal Reserve with economic models and current events.

Instructor: Professor Smith.

ECON 224 - Macroeconomic Data and Analysis
Understanding how to find, manipulate and interpret macroeconomic date is an important tool to comprehend the world we live in and policy decisions made by central banks and fiscal authorities. Students in this course will learn how to obtain and use macroeconomic data such as GDP, inflation and unemployment for the analysis of current economic issues and policy decisions.

Prerequisite: ECON 101. Instructor: J. Smith.

ECON 246 - Evolutionary Game Theory

An introduction to the concepts, techniques, and application of evolutionary game theory. The mathematics of game theory and natural selection offer insights valuable to the study of economics, biology, psychology, anthropology, sociology, philosophy, and political science. This course is intended to serve students with interests in any of these fields learn the approach, requiring minimal mathematical background, with special attention to apparent paradoxes, such as the evolution of altruism. [V]

Prerequisite: MATH 141, MATH 161, or MATH 165; and one of the following: ECON 101, BIOL 102, A&S 102, A&S 103, PSYC 110, GOVT 101, GOVT 102, GOVT 103, GOVT 104, PHIL 200, PHIL 145, PHIL 250, PHIL 260, or NEUR 201. Cross-Listed as: MATH 246. Instructor: Root, Ruebeck.

ECON 251 - Intermediate Microeconomics
A study of how individuals and organizations deal with the problem of scarcity, the role of prices in coordinating economic activity, criteria for determining desirable allocation of resources, the mix of private and public institutions, and the economic basis of public policies. (Formerly 211)

Prerequisite: ECON 101 and MATH 141 or MATH 161. Instructor: Staff. Offered: Every semester.

ECON 252 - Intermediate Macroeconomics
An examination of aggregate economic activity focusing on the forces that determine the behavior of real GDP, interest rates, and the price level. Economic growth, fluctuations, unemployment, and inflation are analyzed along with alternative policies for dealing with them. (Formerly 212)

Prerequisite: ECON 101 and MATH 141 or MATH 161. Instructor: Staff. Offered: Every semester.

ECON 253 - Fundamentals of Econometrics
This course focuses on building multiple regression models useful for testing economic theories and making business forecasts. Topics include simple and multiple regression, dummy variables, multicollinearity, heteroscedasticity, serial correlation, and binary dependent variable models. The coursework includes extensive use of statistical software packages and large data sets. Students who receive credit for 253 may not receive credit for ECON 365. Similarly, students who receive credit for ECON 365 may not receive credit for 253. (Formerly 213)

Prerequisite: ECON 251; MATH 186. Instructor: Staff.

ECON 255 - Multinational Business and Corporate Social Responsibility
Strategic corporate social responsibility (CSR) is about how a company resolves the dilemmas around its core product or service, how that product is produced, and how and to whom it is marketed. In effect, multi-national corporations which have a business model that uses profit to fuel constant innovation in new products, now have to include, for example, programs to reduce emissions, carbon trading, fair trade practices and differential pricing of general drugs in poor developing countries that demonstrate the potential for CSR; others illustrate the continuing limitations. The object of this course is to make students aware of international business situations that require moral reflection, judgement and decision, while revealing the complexities that often surround business choices and the formation of public policies. Learning through cases of irresponsible actions as well as responsible behavior, the course focuses attention on the study of International Business circumstances in which hard choices must e made under complex conditions of uncertainty and disagreement. Students who receive credit for 255 may not receive credit for ECON 352. Similarly, students who receive credit for ECON 352 may not receive credit for 255.

Prerequisite: ECON 101, ECON 218 or permission of instructor. Instructor: Ahene.

ECON 259 - Financial Accounting and Analysis

The primary objective of this course is to introduce students to analysis and assessment techniques useful for decision makers in any entity that provides goods or services to another. It also introduces students to the process and content of financial accounting and it is geared toward information that students will need to function as effective and knowledgeable professionals.

Instructor: Staff.

ECON 300 - Industry, Strategy, and Policy
This course serially examines the major sectors of the global economy using the tools of economic theory. For each sector, students analyze current market conditions and trends, financial performance, critical challenges, and relevant public policies.

Prerequisite: ECON 251. Instructor: Staff.

ECON 303 - Income Tax Topics
This course introduces students to the concepts and intricacies of federal income tax policies. Students learn to recognize the major transactions inherent in business and financial transactions.

Prerequisite: ECON 218. Instructor: Staff.

ECON 311 - Causes of Financial Crises
Students in this course will evaluate the causes of financial crises with an emphasis on the latest financial crisis. There will be specific focus on financial leverage, financial innovation, capital imbalances, regulatory failure, and incentives (e.g., the "seven deadly sins"). Students will be asked to make suggestions for reforms to prevent or mitigate future crises. [W]

Prerequisite: ECON 251, ECON 252 and (ECON 253 or ECON 365), or permission of instructor. Instructor: Kelly.

ECON 319 - Financial Theory and Analysis
This course takes the principles of accounting and applies them to the world of finance. The emphasis is on the theory that underlies corporate accountability for financial reporting. Selected reporting and disclosure issues, such as financial statement presentations, earnings per share (EPS), debt, equity, and investments of excess funds for strategic financial management, as well as cash flow analysis, are incorporated. Excel spreadsheets are used extensively.

Prerequisite: ECON 218. Instructor: Bukics.

ECON 320 - Corporate Finance
Analysis and practical application of corporate financial data as it relates to managerial decision making. Particular emphasis is placed on the corporate investment and financing decision, risk management, and the dividend decision.

Prerequisite: ECON 251 and ECON 319. Instructor: Chambers, Kelly.

ECON 321 - Investments
An examination of the portfolio theory and security analysis involved with both fixed income and equity securities. Topics include analysis, pricing, and risk management.

Prerequisite: ECON 320. Instructor: Chambers, Kelly.

ECON 322 - Financial Markets

This course is an introduction to Flow of Funds analysis and interest rate determination in the money and capital markets, the structure of interest rates, efficient market hypothesis, and major financial institutions in the United States.

Prerequisite: ECON 251, ECON 252, or permission of instructor. Instructor: Staff.

ECON 323 - Money, Financial Intermediation, and the Economy
A theoretical analysis of the role of money in determining the level of economic activity. Topics covered include the determination of interest rates and inflation, the institutional structure of financial intermediaries and the Federal Reserve, and the history of monetary policy in the United States. [W]

Prerequisite: ECON 251, ECON 252, or permission of instructor. Instructor: Smith.

ECON 324 - Options and Futures
This course examines the practices and principal theories of major options and futures markets. Special emphasis is placed on the role of derivative securities in facilitating risk management.

Prerequisite: ECON 321.. Instructor: Chambers, Kelly.

ECON 325 - Women and the Economy
This course surveys a wide range of economic issues relating to women's lives with special emphasis on family, work, and income. Public policy applications are stressed. [GM1]

Prerequisite: ECON 101, ECON 251, and ECON 253 or ECON 365. Instructor: Averett.

ECON 327 - Applied Microeconometrics
The course introduces students to the application of econometric techniques commonly used by microeconomists. The emphasis is on specification, estimation, interpretation, and testing of microeconometric models rather than a thorough treatment of asymptotic properties of estimators. Methods considered include panel data estimators, instrumental variables estimators, difference-in-differences methods, limited dependent variable models, quantile regressions and non-parametric regressions. An emphasis will be placed on application through data-intensive assignments and a research project. [W]

Prerequisite: ECON 253 or ECON 365. ECON 365 can be taken concurrently as long as the student has completed MATH 336.. Instructor: Stifel.

ECON 328 - Labor Economics
This course examines in detail one of the most important markets in economics: the labor market. The course will investigate the key theories behind labor supply and labor demand and how they interact to determine wages and employment. Other topics include: the effects of government policies including welfare programs and minimum wages, compensating wage differentials, education, and human capital, immigration, discrimination. The course will take both a theoretical and empirical look into these topics.

Prerequisite: ECON 251 & ECON 253 or ECON 365. Instructor: Larsen.

ECON 330 - Urban Economics and Public Policy
An introduction to the economic analysis of urban areas. Theories of urban growth and of intra-metropolitan land use are explored.

Topics include trends in the location of economic activity within urban areas, the urbanization of poverty, and problems of urban government.

Prerequisite: ECON 251, ECON 252, or permission of instructor. Instructor: Ahene.

ECON 331 - Industrial Organization
This course integrates microeconomic theory with economic application techniques in an investigation of various market structures, strategic firm interaction, antitrust issues, and economic regulation. Beginning with the standard Structure-Conduct-Performance paradigm and proceeding through some of the most recently developed theories in noncooperative games, the course content exposes students to an array of methods that facilitate the analysis of market structures, antitrust, and regulatory issues.

Prerequisite: ECON 251 or permission of instructor. Instructor: Ruebeck.

ECON 332 - Economics of Health Care
This course provides an overview of the economics of health and medical care. By the end of the semester, students should have the institutional knowledge and analytical tools needed to contribute to current public policy debates about health and medical care.

Prerequisite: ECON 101, ECON 251, ECON 253. Instructor: Averett.

ECON 336 - Experimental and Behavioral Economics
This course provides an introduction to the methods and basic results in experimental and behavioral economics. We will study the design and execution of laboratory and field experiments, and the role of experiments in informing economic theory. We will read a broad survey of experimental results, including risk and time preferences, other-regarding preferences, behavior in markets and biases in decision making.

Prerequisite: ECON 251. Instructor: Lafky.

ECON 337 - Economic Issues in the Demand for Medical Care
This course studies the health care systems and institutions, the demand for medical care and medical insurance, and the production and costs of medical care from an economic perspective. General issues in cost and benefit analysis will also be introduced. The objective of this course is to teach students to learn and apply various microeconomics tools to demand side health issues and problems, and to promote a better understanding of health policies. This course differs from ECON 336 which focuses on the supply of health care.

Prerequisite: ECON 101, ECON 251, and ECON 253. Instructor: Wang.

ECON 338 - Economics of Sports
The application of theoretical economics to the sports industry. Professional and collegiate sports offer opportunities for both theoretical and empirical research due to the amount of data that is available. Topics include market structure and antitrust, managerial decisions for inputs and outputs, pay and performance in labor markets. Students chose a topic area for presentation and write a paper on a contemporary sports issue.

Prerequisite: ECON 251,and either ECON 253;or ECON 365. Instructor: Staff.

ECON 339 - The Foundations of Entrepreneurship and Economic Development
This seminar explores business entrepreneurship as foundational in an economy's transformation, growth and development. Its analytical underlay is that entrepreneurship, whether redistributive or productive, converts ideas into economic opportunities, "assetizing" and commoditizing their intellectual properties and property rights into economic prices and tradable values through market exchange, which in turn drives and guides innovation and change and flexibility and dynamism in an economy. The focus will be on the institutional framework, environment, and analytical processes that enable business entrepreneurship.

Prerequisite: ECON 251. Instructor: Hutchinson.

ECON 341 - Public Sector Economics
A study of the public sector of the economy that includes the theories of public revenues and expenditures, the tax structure of American governments including analysis of the rationale and consequences of major taxes, and major expenditure programs. Fiscal problems of state and local governments and intergovernmental fiscal relations are also examined.

Prerequisite: ECON 251, ECON 252, or permission of instructor. Instructor: Staff.

ECON 342 - Public Finance
This course is a study of the role of government in the economy: when should government intervene, how does it intervene, and what is the effect of interventions on economic outcomes? These issues are examined using the tools of economic theory and statistics, with emphasis on applications and analysis of policies in the U.S. and other countries.

Prerequisite: ECON 251, ECON 253. Instructor: Crain.

ECON 345 - Political Economy
Political economy examines issues that lie on the boundary of political science and economics. At one level, the course uses the tools of modern economics to examine behavior in political settings: why people vote, make campaign contributions, run for political office, favor specific legislative programs, and so forth. At another level, the course seeks a rich understanding of economic policymaking by considering the role of political institutions and non-market incentives.

Prerequisite: ECON 251, ECON 253. Instructor: Crain.

ECON 346 - Economic Development
An introductory survey of the economic structures and behavior of developing countries and how these factors influence their approach to the challenges of reducing poverty, improving health and education, and increasing their productive capacity and national and per capita income. The course examines the applicability of conventional economic logic and analytical tools to developing economies. Competing paradigms of development and the implications of different sets of behavioral assumptions are explored.

Prerequisite: ECON 210 or ECON 251-ECON 252, or permission of instructor. Instructor: Hutchinson, Stifel.

ECON 347 - Advanced Topics in Development Economics
This course will cover a series of topics on economic development in low-income countries. The emphasis will be on microeconomic theory as it applies to poor country settings. The topics addressed in the course are based on recent advances in economic theory related to information-based market failures and fragmentation, coordination failures, and self-reinforcing mechanisms that result in persistence of dysfunctional institutions prevalent in poor countries.

Prerequisite: ECON 251, ECON 252. Instructor: Stifel.

ECON 351 - International Monetary Systems
This course provides students with an understanding of the international monetary system. The course examines the foreign exchange market and the role that governments play in this market. A review of previous and current exchange rate systems and an analysis of international capital markets is provided.

Prerequisite: ECON 210 or ECON 251-ECON 252, or permission of instructor, and junior/senior standing. Instructor: Ogrokhina.

ECON 352 - International Business
This course examines the mechanics of doing business abroad and thoroughly explores the challenges that management faces today within an international environment. The greater the number of countries in which a corporation operates, the more multinational" it is. More specifically students are introduced to the field of global strategic management and are provided with a good understanding of the fundamental importance of cultural economic political and environmental factors in the growth of global business and investment."

Prerequisite: ECON 210, or ECON 251-ECON 252, ECON 218. Instructor: Bukics.

ECON 353 - International Trade Policy
This course examines the ways in which international trade in goods and services is regulated through trade policy. This course has several objectives: 1) to provide students with an understanding of how and why international trade is regulated, 2) to demonstrate to students how particular trade policies affect international trade and international economic welfare, and 3) to expose students to the economic and political forces that shape international trade policy.

Prerequisite: ECON 210 or ECON 251-ECON 252, or permission of instructor. Instructor: DeVault.

ECON 354 - Contemporary African Economics
Analysis of the contemporary economic environment in Africa: political sociocultural identity and economic structure, trends in public and private capital flows, African regional and international economic institutions, trade development and relations with world markets, investment concessions and risk, with case illustrations from African countries.

Prerequisite: ECON 210 or ECON 251-ECON 252, or permission of instructor. Instructor: Ahene.

ECON 358 - Corporate Governance and Ethical Responsibility in the Global Environment
The publicly owned corporation is the dominant legal form for business enterprises in the past 100 years. Corporate governance refers to the organizational structure that supports an enterprise's efforts to utilize firm assets to produce goods and services for profit. The main focus of this course is the intersection of corporate governance principles, financial accountability and the effective execution of ethical business decisions by both large multinational enterprises (as individual entities) and the employees that act on behalf of the firm. Thus, this course will examine the rights and responsibilities for each of the constituents who serve a key role in facilitating efficient and effective business practices, most notably the chief executive officer, the board of directors and the shareholders. Legal requirements, other regulatory financial reporting constraints, as well as the role of corporate culture throughout the globe are also considered.

Prerequisite: ECON 319. Instructor: Bukics.

ECON 360 - Marketing Science
What products do firms decide to introduce? How do they price and promote existing products? Drawing from knowledge in the areas of microeconomic theory and strategic marketing, students use analytical modeling, case study, and computer simulation methods to explore techniques as well as ethics and economic efficiency of product promotion, pricing, and differentiation in today's diverse and evolving markets.[W]

Prerequisite: ECON 251 or permission of instructor. Instructor: Ruebeck.

ECON 361 - Marketing Research
Although the pervasive assumption in microeconomics is that firms know their markets demand functions, understanding how firms actually acquire this information requires studying the well-established techniques embodied in the field of marketing research. Consumer demand features studied include preferences among existing products, new product development, competitive analysis, and customer satisfaction. Research design, data collection methods, sampling issues, and data analysis using basic and advanced statistical techniques are covered. Students apply econometrics to the task of understanding consumers' needs.

Prerequisite: ECON 251 and ECON 253. Instructor: Ruebeck.

ECON 365 - Econometric Analysis
Econometric analysis is a blend of mathematics, statistics, and economic theory. It focuses on the development of multiple regression models useful for testing economic relationships and making business forecasts. The multiple regression model and problems encountered in its application are developed in lecture and individual applied research papers. Topics include serial correlation, heteroscedasticity, simultaneous equations, limited dependent variable models. Special attention is given to the matrix algebra determination of estimators. Students who receive credit for 365 may not receive credit for ECON 253. Similarly, students who receive credit for ECON 253 may not receive credit for 365.

Prerequisite: MATH 272 or MATH 300, MATH 336, MATH 186 (with permission of the instructor); ECON 251, ECON 252 (one of the preceding can be taken concurrently). Instructor: Averett, Stifel.

ECON 366 - Macroeconometrics
The twin objectives of this course are to 1) introduce students to macroeconometric theory and techniques and 2) provide students with practice applying those techniques. The topics covered in the course are: Solow Growth, Okun's Law, the Phillips curve and monetary policy. Techniques covered include time series

decomposition, vector autoregressions and conintegration. The course involves frequent use of econometric software to provide students with experience in applying the techniques discussed in class.

Prerequisite: ECON 365 (may be taken concurrently), MATH 272. Instructor: Staff.

ECON 367 - Internship
A one-semester course that emphasizes the practical application of economics management principles. A limited number of students are placed in either community business organizations or governmental agencies. Under the direction and supervision of a designated internship sponsor, the student completes a training program and a practical work project. Internships do not count toward the elective courses required in the major. Permission of instructor required.

Instructor: Averett.

ECON 368 - Advanced Monetary Policy
A small group of selected students work together with faculty mentors in competition with teams from other colleges and universities. Each team develops a presentation involving U.S. monetary policy and delivers this presentation to judges from the U.S. Federal Reserve System. Interested students are encouraged to take ECON 223, Money and Banking.

Prerequisite: ECON 252, Committee Recommendaton. Instructor: Staff.

ECON 370-375 - Special Topics
A seminar study of major economic issues facing the United States and world economies. Topics to be announced in advance of each semester.

Prerequisite: As stated for each special topics course. Instructor: Staff.

ECON 390-391 - Independent Study
An investigation and report on a subject selected by the student. Open by permission of the department. Hours to be arranged.

Instructor: Staff.

ECON 401 - Economic Analysis of the Health Care Industry
This course applies microeconomic theory to analyze the health care market from the perspectives of those who supply health care. We will start with a description of what a health care system is and discuss the recent health care reform in the U.S. We will then turn our focus to the production of health and then the production of health care. Our attention will then turn to those who supply care including the market for physicians and hospital services, and the pharmaceutical industry. Finally, the structure and performance of the U.S. health care system will be compared to that of other countries. Discussion of empirical studies, current policy debates, and the relevance and limits of the economic approach will be emphasized. Focus of the course is on the economics and not politics or personal opinions. Regardless of your own personal views on health care reform, the goal is for you to be able to analyze the market for health care using the tools and perspectives of an economist. [W]

Prerequisite: ECON 251, ECON 252 and ECON 253. Instructor: Averett.

ECON 402 - Economics of Education
This course applies economic theory to the analysis of the education sector and education policies. We will start by investigating why people make the decision to invest in education using two different models of the returns to education. We will then turn to the "production" of education, examining what the key inputs into education are and how they can be effectively used. Afterwards we focus on the education market itself, market reforms as well as government policies that can help or hinder the distribution and attainment of education. While this course will primarily focus on K-12 education, we will also discuss some early childhood learning as well as higher education policy. Throughout the course there will be a focus on empirical methods and studies. These studies will be viewed as a test of our economic models and help us analyze education policy from an economics perspective. [W]

Prerequisite: ECON 251, ECON 252 and ECON 253. Instructor: Larsen.

ECON 403 - Advanced Topics in Macroeconomics
This course builds upon the theory introduced in Intermediate Macroeconomics, with emphasis on empirical research. First, using mathematical models of the macroeconomy, we will develop a set of tools in order to think about macroeconomic policy issues, most of which require us to think dynamically. In other words, we want to be able to answer questions that involve choices between today and tomorrow on relevant issues when thinking about development from a macroeconomic perspective (consumption, investment, fiscal or monetary policy, etc.). Second, we will practice economic thinking and writing, by asking specific questions and using empirical and statistical methods to investigate and test the predictions of various models. We will discuss the merits and drawbacks of the various approaches that are used. [W]

Prerequisite: ECON 251, ECON 252 and ECON 253. Instructor: Ogrokhina, Smith.

ECON 404 - Big Ideas in Economics
This is a survey course of big ideas in economics-the kind of ideas that transformed the way we understand economics today.We begin by developing an understanding of economics as a set of often-competing models, rather than as a discipline defined by a general theory of economics (despite the titles of some of the works that we will read). We then turn to the foundational work of Adam Smith and the formalization of his work by Arrow and Debreu in the Fundamental Theorems of Welfare Economics. The remaining breakthroughs include Akerlof's work on information asymmetry; the Stopler-Samuelson theorem on the relationship between tariffs and wages; Nash's equilibrium and game theory; Keynes' thinking on fiscal stimuli; and the Mundell-Flemin Trilemma. For each of the big ideas, we will identify the critical assumptions of the models so that we can better understand how/when they are applicable. [W]

Prerequisite: ECON 251, ECON 252 and ECON 253. Instructor: Stifel.

ECON 495-496 - Thesis
For honors candidates. One course each semester, only ECON 496 counts toward the required electives in the major; ECON 495 does not. [One W credit only upon completion of both 495 and 496]

Instructor: Staff.

EDUC - EDUCATION

EDUC 150 - Principles of Education
The course examines the historical, sociological, and philosophical foundations of education. Topics include learning, curriculum, current educational issues, and the relationship of education to society. Emphasis is on current literature, primary source materials, interviews, and classroom observations. The class requires a high degree of participation and preparation, and a minimum of 10 hours of observation in a public school. [SS]

Instructor: Novello.

EDUC 250 - Curriculum and Instruction
This course, designed for students interested in the field of teaching, focuses on curriculum design and construction, and the conceptual and practical knowledge of teaching methods. The use of technology for instruction and accommodations for students with special needs are addressed. The course includes a field experience with 24 hours of observation and opportunities for practice teaching at a local high school.

Prerequisite: EDUC 150 or permission of instructor. Instructor: Squarcia. Offered: Fall and Interim Semesters.

EDUC 350 - Curriculum and Instruction II
This course emphasizes the teaching of mathematics, science, English, social studies, and foreign languages. In addition to reinforcement of the research-based essential elements of instruction, it includes an extensive field experience requiring students to observe and engage in micro-teaching at a local secondary school. Designed for those seeking secondary teacher certification.

Instructor: Squarcia.

EGRS - ENGINEERING STUDIES

EGRS 152 - Power! Energy Technologies in Context
The impacts of energy technologies on society are at once tremendously positive and enormously problematic. In this course, we investigate fossil fuel based, nuclear, and renewable options for producing energy in the transportation, electrical, and buildings energy sectors. We will examine the social, political, and environmental contexts and consequences for our energy use, including global climate change, environmental pollutants, economic development, and inequalities in access to energy and exposure to harm. [STSC]

Prerequisite: MATH 141 or MATH 161 or permission of instructor. Instructor: Nicodemus.

EGRS 191 - Engineering in a Global and Societal Context
This is a three-week summer course, taught in various parts of the world, where we examine the global and societal context of engineering including the impact of traditions, customs, policy, and culture on engineering projects. The course involves daily field trips and plant tours, journaling, and discussions with engineers working in the countries we visit. Each course offering is organized around a multi-disciplinary technical theme e.g. renewable energy, water resources, sustainable buildings.

Prerequisite: Completed sophomore year with an engineering major. Instructor: Staff.

EGRS 222 - Sustainability of Water Systems
While there is no less water on Earth than there was when the planet was formed, many communities face frequent and/or dramatic water shortages. These incidents of lack of potable water affect small villages and large cities in developing and developed countries. Modern approaches of water management will be discussed. The design and construction of water systems for developing countries will also be discussed, with special consideration to sustainability, professional and moral ethics, and environmentalism. [V, W]

Instructor: J. Smith.

EGRS 230 - Environmental Justice
This interdisciplinary course explores the intersection of social justice and environmental stewardship in an attempt to understand the various dimensions of the environmental justice movement and how it affects modern society. Students will be exposed to humanities, social sciences, and environmental science/engineering aspects relevant to the topic. Cross-listed with AFS 230.

Prerequisite: At least one college-level mathematics course and one college-level social science course. Instructor: Staff.

EGRS 251 - Introduction to Engineering and Public Policy
This course introduces students to the governance of science and engineering. Course topics include the overall context for science and engineering policy, the public policy process and institutions involved in that process, and several current science and engineering public policy issues. The course includes a combination of role-playing exercises, debates, field trips, as well as traditional lectures. [V]

Prerequisite: ECON 101. Corequisite: ECON 101. Instructor: Staff.

EGRS 261 - Engineering Economics and Management
This course addresses the concepts and analytical techniques of engineering economics and management. Topics include present and annual worth analysis, rate of return analysis, benefit/cost analysis, capital budgeting, scheduling, optimization, and decision-making under uncertainty.

Prerequisite: ECON 101. Corequisite: ECON 101. Instructor: Veshosky.

EGRS 270 - Designing London
This course considers many aspects of London and its environs as the products of human creative design. Bridges, structures, water and sanitation systems, and the Underground were all designed as London became a thriving, diverse city. We will learn about the historical development of these structures and systems-and many others-that responded to societal needs, and to which society responded in art, literature, and movies. In understanding the engineering and other design processes, we will gain an appreciation for the complex interrelationship of science, technology, and society. From Stonehenge and Bath to Ironbridge and the Industrial Revolution to the current innovative design culture of London, the city will be our laboratory. [GM2, W]

Instructor: Rossmann.

EGRS 271 - Introduction to Architectural Engineering

This course provides an introduction to aspects of engineering and construction that are relevant to the practice of architecture. It addresses the primary systems that must be engineered, fabricated, and installed in a construction project. The course is intended for non-engineering majors.

Instructor: Staff.

EGRS 273 - Architecture Theory and Practice
Architects may consider a number of issues in their designs: environmental responsibility, physical and historical relationships with the adjacent community, the symbolic and psychological impact buildings have on their occupants, etc. This course examines these issues as well as the way architects employ aesthetic devices like proportion or scale or perspective to address them. Also explored is the impact of practical concerns such as building codes, engineering requirements and construction details. Architecture minors or anyone with an interest in design may find the course of particular interest.

Instructor: Staff.

EGRS 281 - Historical Studies in Engineering and Society
This is a historical study of engineering and society. It examines the ways cultural influences have shaped the extent and direction of technological development in the past while showing how students, as aspiring engineers, can gain access to those factors for the future. The class focuses on global and multi-cultural settings. To achieve its goals, it brings together non-technical elements of engineering design with technical details about operational aspects of technological systems. [GM2]

Instructor: Cohen.

EGRS 325 - Sustainable Environmental Management
Sustainable environmental management is currently one of the essential elements in product design and facilities management. At the facility level, environmental management means everything from manifesting hazardous waste to redesigning a product to installing air pollution control equipment. Key considerations include economics, long-term liability, and public perception, both in the USA and globally. Emphasis is on management, policy, and technological solutions that can promote sustainability with a focus on manufacturing facilities.[W]

Prerequisite: MATH 141 or MATH 161, CHEM 121, and junior standing. Instructor: Staff.

EGRS 352 - Energy Technology and the Modern World
This course examines the role of energy and energy technologies in the United States and the world. Energy from fossil fuels, nuclear power, and renewable resources is covered. Topics include world resources and recovery of fossil fuels, energy conversion technologies and impacts, nuclear energy and waste disposal, role of energy in global climate change, and emerging renewable energy technologies. Economic and policy issues are integrated with a technical introduction to the energy field.

Prerequisite: At least one college-level mathematics and one college-level science course. Instructor: Staff.

EGRS 370-371 - Special Topics
This course sequence addresses subjects of current interest to faculty and students. The special topic for a given semester is announced prior to registration.

Prerequisite: Junior standing.. Instructor: Staff.

EGRS 373 - Technology and Nature
This course examines the sometimes-contentious relationship between the natural world and human attempts to understand it (science) and manage it (technology). It addresses historical, ethical, artistic, and scientific distinctions between the natural and the human-built world, with examples from food and agriculture, modes of transportation, river control, factories, and more. The purpose of the course is to help students develop a nuanced understanding of the interactions amongst and between technology and nature. [W]

Prerequisite: A prior writing [W] course. Instructor: Cohen.

EGRS 382 - Engineering and Policy Internship
A course that emphasizes the practical application of engineering and public policy or engineering management principles. A limited number of students are placed in governmental agencies or business organizations. Under the supervision of a faculty member, each student completes a practical work project.

Prerequisite: EGRS 251 and EGRS 261 or permission of instructor, not open to second semester seniors. Instructor: Staff.

EGRS 390-391 - Independent Study
Individual investigation of a particular topic in engineering and policy under the supervision of a faculty adviser.

Prerequisite: Junior or senior standing and permission of A.B. Engineering Program chair. Instructor: Staff.

EGRS 450 - Engineering Management
This course addresses management concepts and techniques as applied to engineering organizations and operations. Topics include organizational design, human resource management, technology management, financial management, strategic management, project management, and operations management.

Prerequisite: EGRS 261. Instructor: Veshosky.

EGRS 451 - Seminar on Engineering and Society
This seminar focuses on how engineering impacts society as well as how society impacts the practice of engineering. Students apply the knowledge they have gained from both engineering and non-engineering courses to evaluate these impacts. Students play an active role in leading sessions, presenting results, organizing class participation, and discussing project results. This is the capstone seminar for the Bachelor of Arts in Engineering. [W]

Prerequisite: EGRS 251 and EGRS 261; senior standing AB Engineering major. Instructor: Staff.

EGRS 452 - Applied Systems Analysis for Engineering Policy and Management
This course provides an introduction to quantitative systems analysis methods used for engineering and economic management and public policy decision making. Applied systems analysis is used to optimize engineering system and policy designs and evaluate decision alternatives. Techniques include constrained optimization, linear programming, sensitivity analysis, multi-objective optimization, decision analysis, and system dynamics modeling.

Prerequisite: MATH 161 and EGRS 261. Instructor: Staff.

EGRS 462 - Management of Technology and Innovation

This course addresses the concepts and analytical techniques used in managing technology and innovation. Topics include management of research and development (R&D) functions, technological forecasting, dynamics of organizational change, cost justification of technological innovations, replacement analysis, diffusion of technology and innovation, and governmental policies related to technology and innovation.[W]

Prerequisite: EGRS 261, or permission of instructor. Instructor: Staff.

EGRS 480 - Sustainable Solutions
Sustainable solutions developed for a complex, real-world project by small groups of multidisciplinary students directed by a faculty adviser, or team of faculty advisers. All projects include significant technical and non technical challenges, and do not have a well-defined solution procedure.

Prerequisite: Permission of instructor. Instructor: Staff.

EGRS 495-496 - Thesis
This program is designed in accordance with the honors program of the College. Enrollment is limited to A.B. Engineering seniors. [One W credit only upon completion of both 495 and 496]

Instructor: Staff.

ENG - ENGLISH

ENG 100 - Introduction to Academic Writing
Focuses on rhetorical awareness. In this course, students will explore the reading and writing practices of the academic community. Through primary and secondary research, and through guided writing practice, students will critically examine what these practices mean and consider how students' owen reading and writing practices fit into those of "the Academy." While additional texts may be assigned, writing produced by students in the class will serve as the principal texts of the course. Additional texts may include Graff & Birkenstein's They Say/I Say, Harris' Rewriting: How to do things with Texts, and Richard Lanham's Revising Prose. [W]

Prerequisite: FYS. Corequisite: First Year or Sophomore standing. Instructor: Staff.

ENG 115 - Science Fiction
Science Fiction examines short stories, novels, and films by some of the leading practitioners of the genre. The course considers the genre from literary, cultural, historical, and scientific perspectives. [H]

Instructor: Staff.

ENG 116 - Film and Literature
Through a comparative study of films based on highly regarded plays and novels, as well as a number of autonomous films, the course seeks to define both the affinities and the distinctive capacities of the two art forms.

Instructor: Staff.

ENG 118 - Literature for Children
This course looks at how children's texts socialize their readers by confirming or, in some cases, resisting and undermining cultural norms and values. Course texts include a range of classic and popular printed books for children as well as selected films and TV shows. As part of the course, students write and illustrate their own children's books. [H, V]

Prerequisite: Any 100-level literature course. Instructor: Staff.

ENG 119 - Literary Women
This course examines writings and films by women. Topics vary and have included courses on women poets, women science fiction writers, coming-of-age narratives, novels by contemporary Middle Eastern and Asian women, and texts that explore the connections between race, class, and gender. [GM1, H]

Instructor: Staff.

ENG 120 - Satire and the Comic Absurd
An exploration of comic and satiric traditions from the earliest times to the present, with some emphasis on modern and contemporary texts and on authors influenced by the Theater of the Absurd. [H]

Instructor: Staff.

ENG 128 - American-Jewish Literature
A course exploring American-Jewish literature's roots in Eastern European and Sephardic traditions, its place in the American literary canon, and its relation to international Jewish writings.

Instructor: Staff.

ENG 135 - Literature and Human Experience
An examination of a significant social or cultural problem as reflected in literary texts. Topics vary from semester to semester and will be announced during the registration period. May be taken more than once with different content. [H, V]

Instructor: Staff.

ENG 150 - Introduction to the Digital Humanities
This course examines the intersection of computers and the humanities (usually the areas of study that address art, literature, and human expression). The course provides an overview of key terms and debates in the digital humanities and asks students to explore a number of its methods such as text mining, digital mapping, and information visualization. These activities will prompt students to think about our relationship with humanities artifacts and the ways we might understand them. [H, W]

Instructor: Laquintano.

ENG 151 - Introduction to Creative Writing
An introduction to the fundamentals of creative writing, focusing on strategies for generating, developing, revising, and editing across genres such as poetry, fiction, and creative nonfiction. Through intensive reading, writing, and discussion, students will explore ways to enhance their own creative processes as they identify and attempt to duplicate techniques employed by imaginative writers. [W]

Instructor: Staff.

ENG 202 - Writing Seminar
Writing seminars are courses that make writing and language their explicit subject. Examples include seminars in writing genres (memoir and travel writing), in rhetoric and argument, or in the way language and discourse constitute particular cultural constructions ("the animal" or "race"). While each seminar has a specific focus (to be announced in its subtitle), all seminars

emphasize the process of academic reading and writing and use student writing as a primary text. [W]

Prerequisite: FYS. Instructor: Staff.

ENG 205 - Seminar in Textual Practices
This course provides students with an introduction to the theory and methodology of literary study by focusing on three questions: What is a literary text? How do we read a literary text? How do we write about a literary text? By considering the rhetorical, aesthetic, and ideological issues that determine literary value, students examine their assumptions about literature. Required of all English majors and minors. [H]

Prerequisite: Any introductory English Department course (101-199) or AP credit or permission of instructor. Instructor: Staff.

ENG 206 - Literary History
How is literary history constructed? What is the canon of great works and how is it formed? This course inquires into the specific cultural practices that construct literature and engages students in an exploration of canon formation, marginalization, intertextuality, and influence. Readings are chosen from British, American, and Anglophone literatures and from various genres; texts from at least three literary periods are studied in depth. [H]

Prerequisite: Any introductory English Department course (101-199) or AP credit or permission of instructor. Instructor: Staff.

ENG 210 - English Literature I
A survey of literature from Beowulf to Milton; major writers, movements, and forms are viewed in their historical contexts. Normally closed to seniors. [H]

Prerequisite: Any introductory English Department course (101-199) or AP credit or permission of instructor. Instructor: Staff.

ENG 211 - English Literature II
A survey of literature, chiefly poetry, from the Restoration through the nineteenth century; major writers, movements, and forms are viewed in their historical contexts. Normally closed to seniors. [H]

Prerequisite: Any introductory English Department course (101-199) or AP credit or permission of instructor. Instructor: Staff.

ENG 212 - American Literature I: Origins to Civil War
A study of American prose and poetry from the colonial period to 1870. Normally closed to seniors. [H]

Prerequisite: Any introductory English Department course (101-199) or AP credit or permission of instructor. Instructor: Staff.

ENG 213 - American Literature II: The Gilded Age to the Present
This course introduces students to poetry and prose by representative writers of the late 19th and early 20th century. Normally closed to seniors.

Prerequisite: Any introductory English Department course (101-199) or AP credit or permission of instructor. Instructor: Staff.

ENG 214 - New Media
New Media considers a range of texts that have emerged recently in various media: television, digital platforms, and the internet. It may also include mixed media or interdisciplinary forms. Topics might include the graphic novel, virtual environments, electronic writing, or video games. The specific topic for this course will be announced at registration.

Prerequisite: Any introductory English Department course (101-199) or AP credit or permission of instructor. Instructor: Staff.

ENG 217 - Psychoanalysis and Literature
This course focuses on the relationship between literature and psychoanalysis and on different ways of understanding that relationship. Readings include psychoanalytic texts and works of fiction. [H]

Prerequisite: Any introductory English Department course (101-199) or AP credit or permission of instructor. Instructor: Staff.

ENG 225 - Contemporary Literature
An encounter with fiction of the last decade and with social, philosophical, and literary questions raised both by the texts themselves and by the activity of reading. [H]

Prerequisite: Any 100-level literature course. Instructor: Staff.

ENG 231 - Journalistic Writing
An introduction to the practice of writing news and feature stories for magazines and the daily press. Attention is paid to writing, revising, evaluating, and publishing work. The course also examines audience, style, and the role of the journalist in society. [W]

Prerequisite: FYS. Instructor: Staff.

ENG 232 - The Short Story
This course explores the short story across a broad variety of writers, cultures, and modes from the nineteenth century to the present, examining genres such as detective and science fiction as well as artistic movements from realism to postmodernism. [H]

Prerequisite: Any introductory English Department course (101-199) or AP credit or permission of instructor. Instructor: Staff.

ENG 245 - International Literature
This course looks beyond the traditional British and American texts that have populated English studies to challenge the once elite dominance of English as the authorized language of "first-world" mastery. The concept of "literatures in English" speaks, therefore, to an evolving international dialogue that is sensitive to the formation of personal and political identities in a new global economy. Texts represent diverse national regions such as the Caribbean, Africa, India, Canada and Australia. [H, GM1, GM2]

Prerequisite: Any 100-level literature course. Instructor: Staff.

ENG 246 - Black Writers
An introduction to black American writers, the course exposes students to a variety of genres, to diverse reading strategies, to the social and historical roots of African-American experience, and to the interplay between classic texts and popular media. [GM1]

Prerequisite: Any introductory English Department course (101-199) or AP credit or permission of instructor. Instructor: Staff.

ENG 250 - Writing Genres
Writing Genres introduces students to the expectations and purposes of a particular written genre and offers them intensive practice composing texts that function within the conventions and boundaries of this genre. Students will compose multiple texts in drafts, participate in workshops and discussions, and produce critical analyses and reviews. Sample genres include the essay,

autobiography, hypertext and electronic media, travel writing, and science writing. The English Department will distribute a description of the specific genre(s) under consideration before the registration period each semester. [W]

Prerequisite: FYS. Instructor: Staff.

ENG 251 - Screenwriting
This course introduces students to the basic elements of screenwriting: developing characters, writing dialogue, plotting scenes, and structuring narrative. Writing assignments build from initial treatments to individual scenes and story outlines with emphasis on drafting and revision. By viewing films, reading screenplays, and critiquing the work of peers, students learn about the role of the screenwriter in the collaborative process of film making, and work towards a final portfolio that will include a polished script of their own. [H, W]

Prerequisite: FYS and permission of instructor. Instructor: Staff.

ENG 252 - Writing for Television

In this course, students will learn how to write for both comedic and dramatic series. An intensive workshop process will guide students through the process of developing a TV pilot, including concept, act structure, character development, scene breakdowns, and dialogue. By the end of the semester, students will know how to properly format and pitch a series idea. [W]

Prerequisite: FYS. Instructor: Ohlin.

ENG 254 - Humor Writing

Students explore the craft of humor writing and develop techniques for generating comic material in multiple writing genres, such as essays, mock memoirs, and scripts. Students engage in frequent oral presentations and revision workshops. A final portfolio of humor writing is required. [W]

Prerequisite: FYS. Instructor: Upton.

ENG 255 - Creative Writing
Intensive workshops in the writing of poetry and fiction. Writing exercises and allied readings. Permission of instructor required. [H,W]

Prerequisite: FYS and permission of instructor. Instructor: Staff.

ENG 256 - Fiction Writing Workshop
An intensive workshop course in fiction writing at the intermediate level. Students will compose short stories, study the art and craft of accomplished fiction writers, and participate in revision and editing workshops. Increasingly complex short story structures will be analyzed and practiced as the semester develops. A final portfolio of fiction will be required. [W]

Prerequisite: ENG 151 or ENG 255, or permission of instructor. Instructor: Ohlin, Upton.

ENG 257 - Poetry Writing Workshop
An intensive workshop course in poetry writing at the intermediate level. Students will compose poems, study the art and craft of major poets, and participate in revision and editing workshops. Students will strengthen close reading and workshop skills, produce a polished portfolio of poems, experiment with different writing prompts, and analyze contemporary poetry. [W]

Prerequisite: ENG 151 or ENG 255 or ENG 256 or permission of instructor. Instructor: Fernandes, Upton.

ENG 260 - The New York Theater
This course combines reading and analysis of texts with experience of live theater. On-campus seminars include discussion of plays and dramatic theories to explore styles, themes, and intentions of playwrights and directors. Students see productions, tour theaters, and talk with theater professionals in New York to discover how text, theory, and practice combine to create theatrical experience. [H]

Prerequisite: ENG 205 and a literary history course (ENG 206, ENG 207, ENG 210, ENG 211, ENG 212, or ENG 213), or permission of the instructor. Instructor: Staff.

ENG 272-273 - Internship
Practical experience in fields such as journalism, broadcasting, publishing, public relations, and advertising, in which writing is a central activity. Written reports are required of the student, as is an evaluation of the student by the supervising agency. Advance approval of the departmental internships coordinator required.

Instructor: Staff.

ENG 274 - Taboos: Literary Sexualities
Few contemporary issues generate as much controversy as same-gender attraction and relationships; fewer still are so deeply rooted in oppression, violence and discrimination. Literature, a vital tool of social investigation, plays a key role in exploding sexual taboos and the related politics of silence. The course will employ several angles of inquiry, including banned books, popular culture, activism, gender, religion, and global cultures. Students will examine key historical moments in the modern history of gay and lesbian liberation; read across a variety of genres (short story, documentary, novel, drama, film); and engage the relevant critical terminology and theory. [GM1, H]

Prerequisite: Any introductory English Department course (101-199) or AP credit or permission of instructor. Instructor: Staff.

ENG 276 - The Literature of the Sea
This course focuses on literary works (fiction, poetry, journalism, etc.) that take the marine environment as a focus, written on a range of land masses from 1800 to the present. Examples include Moby-Dick and Rachel Carson's Under the Sea-Wind. Major themes include cultural contact, science, and literature, the environment as concept, and the social worlds of seagoing. [H, GM1, W]

Prerequisite: Any introductory English Department course (101-199) or AP credit or permission of instructor. Instructor: Phillips.

ENG 280 - London and Dublin Theater
England's rich theatrical tradition is continually affirmed by the excellence of its London theater productions. During this course, students attend a dozen plays at West End and fringe theaters, the National Theatre, and the Barbican Center, which hosts the Royal Shakespeare Company. Though the specific works studied depends on theater offerings, the course focuses on literary and performance aspects of Shakespearean and modern plays. [H, GM1]

Prerequisite: Any introductory English Department course (101-199) or AP credit or permission of instructor. Instructor: Lodge, Westfall.

ENG 300 - Chaucer

A study of The Canterbury Tales and Troilus and Criseyde and an introduction to the language and culture of medieval England. [H,W]

Prerequisite: ENG 205 or permission of the instructor. Instructor: Staff.

ENG 301 - Shakespeare
This course will provide an introduction to Shakespeare's plays and non-dramatic works in the context of early modern history and culture, including consideration of staging conventions. [W]

Prerequisite: ENG 205 and a literary history course (ENG 206, 210, 211, 212, or 213), or permission of the instructor. Instructor: Staff.

ENG 303 - British Writers
A study of one, two, or three British or Irish writers in some depth (for instance, Yeats/Joyce, Keats/Shelley, Dickens/Woolf). [W]

Prerequisite: ENG 205 permission of the instructor. Instructor: Staff.

ENG 304 - American Writers
A study of one, two, or three American writers in some depth (for instance, Hemingway/Faulkner, Twain/James). [H,W]

Prerequisite: ENG 205 or permission of the instructor. Instructor: Staff.

ENG 313 - The Irish Literary Renaissance
This course examines poems, essays, plays, fiction, and folklore produced by Irish writers in the years 1880-1925. Particular attention is given to the ways in which the writings of Joyce, Yeats, O'Casey, Synge, and Lady Gregory are informed by such events as the Gaelic revival, the founding of the Abbey Theatre, Ireland's struggle for political independence from England, and the Irish Civil War. [H,W]

Prerequisite: ENG 205 or permission of the instructor. Instructor: Staff.

ENG 320 - The English Language
An introduction to linguistics, with a focus on English and its development from the beginning to the present. [H,W]

Prerequisite: ENG 205 or permission of the instructor. Instructor: Staff.

ENG 324 - Eighteenth-Century Fiction
Comic, sentimental, and gothic novels from an age whose pursuit of happiness is marked by growing psychological awareness and by changing views on sex, passion, and marriage. Within such social contexts, the course assesses the tensions between the early novel's richly comic realism, its serious indulgence in the cult of feeling, and its romantic flirtation with the supernatural thriller. [W]

Prerequisite: ENG 205 and a literary history course (ENG 206, ENG 210, ENG 211, ENG 212, or ENG 213), or permission of the instructor. Instructor: Staff.

ENG 326 - The Romantics
A study of British writers, especially poets, of the period 1780-1830. The course examines how writings of the era reflect and helped to shape discourse on poverty, slavery, women's rights, urbanization, and the cultural role of art and artists. [H, W]

Prerequisite: ENG 205 and a course in literary history (ENG 206, ENG 210, ENG 211, ENG 212, or ENG 213) or permission of the instructor. Instructor: Staff.

ENG 327 - The Victorians
A study of British writers, especially poets, of the period 1830-1900. The course examines how writers of the era responded to the industrial revolution, British imperialism, theories of human evolution, debates about gender and sexuality, and aesthetic movements like those of the Pre-Raphaelites, the Symbolists, and the Decadents. [H, W]

Prerequisite: ENG 205 and a literary history course (ENG 206, ENG 210, ENG 211, ENG 212, or ENG 213), or permission of the instructor. Instructor: Staff.

ENG 328 - The American Renaissance
An intensive study of American literature, 1840-1860. The course examines a range of forms of American writing dealing with issues such as nationalism, romanticism, slavery, expansion, gender relations, and the place of literature in the young nation. [H, W]

Prerequisite: ENG 205 and a literary history course (ENG 206, ENG 210, ENG 211, ENG 212, or ENG 213), or permission of the instructor. Instructor: Staff.

ENG 329-330 - American Decades
An intensive investigation of a single decade in American life, exploring the relationships between and within the several areas of the American experience as expressed in its literature and history. [GM1, H, W]

Prerequisite: ENG 205 or permission of the instructor. Instructor: Staff.

ENG 332 - Inventing America
A study of selected works in American literature before 1820. Specific texts depend on the thematic focus, which varies from year to year. [H, W]

Prerequisite: ENG 205 or permission of the instructor. Instructor: Staff.

ENG 334 - Studies in Medieval Literature
A study of selected works written between 700 and 1500, with an emphasis on those written in England (exclusive of Chaucer). Specific texts depend on the thematic focus, which varies from year to year. [H, W]

Prerequisite: ENG 205 permission of the instructor. Instructor: Staff.

ENG 336 - Studies in Seventeenth-Century Literature
The seventeenth century saw unprecedented growth and change in England: the decline of absolute government and the rise of liberalism and capitalism, the scientific revolution, colonial expansion, and the rise of modern consciousness and subjectivity. This course explores the ways in which the literature of the period reflects English culture in transition and the ways in which formal literary genres change as the century unfolds. Topics vary. [H, W]

Prerequisite: ENG 205 or permission of the instructor. Instructor: Staff.

ENG 337 - Milton
This course covers Paradise Lost and selections from Milton's prose and other poetry, focusing on literary themes, style, and

genre, and the place of his writings in the history of religious and political thought. Considerable attention is given to Milton's radicalism, including both his theological "heresies" and left-leaning political sympathies. The course considers Milton's unique conception of the creation narrative and the "characters" of Adam, Eve, Christ, God, and his arguably most magnificent creation, Satan. [H, V, W]

Prerequisite: ENG 205 or permission of the instructor. Instructor: Staff.

ENG 338 - Metaphysical Poetry
Metaphysical poems are witty, cerebral poems that use elaborate metaphors or "conceits" to comment on a range of elusive "big topics" including the nature of love, death, evil, and God. Form, style, and imagery are considered as well as the historical contexts in which this poetry emerged in England. Students are introduced to a range of seventeenth-century poets including John Donne, George Herbert, and Richard Crashaw, as well as the work of later poets influenced by seventeenth-century poetry. [H, W]

Prerequisite: ENG 205 or permission of the instructor. Instructor: Staff.

ENG 339 - Revenge and Restoration Drama
Seventeenth-century drama reflects one of the more tumultuous eras in British history-a king beheaded, public theaters closed, a bloody civil war, and the restoration of the monarchy. During this period, symmetrical forms replaced mixed genres, women supplanted boys on stage, and comedy trumped tragedy. Students read Jacobean revenge tragedies and some Restoration comedies to explore how issues of class, gender, and politics played themselves out during this era. [H, W]

Prerequisite: ENG 205 or permission of the instructor. Instructor: Staff.

ENG 341 - The Nineteenth-Century English Novel
A study of the main tendencies of major examples in English fiction from Shelley to Hardy. [W]

Prerequisite: ENG 205 or permission of the instructor. Instructor: Staff.

ENG 342 - Modern British Literature
This course investigates various literary and cultural crises during the British modernist period. Among our considerations will be how science and technology, evolutionary theory, the New Woman, and colonialism challenge traditional notions of what it means to be human at the turn of the twentieth century. We will investigate these changes in texts by writers such as Joseph Conrad, E. M. Forster, James Joyce, D. H. Lawrence, and Virginia Woolf. [W]

Prerequisite: ENG 205 or permission of the instructor. Instructor: Staff.

ENG 343 - American Fiction to the Gilded Age
This course examines American prose-novels, short stories and essays-from the moment of contact to the decades after the Civil War. Possible authors include Rowson, Melville, Hawthorne, and Twain. [W]

Prerequisite: ENG 205 or permission of the instructor. Instructor: Staff.

ENG 344 - American Fiction from the Gilded Age to 1945
This course examines American fiction from the 1890's to 1945. Possible authors include Chopin, Crane, Dreiser, Hemingway, and Faulkner. [W]

Prerequisite: ENG 205 or permission of the instructor. Instructor: Staff.

ENG 345 - Foundations of Modern Drama
An introduction to the critical analysis of drama, using chiefly European plays 1880-1920, by Ibsen, Chekhov, Strindberg, Shaw, O'Neill, and others. [W]

Prerequisite: ENG 205 or permission of the instructor. Instructor: Staff.

ENG 346 - Modern and Contemporary Drama
A study of British, American, European, and other plays from approximately 1920 to the present, with attention to both text and performance. [W]

Prerequisite: ENG 205 or permission of the instructor. Instructor: Staff.

ENG 347 - Modern and Contemporary Poetry
A study of the aesthetics and ideologies of some of the most significant modern and contemporary poets writing in English, with special focus on theories and practices related to experimental poetries. [H, W]

Prerequisite: ENG 205 or permission of the instructor. Instructor: Staff.

ENG 349 - Postcolonial Literature
An introduction to selected writers from Africa, India, the Caribbean, and Australia and to the political and cultural issues that affect writing and reading across cultures and political inequalities. [H, W]

Prerequisite: ENG 205 or permission of the instructor. Instructor: Staff.

ENG 350 - Studies in Writing and Rhetoric
Exploration of topics in writing, literacy, language use, and argument from a range of theoretical and practical perspectives. The course examines how humans use written language to communicate ideas, to argue points, to create identities, to educate each other, and to maintain social structures. Students learn to think about such uses in sophisticated ways and gain a better understanding of their own experiences with written language. [W]

Prerequisite: ENG 205 or permission of the instructor. Instructor: Staff.

ENG 351 - Environmental Writing
This course is designed to engage students in advanced writing about nature and the environment. A central focus of the course will be an examination of the language and rhetoric used to describe these crucial issues in various popular, government, and scholarly contexts. [H, W]

Prerequisite: ENG 205, ENG 250, ENG 251, or ENG 255 and permission of the instructor. Instructor: Staff.

ENG 352 - Special Topics in Black Literature
A study of a special area of literature by black writers. Among the topics considered are autobiography, theater, contemporary

writing, modern African novels, and such major writers as Baldwin and Wright. The choice of topics varies from year to year. [GM1, W]

Prerequisite: ENG 205 or permission of the instructor. Instructor: Staff.

ENG 355 - Race Theory
This course provides an introduction to theories and representations of race and racism as applied to the analysis of literature and culture. The aim of the course is to trace the protean uses of race in history and to place contemporary debates on race into historical context. Readings focus on a broad range of literary and cultural texts in order to trace the emergence and/or transformation of race in intellectual and social contestation. [GM1, W]

Prerequisite: ENG 205, and a literary history course (ENG 206, ENG 210, ENG 211, ENG 212, or ENG 213), or permission of the instructor. Instructor: Staff.

ENG 361 - Advanced Creative Writing: Poetry
The course expands upon the writing skills in poetry that students developed in introductory courses in imaginative writing. Students engage in regular intensive workshops in which their poetry is critiqued. The course requires completion of advanced exercises in structure and style and the composition of a final portfolio of poetry. [W]

Prerequisite: ENG 250, or ENG 251, or ENG 255 permission of instructor. Instructor: Upton.

ENG 362 - Advanced Creative Writing: Short Fiction
This course expands upon the writing skills in short fiction that students developed in introductory courses in imaginative writing. Students engage in regular intensive workshops in which their fiction is critiqued. The course requires completion of advanced exercises in structure and style and the composition of a final portfolio of short fiction. [W]

Prerequisite: ENG 250, ENG 251, or ENG 255 permission of instructor. Instructor: Staff.

ENG 365 - Seminar in Literary Criticism
An advanced introduction to the history of literary criticism and its dominant theoretical practices. Students read representative texts from various schools of criticism-formalism, structuralism, deconstruction, Marxism, psychoanalysis, gender studies, cultural studies-and apply them to several literary works. Recommended for students seeking honors in English or considering graduate study in literature. [W]

Prerequisite: ENG 205, and a literary history course (ENG 206, ENG 210, ENG 211, ENG 212, or ENG 213), or permission of the instructor. Instructor: Staff.

ENG 369 - Writers in Focus
The study of one, two, or three writers in depth. Topics vary from semester to semester and will be announced during registration period. May be taken more than once with different content. [H, W]

Prerequisite: ENG 205, and a literary history course (ENG 206, ENG 210, ENG 211, ENG 212, or ENG 213), or permission of the instructor. Instructor: Staff.

ENG 370-379 - Special Topics
A seminar on a topic selected by an instructor. [W]

Prerequisite: ENG 205 and a literary history course (ENG 206, ENG 210, ENG 211, ENG 212, or ENG 213), or permission of the instructor. Instructor: Staff.

ENG 387 - Nineteenth-Century American Poetry
Intensive study of poems, poets, and poetic forms in the United States from the War of 1812 to the turn of the twentieth century. Particular focus on Whitman, Dickinson, Longfellow, and Melville. [H, W]

Prerequisite: ENG 205 and a literary history course (ENG 206, ENG 210, ENG 211, ENG 212, or ENG 213), or permission of the instructor. Instructor: Staff.

ENG 390-391 - Independent Study
A program of tutorial study, initiated by the student and pursued independently under the guidance of an instructor from whom the student has gained approval and acceptance. [W]

Prerequisite: ENG 205 and a literary history course (ENG 206, ENG 210, ENG 211, ENG 212, or ENG 213), or permission of the instructor. Instructor: Staff.

ENG 395 - Problems and Possibilities: Literary Research Seminar
Literary research, like all research, entails both discovering answers and, more interestingly perhaps, discovering questions: finding uses for already-available evidence. We will do research in both these senses of the word. This course is an opportunity to find out what resources exist, what they are good for, and how to incorporate research into readable and lively papers. Seminar members will provide an interested and inquisitive audience for each others' projects. These projects, culminating in a substantial research-based essay, will be on topics chosen from a wide range of possible inquiries into literature and language. The course is designed for anyone interested in research and should be of particular value to present or prospective independent study and honors students and to those contemplating graduate or professional study. [W]

Prerequisite: ENG 205 or permission of the instructor. Instructor: Staff.

ENG 495-496 - Thesis
Tutorial sessions related to the student's investigation of the area chosen for his or her honors essay. Open only to candidates for honors in English. [One W credit only upon completion of both 495 and 496]

Prerequisite: ENG 205 and a literary history course (ENG 206, ENG 207, ENG 210, ENG 211, ENG 212, or ENG 213). Permission of the Associate Department Head required. Instructor: Staff.

ES - ENGINEERING SCIENCE

Courses designated as Engineering Science are basic courses for all engineering programs. (ES 101, ES 225, ES 226, ES 230, ES 231, ES 241).

ES 101 - Introduction to Engineering
This course teaches the fundamentals of engineering design methodology. Students will use engineering design processes to aid them in: recognizing the need for an engineering solution, defining constraints, specifying requirements, and modeling an

engineering solution, among other aspects of engineering design. Instructors integrate societal contexts of engineering practice into the projects and examine the implications of engineering solutions.

Instructor: Staff.

ES 102 - Introduction to Spatial Visualization
Visualization skills are cognitive and are linked to success rate in science, technology, engineering, and mathematics (STEM) fields. This course provides students with various methods to improve these vital skills in preparation for advanced coursework. Methods covered include surfaces and solids of revolution, combining of solid objects, orthographic projections of inclined and curved surfaces, rotation of objects about multiple axes, and object reflections. (Credit/No Credit Grading, 0.25 credit course)

Instructor: Rosenbauer.

ES 212 - Energy Systems
What technologies are applied in energy conversion processes, and what future developments will be critical to the global energy equation? While analyzing energy system technologies, consideration is given to ethical, economic, and environmental impact of their deployment. Electric power generation, residential energy consumption, transportation systems, and industrial/commercial energy demands are quantified and balanced against worldwide energy reserves. The course addresses technical aspects of energy systems, and explores the broad issues related to energy policies and societal influences. [V, W]

Prerequisite: MATH 161, PHYS 131. Instructor: Hornfeck.

ES 226 - Statics
Introduction to the analytical methods of engineering and engineering computation through the analysis of equilibrium force systems. The fundamental principles of mechanics are explored through extensive problem-solving exercises. Topics include vector algebra, resultants of force systems; free body analysis, friction; first and second moments of area, shear and bending diagrams; direct stress calculations for axially loaded bars and beams in bending.

Prerequisite: MATH 161, MATH 165. Instructor: Staff. Offered: Fall semester.

ES 230 - Strength of Materials
Stress and strain relationships in tension, compression, shear, and combined loading. Material properties. Theory and design of pressure vessels, beams and columns. Analysis of torsion, bending and transverse loading. Deflections. Introduction to and use of Finite Element Modeling.

Prerequisite: ES 226, MATH 162. Instructor: Staff. Offered: Spring semester.

ES 231 - Nature of Engineering Materials
Nature and properties of metals, ceramics, polymers, and other materials in engineering applications. Interpretation of the mechanical, physical, and chemical properties from the viewpoint of scientific disciplines. Offered as an elective for physics and chemistry majors. Lecture/recitation/laboratory.

Prerequisite: CHEM 121 and MATH 125 or MATH 161. Instructor: Staff. Offered: Fall and spring semesters.

ES 232 - Biomaterials Science
Classes of biomaterials used in medical applications, including ceramics, metals, and polymers (both synthetic and natural), will be discussed in terms of physical, chemical, and mechanical properties. Structure, properties, and processing of biomaterials will be examined to predict biocompatibility and to appropriately select biomaterials for specific applications. Students may not receive credit for both ES 231 and ES 232.

Prerequisite: CHEM 121 and MATH 125 or MATH 161 or MATH 165. Instructor: Anderson.

ES 241 - Basic Electrical Circuits for Engineers
This course develops a basic understanding of DC and AC circuits and their analysis, simple analog and digital systems, basic electronics and electromechanical devices. This course may serve to better prepare non-ECE majors for the electrical engineering component of the Fundamentals of Engineering exam.

Prerequisite: PHYS 131, MATH 162. Instructor: Gum.

ES 252 - Engineering America
This course presents modern engineering as a narrative of contemporary American society; breakthrough innovations that responded to societal needs, and to which society responded in art, literature, film and other forms. Students will learn about the breakthrough technological developments that underpin modern civilization, in historical and societal context; understand each innovation in engineering terms; appreciate the reflections of these breakthroughs in literature, art, and other societal products; and gain an understanding of the complex interrelationship of science, technology, and society. [W]

Instructor: Rossmann.

EVSC - Environmental Science

EVSC 390 - Independent Study
This course provides students an opportunity to examine special academic topics in Environmental Science that may not be covered in normal programmatic coursework. An independent study may take multiple forms such as an in-depth guided reading, written literature review or conducting a non-research based project. Students may take this course multiple times for credit.

Prerequisite: Permission of instructor. Instructor: Staff.

EVSC 392 - Independent Research
In this course students will perform research under the guidance of an Environmental Science faculty mentor. Students are expected to contribute to a research project that furthers our interdisciplinary understanding of an environmental research problem. Students will apply their knowledge from coursework in order to approach research issues. Students may take this course multiple times for credit.

Prerequisite: Permission of instructor. Instructor: Staff.

EVSC 394 - Independent Research
In this course students will perform research under the guidance of a faculty mentor. While not as in depth as honors thesis, students are expected to contribute to a research project that furthers our understanding of Environmental Science. Students

will apply their knowledge from coursework in order to solve research problems. Students may take this course multiple times for credit. [W]

Prerequisite: Permission of instructor. Instructor: Staff.

EVSC 495-496 - Thesis
This course serves as a capstone to the Environmental Science program. In this course students will perform research under the guidance of a faculty mentor. Students will apply their knowledge from course work to enhance empirical understanding of environmental studies issues. In addition to performing the research, students will present their research to the Environmental Science program and provide a written report to their mentor. [One W credit only upon completion of both 495 and 496]

Prerequisite: Permission of instructor. Instructor: Staff.

EVST - ENVIRONMENTAL STUDIES

EVST 100 - Introduction to the Environment: A Systems Approach
An Interdisciplinary course that introduces students to the major issues in environmental studies. We emphasize the importance of analyzing environmental issues from a comprehensive systems approach. The course focuses on the interaction of natural, socioeconomic, political, and ethical systems, using case studies to highlight the need to examine environmental issues from multiple perspectives. Case studies include: "clean" coal, ocean depletion policy, and energy and transportation systems and the environment. Case studies are likely to change from year to year.

Instructor: Germanoski.

EVST 201 - Culture and the Environment
We will study how humans have shaped the environment and how the environment has shaped us, utilizing theories from anthropology that provide insight into our relationships and interactions with the worlds around us and help us understand environmental issues. Topics include relationships with "nature," knowledge about environments and how we use it, interactions with plants and animals, and intersections of the environment with race, class, gender, and ethnicity. Cases from around the world will be examined. [W]

Instructor: Staff.

EVST 202 - Environmental Economics
This course is designed to give students a better understanding of how the environment and the economy interact and how public policy can be used to shape this interaction. The course begins by sketching out the flows of natural resources associated with economic activity and how the environmental effects produced by these flows are valued. The course then proceeds to how how market economies affect the environment. Particular emphasis is placed on the environmental damage generated by market economies and how public policy can best be used to address this damage.

Prerequisite: ECON 101. Cross-Listed as: ECON 202. Instructor: DeVault.

EVST 210 - Waste and Environmental Policy; Laws, Habits, and Culture
This course introduces students to core concepts in environmental policy through the prism of waste. It explores the political, economic, ethical, and environmental dimensions of waste production. Topics include solid waste, clean water, hazardous waste, and waste as a sustainability issue.

Instructor: Staff.

EVST 215 - Environmental Policy
This course examines the ways policy seeks to promote environmental value in our complex and changing world. Students will be introduced to the contemporary environmental policy landscape, as well as the politics of environmental decision-making. We will examine and critique policy-making processes, policy actors and influence, dominate policy strategies for environmental change, and environmental policy analysis frameworks. We will draw upon case studies from multiple environmental and political contexts to explore class concepts.

Prerequisite: EVST 100 or permission of instructor. Instructor: Staff.

EVST 220 - Places, People, and Environments of the Mid-Atlantic
Students will learn about challenging and current environmental dilemmas by examining real-world and literary representations of the Mid-Atlantic region. The course will draw on understandings of place, society, and environmental writings to analyze environmental initiatives in the most densely populated region of the country. The course will focus on case studies, which may include energy development, the Chesapeake Bay, urban ecology, and the Pine Barrens. [W]

Instructor: A. Armstrong.

EVST 225 - Rivers and Society
This course examines the rich relationships that humans have with river environments. While grounded in the environmental social sciences, we will draw upon multiple disciplines to examine the importance of rivers in the human landscape. The course is organized around several key areas including: rivers in the arts; rivers and the politics of dams, river policy; rivers and water conflicts; international rivers; rivers, fish, and fishers; rivers and pollution; rivers and recreation; and river restoration.

Instructor: Staff.

EVST 230 - Water Problems, Water Solutions
An introduction to water in the contemporary world. Examines a wide range of topics-privatization, dam building, conservation, irrigation, pollution-drawing on case studies from within and outside the United States. Assignments will include historical, journalistic, cinematic, and scientific accounts of water development and exploitation with an emphasis on freshwater settings. [SS]

Instructor: Staff.

EVST 240 - Rural Society and Environment
This course considers the relationships between rural societies and the environment, with a focus on the United States. We examine perspectives from within and looking into rural America on environmental topics. Students will use social science theories and techniques to examine pressing, rural social-environmental phenomena, including rural economies, agriculture, natural

resource dependence, land use, natural amenity tourism, and community change.

Instructor: Armstrong.

EVST 250 - Art and Environment
While one view of art making would suggest elite tools and materials available at a premium through specialty shops, many artists from all over the world-for reasons of politics, philosophy, economics, environmental concerns or conceptual relevance to the given idea-have engaged with found objects and materials to create beautiful, compelling, and revolutionary works of art. In this course we will explore artists and art practices that function in this manner and investigate through studio practice ideas and methods for producing such work. Our investigations will focus on artists whose work is involved with environmental concerns, broadly defined. We will explore and produce work that engages with environment in a social, political, and cultural context. [H]

Prerequisite: Any 100-level Studio Art or Environmental Studies course. Cross-Listed as: ART 250. Instructor: Gil.

EVST 253 - Gender, Race and Environmental Justice
This course explores connections between environmental issues and hierarchies of social power. The course investigates how systemic social hierarchies of dis/advantage-principally gender and racial/ethnic identity-are articulated through the environment and how the environment is shaped by dynamics of gender/race inequalities. Additional analytical lenses (sexuality, socio-economic class, and global position) are used to form conceptual frameworks that improve our understanding of the important role "environmental justice" plays in the study of systemic social inequalities. [GM1]

Instructor: Armstrong.

EVST 254 - Cultures of Nature
This course is an interdisciplinary examination into the American relationship with nature. We will investigate how Americans have historically defined and currently conceive of concepts such as "nature," "wilderness,"environmental," and "green." The course will contrast and combine arts/humanities and scientific/technology perspectives, and it will merge active field-experience and field trips with the main topics and texts under discussion. Our texts will include diverse nature and environmental writings, films and visual culture, plus local physical landscapes and ecosystems. We will hike, paddle and camp, integrating site visits and activities in the Delaware River watershed with our critical explorations, so that the personal connection to place that is so central to environmental literature, art, and science becomes an essential context for our understanding. [W]

Prerequisite: ENG 110. Instructor: Brandes, A. Smith.

EVST 290 - Climate Change: The Facts, the Issues, and the Long-Term View
The Scientific community has explored modern climate change for decades, yet only recently has this issue emerged in the consciousness of the broader society. This writing-intensive, discussion-based seminar will consider the scientific evidence that has climate experts concerned about the future, as well as the significant economic, moral, political, and social issues that human-induced climate change raises. We will explore the challenges as well as the proposed solutions for addressing this global environmental problem. [V, W]

Prerequisite: Sophomore standing or permission of instructor. Instructor: Lawrence.

EVST 310 - Organizations and the Environment
As environmental concern deepens, the landscape of organizations seeking to redress environmental degradation has become more complex. Students in this course will examine and evaluate diverse organizational forms and strategies for promoting environmental value. We will cover environmental activism, governmental natural resource agencies, environmental non-governmental organizations, international environmental institutions, and discuss the emergence of"green" business. Students will ground their learning in community-based learning projects with local and regional environmental organizations.

Prerequisite: EVST 100 or permission of instructor. Instructor: Staff.

EVST 315 - Food, Culture, and Sustainable Societies
We ask, critically, what sustainable and just mean in relation to food and why it matters - and what "culture" has to do with it. To do so we merge well-established studies and work in the anthropology of food with (1) environmental studies of alternative food systems and urban gardening/farming. (2) studies from political ecology engaging a range of analysis on food, (3) critical food studies, which considers race/class/gender/globalism in the context of food.

Prerequisite: A&S 102 or A&S 103. Instructor: Staff.

EVST 373 - Technology and Nature
This course examines the sometimes-contentious relationship between the natural world and human attempts to understand it (science) and manage it (technology). It addresses historical, ethical, artistic, and scientific distinctions between the natural and the human-built world, with examples from food and agriculture, modes of transportation, river control, factories, and more. The purpose of the course is to help students develop a nuanced understanding of the interactions amongst and between technology and nature. [W]

Prerequisite: A prior writing [W] course. Instructor: Cohen.

EVST 390 - Independent Study
This course provides students an opportunity to examine special academic topics in Environmental Studies that may not be covered in normal programmatic coursework. An independent study may take multiple forms such as an in-depth guided reading, written literature review, or conducting a non-research based project. Students may take this course multiple times for credit.

Prerequisite: Permission of instructor. Instructor: Staff.

EVST 392 - Independent Research
In this course students will perform research under the guidance of an Environmental Studies faculty mentor. Students are expected to contribute to a research project that furthers our interdisciplinary understanding of an environmental research problem. Students will apply their knowledge from coursework in order to approach research issues. Students may take this course multiple times for credit.

Prerequisite: Permission of instructor. Instructor: Staff.

EVST 394 - Independent Research
In this course students will perform research under the guidance of a faculty mentor. While not as in depth as honors thesis, students are expected to contribute to a research project that furthers our understanding of Environmental Studies. Students will apply their knowledge from coursework in order to solve research problems. Students may take this course multiple times for credit. [W]

Prerequisite: Permission of instructor. Instructor: Staff.

EVST 400 - Capstone
This course serves as a capstone to the Environmental Studies program. In this course students will perform research under the guidance of a faculty mentor. Students will apply their knowledge from coursework to enhance empirical understanding of environmental studies issues. In addition to performing the research, students will present their research to the Environmental Studies program and provide a written report to their mentor.

Prerequisite: Permission of instructor. Instructor: Staff.

EVST 495-496 - Thesis
This course serves as a capstone to the Environmental Studies program. In this course students will perform research under the guidance of a faculty mentor. Students will apply their knowledge from coursework to enhance empirical understanding of environmental studies issues. In addition to performing the research, students will present their research to the Environmental Studies program and provide a written report to their mentor. [One W credit only upon completion of both 495 and 496]

Prerequisite: Permission of instructor. Instructor: Staff.

FAMS - FILM AND MEDIA STUDIES

FAMS 101 - Introduction to Film and Media Studies
This is a foundational course that introduces students to central concepts, theories and methods in film and media studies. We will study the histories and genres of cinema and formal techniques such as lighting, editing, and sound to develop a critical understanding of film as a dominant mode of representation. We will also critically analyze television and other forms of electronic media to gain a better understanding of perspectives and practices of emerging technologies and forms of distribution. [H]

Instructor: Sikand.

FAMS 105 - New Media: Sculpture Against the Digital Horizon
Through a series of reading/viewing/discussion sessions, this course will first examine issues and ideas that involve the use of new media methods and technologies in the contemporary practice of art. Second, through studio projects ranging from video art to social practice art to internet art, this course will serve as a laboratory from which experiments will be performed that investigate these ideas through students' own cultural production. [W, H]

Instructor: Gil.

FAMS 120 - Filmmakers-Martin Scorsese's America
This course is an examination of the films of Martin Scorsese, one of the most prolific, successful, and distinctive filmmakers in American cinema. As we explore both the breadth and depth of Scorsese's body of work, we will use his films as windows through which to understand: 1) cinema as a complex art form, and 2) cultural complexities around issues such as family, ethnicity, class, masculinity, deviance, salvation, and violence. [H]

Instructor: A. Smith.

FAMS 201 - Making Media I
This course introduces students to creative and technical aspects of media production, and is designed to provide a basic understanding of framing, composition, audio and storytelling through the use of sound and image. Students learn fundamentals of lighting, audio recording, and digital video. We will also study aspects of pre-production and production through hands-on assignments, readings, screenings, discussion of assigned exercises and in-class workshops with camera and lighting equipment. No prior production experience necessary.

Prerequisite: FAMS 101 or permission of instructor. Instructor: N. Sikland, A. Smith.

FAMS 202 - Making Media II
This hands-on production course is the second half of the media production sequence begun in FAMS 201 and builds on the fundamentals of lighting, sound, and camera. Students will further develop their digital film making techniques as well as learn to edit in Final Cut Pro. They will work on individual and collaborative media assignments that will culminate in a public screening at the end of the semester.

Prerequisite: FAMS 201 or permission of instructor. Instructor: Sikand, Smith.

FAMS 220 - The Poetics and Politics of Film
The study of film theory gives us deeper insight into film as a language and social practice, allowing one to explore cinema's relationship to historical, aesthetic, social, political and technological influences.We will study some of the debates in classical film theory, auteurism, psychoanalysis, feminist film theory, queer theory, postmodernism and post colonialism as they apply to issues of perception, the spectator, representation, adaptation and realism. [GM1, W]

Prerequisite: FAMS 101 or permission of instructor. Instructor: Sikand, Smith.

FAMS 230 - Reading Media
Our first books are picture books, but as we age, the images disappear and we focus on reading and writing WORDS. While images surround us, we are rarely taught how to read, analyze, or acknowledge as intellectual property the non-verbal modes of communication. This course will introduce students to techniques for analyzing visual images. We will discuss how we receive and respond to images, and how those images function ethically and morally in our culture. [H, V, W]

Instructor: Westfall.

FAMS 255 - Women Make Movies/Movies Make Women
This non-production course examines the work of women filmmakers and how women have historically been constructed (and not constructed) in cinema. We will examine issues of

gender, spectatorship, sexuality, race, representation and authorship as they intersect with images of women such as savior, victim, femme fatale, mother and artist. [GM1, W]

Prerequisite: FAMS 101, WGS 101, or permission of instructor. Instructor: Sikand.

FAMS 260 - Film Genres
This non-production film course is a tour through cinema via several influential genres or film types. Focusing on 3 or 4 important genres, we will look closely at the films' stylistic elements, cultural impact, and role in cinematic history. Questions considered will include how genres are established, stretched, and subverted, and the political or social uses of certain genres. Possible genres include Film Noir, the Western, the Musical, Screwball Comedies, and the Horror Film. [H]

Prerequisite: FAMS 101 or permission of instructor. Instructor: A. Smith, Sikand.

FAMS 270 - World Cinema
In this class we will study various cinemas of the world and the cultural, political, and historical contexts from which they emerge. Through screenings, complementary readings, and case-studies, and guided discussion we will develop an understanding of the theoretical debates as they relate to concepts of "national," "global," and "third" cinemas, and explore different systems of production and distribution. Looking at how cinema across the world can be a means of expression, a form of entertainment, and an instrument for political change, we will examine the ways in which films reflect the cultures from which they emerge and how they, in turn, influence those and other cultures. [GM1, GM2, H] Pre-req: FAMS 101

Prerequisite: FAMS 101, A&S 102 or permission of the instructor. Instructor: Sikand.

FAMS 275 - World Pictures-Visual Studies and Media Cultures
What is an image? What is vision? How and why do we look, gaze, and spectate? This course aims to introduce students to global Visual Studies, including the central debates and theoretical frameworks that inform the field, along with the contemporary media formations that have motivated its development. Students will learn to analyze images and media using a set of critical tools and concepts (e.g., the gaze, interpellation, embodiment, circulation, commodity fetishism, objectivity, the archive, biopower, the anthropocene, post-humanism, etc.) and consider the role that images and media play in constructing categories of racial, sexual, ethnic, geographic, and biological difference. Finally, this course will challenge students to consider the stakes of disciplinary boundaries and interdisciplinary thought. [H]

Prerequisite: FAMS 101 or permission of instructor. Instructor: Groo.

FAMS 280-281 - Internship
Practical experience in fields relating to film and media. Written reports are required of the student, as is an evaluation of the student by the supervising agency. Advance approval of the program internships coordinator required.

Instructor: Staff.

FAMS 301 - Making Media 3
This course extends the hands-on media making of the early production courses and is recommended for students hoping to 1) complete a production-based capstone project in their senior year, and/or 2) sharpen their media work into a coherent, presentable portfolio. Students will practice advanced camera and sound techniques and learn to operate Avid and Premiere editing software on several complex assignments that will result in a diverse e-portfolio of finished media. [H]

Prerequisite: FAMS 202 or permission of instructor. Instructor: A. Smith, Sikand.

FAMS 320 - The Spectre of Race
Governed by the metaphor of "spectre," this seminar looks at the tangle between race, images and technology. Beginning with early image-making and the birth of cinema and moving through the 20th century up to the present day, we will examine how the rise of mass media in modern consumer society and the relationship between visual cultures and power have deeply intertwined to influence and create racialized discourses such as eugenics, diversity, and post-raciality. [GM1, H, V]

Prerequisite: FAMS 255/WGS 255 or FAMS 220 or permission of instructor. Instructor: Sikand.

FAMS 335 - Green Screen-Film and Environment
This course is an exploration of the intersections between filmmaking and the environment. We will employ critical concepts from cinema studies and ecocriticism/ecomedia to investigate diverse cinematic representations of the non-human world, the human place within the natural world, and larger environmental issues, class discussions based on weekly film screenings and relevant readings, blog work and recursive paper writing, plus students make their own short environmental films, which we will screen at semester's end.

Prerequisite: FAMS 101 or EVST 101 or permission of instructor. Instructor: Staff.

FAMS 340 - Documentary Film
This course is an examination of documentary film-its form, history, style, and impact on cinema and culture. We begin with 19th century roots of the documentary and proceed to the recent democratization of digital documentary film making, Among the topics covered will be early actualities, travelogues, propaganda, newsreels, cinema-verite, direct cinema, avant-garde, mockumentary, educational, experimental and political documentaries, and recent developments in digital documentary. Our overall goals are to become critically thoughtful of cinematic texts, to gain familiarity with significant documentary techniques, to acquire an understanding of the historical evolution of documentary film as an art form and social tool, and to learn something of the diverse state of documentary film making today. Readings will aid students in the development of a practical understanding of how doc films work, and present a range of critical and theoretical approaches to film study. Essential to this collaborative process will be learning to use video cameras and Final Cut Pro digital editing software, as well as practicing film making techniques along the way to the construction of an original documentary film. The last activity of the semester will be a student doc film festival.

Prerequisite: FAMS 201 or permission of instructor.

FAMS 345 - Philosophy of Film

An examination of philosophical questions on the nature, interpretation, and evaluation of film. Topics may include: the distinctive nature of the moving image compared to other forms of representation; the issue of whether film is an art form; film authorship; the essence of film narrative; the role of the imagination in understanding and appreciating film; identification and emotional engagement with characters; film and morality; film and knowledge. [H, W]

Prerequisite: One course in philosophy or permission of instructor. Cross-Listed as: PHIL 345. Instructor: Staff.

FAMS 364 - Imperialism, War and Visual Culture in East Asia: 1874-1945

This course focuses on Japan's East Asian empire (in Taiwan, Korea, China, and several Pacific Islands), and the war against America (1941-45), through the lens of visual-studies scholarship and still- and moving pictures. Beginning with late 19th century Japanese wood-block prints and ending with 1940s propaganda films, we chart the relationship between the visualization of war, image propagation, and the mobilization of the national peoples in whose names wars are launched and sustained. [GM2, W]

Prerequisite: HIST 206, HIST 248 or HIST 249; or FAMS 101 or FAMS 220 or permission of instructor. Cross-Listed as: HIST 363. Instructor: Barclay.

FAMS 370 - Special Topics
A seminar on topics selected by the instructor.

Instructor: Staff.

FAMS 390-391 - Independent Study
Student directed research or study under the supervision of an adviser.

Instructor: Staff.

FAMS 420 - Capstone
This required course for FAMS majors is a chance for students to synthesize their course of study into one major individual project.The capstone is a workshop-based experience where students design and complete either a critical or creative (or some combination of the two) project that results in a public presentation of their most advanced work as FAMS majors.

Prerequisite: Open only to Senior FAMS majors. Instructor: Sikand.

FAMS 495-496 - Thesis
A two semester independent research project culminating in a thesis on a topic selected by the student in consultation with the adviser. [One W credit only upon completion of both 495 and 496]

Instructor: Staff.

FLL - FOREIGN LANGUAGES AND LITERATURES

Courses designated as Foreign Languages and Literatures (FLL) are common to all language programs. For example, the Department of Foreign Languages & Literatures offers courses on teaching methodology and language pedagogy. These classes include a practicum in local primary or secondary schools. (FLL 380, FLL 381)

FLL 100 - Guided Independent Language Study (GILS): Introduction to Arabic Letters and Sounds
The GILS Elementary Arabic program covers both spoken and written Modern Standard Arabic with an emphasis on developing speaking, listening, reading, and writing skills. Guided Elementary Arabic 100 emphasizes learning to read, write, and pronounce the Arabic script. It also covers basic conversational skills and culturally appropriate etiquette, and it introduces students to the predominantly Levantine Arabic-speaking community of Easton, Pennsylvania.

Prerequisite: Permission of instructor. Instructor: Toulouse.

FLL 101 - Guided Independent Language Study (GILS): Elementary Arabic I
The GILS Elementary Arabic program covers both spoken and written Modern Standard Arabic with an emphasis on developing speaking, listening, reading, and writing skills. Like GILS Arabic 100, GILS Arabic 101 emphasizes learning to read, write, and pronounce the Arabic script. It also covers basic conversational skills and culturally appropriate etiquette. For true beginners, successful completion for both courses (FLL 100-FLL 101) leads to a proficiency level equivalent to one semester of college-level Arabic study in a more traditional classroom setting.

Prerequisite: Permission of instructor. Instructor: Toulouse.

FLL 102 - Guided Independent Language Study (GILS): Elementary Arabic 2
The GILS Elementary Arabic program covers both spoken and written Modern Standard ARabic with an emphasis on developing speaking, listening, reading, and writing skills. Like GILS Arabic 100-101, GILS Arabic 102 emphasizes learning to read, write, and pronounce the Arabic script. It also covers basic conversational skills and culturally appropriate etiquette. For true beginners, successful completion of all three courses (FLL 100-FLL 101-FLL 102) leads to a proficiency level equivalent to two semesters of college-level Arabic study in a more traditional classroom setting. [H, EPSL]

Prerequisite: Permission of instructor. Instructor: Toulouse.

FLL 210 - Second Language Acquisition
How do people learn another language? The primary goal of this course is to introduce students to a vibrant and expanding branch of language science and, more generally, to cognitive science as it relates to the study of second language acquisition. This course is designed for those interested in theories and processes of language learning or for those seeking a career in language teaching. [W]

Instructor: Luo.

FLL 380 - Second-Language Teaching Methodology and Practicum
Students meet with the instructor on a weekly basis to study teaching methodology, language pedagogy, and second-language acquisition theory. The course also gives students the opportunity to apply what they learn and gain language teaching experience under faculty supervision in local elementary, middle, and high schools. Practicums are available in French, German, Korean, Russian, and Spanish.

Prerequisite: FLL 211 or higher, and permission of the instructor. Instructor: Staff.

FLL 381 - Second-Language Teaching Methodology and Practicum
Students meet with the instructor on a weekly basis to study teaching methodology, language pedagogy, and second-language acquisition theory. The course also gives students the opportunity to apply what they learn and gain language teaching experience under faculty supervision in local elementary, middle, and high schools. Practicums are available in French, German, Korean, Russian, and Spanish.

Prerequisite: FLL 211 or higher, and permission of the instructor. Instructor: Staff.

FREN - FRENCH

FREN 101 - Elementary French I
Provides students with the four basic language skills of reading, writing, listening, and speaking. Emphasis is on learning the fundamentals of grammar and on the development of verbal skills through their active use. Students having had two or more years of high school French are ineligible to take FREN 101 unless they obtain the instructor's permission. Class/laboratory. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department.

Instructor: Staff.

FREN 102 - Elementary French II
Provides students with the four basic language skills of reading, writing, listening, and speaking. Emphasis is on learning the fundamentals of grammar and on the development of verbal skills through their active use. Students having had two or more years of high school French are ineligible to take French 101 unless they obtain the instructor's permission.
Class/laboratory. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [H]

Prerequisite: FREN 101 or equivalent proficiency. Instructor: Staff.

FREN 103 - Accelerated Elementary French
Accelerated Elementary French is an intensive program for high beginners. This course takes a communicative approach to developing reading, writing, speaking, and listening skills, while providing a diverse array of on-line ancillary materials to enhance the student's understanding of French and Francophone cultures. Students wishing to take this course should consult with the instructor in order to determine whether it is appropriate for them. In addition to four hours of class instruction per week, students will be expected to actively engage in self-directed learning, both on-line and in the Language Resource Center. [H]

Instructor: Lalande.

FREN 111 - Intermediate French I
Review and expansion of the basic grammar and vocabulary of the language. Attention to developing reading and conversational skills and a deeper understanding of the culture of France and other francophone countries. Class/laboratory. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [H]

Prerequisite: FREN 102 or 103 or equivalent proficiency. Instructor: Staff.

FREN 112 - Intermediate French II
Review and expansion of the basic grammar and vocabulary of the language. Attention to developing reading and conversational skills and a deeper understanding of the culture of France and other francophone countries. Class/laboratory. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [GM2, H]

Prerequisite: FREN 111 or equivalent proficiency. Instructor: Staff.

FREN 211 - Advanced French
Grammar review with emphasis on areas of greatest difficulty. Enrichment of written expression with emphasis on style and vocabulary building. Examination of cultural and contemporary issues through use of the language laboratory (films, television broadcasts, newspaper articles, computerized programs) and discussion of cultural and literary texts. Class/laboratory. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [H]

Prerequisite: FREN 112 or equivalent proficiency. Instructor: Staff.

FREN 212 - Bridging the Gap: Language to Literature
This course is designed to help students make the difficult transition between advanced language study and the study of French literature. FREN 211 (Advanced Composition) focuses on developing writing skills necessary for written essays, while this course is designed to prepare students more adequately for reading, interpreting, and discussing literary texts. Activities will focus on close reading of short literary texts or excerpts, class discussion of the material read, and the writing of short literary analyses. [H]

Prerequisite: FREN 211 or equivalent proficiency. Instructor: Lalande.

FREN 225 - Business French
Designed for the advanced student wishing to acquire specialized knowledge of the French language for use in business. The course examines a variety of topics such as agriculture, industry, postal services, telecommunications, international trade, customs regulations, banking activities, the stock market, major enterprises, advertising, the insurance industry, the real estate market, job offers and applications, résumé writing, and business correspondence.

Prerequisite: FREN 211 or equivalent proficiency. Instructor: Lalande.

FREN 321 - High and Popular Culture in Medieval and Renaissance France
Introduction to the study of medieval and Renaissance French literature and civilization. Readings from such works as La Chanson de Roland, Yvain ou le chevalier au lion, Tristan et Iseult, Aucassin et Nicolette, Rabelais's Gargantua et Pantagruel, the poetry of the Pléiade, and Montaigne's Essais. [H]

Instructor: Duhl, Lalande.

FREN 322 - Reason, Wit, and Wild Imaginings: Seventeenth- and Eighteenth-Century French Literature and Civilization
Readings from such works as Corneille's Le Cid, Racine's Phèdre, Molière's Le Tartuffe, Mme de La Fayette's La Princesse de

Clèves, Prévost's Manon Lescaut, Marivaux's Le Jeu de l'amour et du hasard, Voltaire's Candide, and Montesquieu's Lettres persanes. [H]

Instructor: Lalande.

FREN 323 - Iconoclasts: Nineteenth- and Twentieth-Century French Literature
Introduction to the study of such modern literary movements as romanticism, realism, naturalism, symbolism, surrealism, existentialism, and the absurd. Emphasis on poetry, fiction, drama, and criticism in the works of such authors as Mme de Staël, Chateaubriand, Lamartine, Hugo, Stendhal, Balzac, Flaubert, Zola, Maupassant, Baudelaire, Verlaine, Rimbaud, Mallarmé, Jarry, Valéry, Apollinaire, Gide, Proust, Breton, Malraux, Sartre, Camus, Beckett, and Ionesco. [H]

Instructor: Rosa.

FREN 324 - Turning the World Upside Down: French Civilization since 1789
French history, civilization, and culture from the Revolution of 1789 through modern times. Emphasis on major historical figures and events, the evolution of political and social institutions, economic trends, the development of religious, philosophical, and political beliefs, and changes in the modes of artistic expression. [H]

Instructor: Rosa.

FREN 421 - The Sword, the Rose, and the Pen: Constructing Identity in French Medieval and Renaissance Literature and Culture
This course examines themes and techniques of imitation and/or subversion of classical and Biblical sources as strategies for defining the self and the creative process in the vernacular. Readings include such genres as the epic, courtly romance, popular theater, allegorical and lyric poetry, short story, and the essay (La Chanson de Roland, Chrétien de Troyes, Le Roman de la Rose, La Farce de Maistre Pathelin, François Villon, François Rabelais, Joachim du Bellay, Pierre de Ronsard, Louise Labé, Marguerite de Navarre, Michel de Montaigne). [H, W]

Instructor: Duhl.

FREN 422 - The Age of Absolutism
A study of representative classical authors of the seventeenth century and their works, with emphasis on Corneille, Molière, Mme de La Fayette, Pascal, Descartes, La Fontaine, La Rochefoucauld, Malherbe, Théophile, and Racine. [H, W]

Instructor: Lalande.

FREN 423 - The Artist as Outsider: French Literature of the Nineteenth Century
Study of the development of romanticism, realism, naturalism, and symbolism, with emphasis on such writers as Chateaubriand, Constant, Musset, Sand, Nerval, Hugo, Stendhal, Balzac, Flaubert, Zola, Baudelaire, Rimbaud, Mallarmé, and Villiers de l'Isle-Adam. Attention also may be given to the Parnassian school. [H, W]

Instructor: Rosa.

FREN 424 - Literature, Ideas, and Film: Twentieth-Century French Culture
The major movements following symbolism are studied in historical context and in the works of such authors as Gide, Proust, Apollinaire, Breton, Mauriac, Colette, Malraux, Sartre, Camus, Ionesco, Robbe-Grillet, Queneau, Perec, Barthes, Kristeva, Ernaux, and Derrida. Topics such as surrealism, Orientalism, ludics, feminism, memory of World War II, the Algerian War, multiculturalism, and Francophonie. [H, W]

Instructor: Staff.

FREN 425 - French Cinema
French cinematographers and their works have often stood in contrast to large-scale epic Hollywood productions. This is not to say that the two traditions are totally distinct: cross-fertilization has occurred in both directions. This course will examine several eras of French film-making: the Golden Age, the Cinema de Qualite, and the Nouvelle Vague, as well as various genres, such as the the Film Noir, the Cinema du patrimoine, the Cinema de look, the Cinema de banlieue, and Feminist film making. [H, W]

Prerequisite: At least one 300-level French course. Instructor: Lalande.

FREN 431 - Contemporary France: Political, Economic, and Social Institutions
A study of French civilization since World War II; institutional changes under the IVth and Vth Republics; the educational system, the economy, the media, cultural life. France in the contemporary world and francophone countries. [H]

Instructor: Staff.

FREN 441 - Junior/Senior Seminar
Study of a genre or major theme in French literature. Course content is broad in scope. [H, W]

Instructor: Staff.

FREN 460 - Reading and Research in French
This course gives students the opportunity to investigate intensively an area of special interest. Students work on their projects independently under the guidance of an instructor. At the end of the semester, students submit a research paper and/or make a substantial oral presentation. Hours arranged.

Prerequisite: Permission of the research instructor. Instructor: Staff.

FREN 495-496 - Thesis in French
Tutorial sessions related to the student's investigation of the area chosen for the honors essay. Open to majors in French who are candidates for departmental honors. [One W credit only upon completion of both 495 and 496]

Prerequisite: Permission of the research instructor. Instructor: Staff.

FYS - First Year Seminar

FYS 011 - International Conflict and Cooperation in the Contemporary World
This seminar looks at international conflict from a social science perspective. Its function is not only to transmit information about specific conflicts in the twentieth century but also to equip participants with tools to analyze any international conflict. Topics include causes of individual and collective violence, arms

races and deterrents, and means for prevention or reduction of international conflict.

Instructor: Peleg.

FYS 012 - Photography and Race in America
This class will consider the connections between photography and race through a number of photographic case studies. Beginning with a series of photographs of slaves from the 19th century and ending with recent images of police brutality of people of color, students will learn how to examine photographs and discuss them from multiple vantage points. "Reading" photographs will make students aware of the nature of photograph; its subjective, historical and theoretical implications and how those play out in our daily lives. Assignments will include analytic essays, film screenings, field trips and photographic exercises.

Instructor: Skvirsky.

FYS 013 - Deviance
What does it mean to be a deviant? Or to deviate from some standard? In disciplines such as drawing, physics, and poetry, deviation emerges in avant-garde circles that often challenge the status quo of a given tradition (abstract expressionism, quantum physics, projective verse poetry). But "deviation" also has larger ideological concerns as deviants are seen as threats to a supposedly stable social structure. From queer subcultures to ancient philosophies of atomism to the Black Lives Matter phenomena, this course explores how cultures of deviance are often political strategies of resistance to the way bodies are normalized and regulated.

Instructor: Fernandes.

FYS 014 - Individualism in American Culture, Character, and Society
The term "individualism" has long been used to describe one of the distinctive qualities of Americans and of American culture. Using Alexis de Tocqueville's Democracy in America (1840) as the starting point this colloquium systematically examines expressions of individualism in American life past and present.

Instructor: Schneiderman.

FYS 015 - The Endurance of Race
This seminar explores how race and ethnicity is mediated through film and media by analyzing the tangle between the construction of race and visual technology. Beginning with early image-making and the birth of cinema, we will examine how ways of seeing, the rise of mass media in modern consumer society, and the relationship between visual culture and power are deeply intertwined to influence and perpetuate racialized difference. We will study a range of media such as early ethnographic films, Hollywood cinema and look at how counter cinema and global activism have helped to draw attention to these images in important ways.

Instructor: Sikand.

FYS 016 - Zombies! From Slaves to Cannibals
This seminar explores the zombie's migration from Caribbean folklore to the popular culture of the United States, and its subsequent metamorphoses from passive slave to violent cannibal and figure of infection. This course will examine these transformations through anthropological and literary tests, as well as films and popular culture, from Haiti and the United States. It will take an interdisciplinary approach, examining the zombie as religious, scientific, social, and historical phenomenon. The goal of this seminar is to study how monstrous beings serve as imaginary manifestations of cultural realities.

Instructor: Swanson.

FYS 017 - An Element of Risk
Each day people make decisions that are based on an assessment of the costs, benefits, and consequences associated with a choice of action. In this seminar, case studies from medicine, the environment, and technology are used to apply relevant historical perspectives, statistical analysis, and the consideration of issues of personal choice and values in the critical evaluation of patterns of risk-taking behavior, assessment, and management.

Instructor: Husic.

FYS 018 - Ten Ways to Know Nature
This class is a study of the different ways we interact with and thus know the natural environment. These ways include, among others, the scientific, technological, artistic, experience-based (hands-on), biographical, and religious; the forms of interaction follow from our lives as consumers, as eaters, and as thinkers, while we work, live, and play. The purpose of the course is to examine how those ways of interaction with nature influence how we know and then treat those environments.

Instructor: Cohen.

FYS 019 - From Magical Mushrooms to Cereal Killers: How Fungi Have Shaped Human Civilization
Fungi have played a critical role in the development of society since ancient times. As food (or a threat to it), as medicinal sources, as recreational items, as religious or philosophical icons, fungi have participated in all aspects of human kind. The seminar class explores all facets of fungi and how they have shaped civilization. By using texts from books, popular articles and scholarly publications, we will attempt to understand the multiple ways in which fungi have affected our lives.

Instructor: Ospina-Giraldo.

FYS 020 - Appalachia
The region of the Eastern U.S. known as Appalachia is defined by the geological characteristics of the Appalachian Mountains, but also can be characterized and described on the basis of the distinctive natural, historical, cultural, and economic characteristics of the region. It will be the goal of this course to develop the skills to recognize, understand, and evaluate and communicate the complex interrelationships among those factors that define and describe this region of the U.S.

Instructor: Husic.

FYS 021 - Masculinities: Maleness in Contemporary American Culture
What does it mean to be a man, manly, masculine? Do gender and race condition the way people view masculinity? In journals, essays, and group presentations, students analyze a variety of texts-from ads, cartoons, and essays in popular magazines to scholarly studies by sociologists and biologists.

Instructor: Byrd, Washington.

FYS 022 - Cinema, Mind, and Morals

The moral life is intimately related to questions regarding self-understanding in relationship with others. These questions are also at the core of many notable films. In this seminar, we will investigate a range of related issues, from moral obligation, to moral motivation, to such virtues and emotions as friendship, love, shame, forgiveness, etc., as they can be better understood through movies. Assignments include readings drawn from contemporary philosophy and film viewings to be completed outside of class.

Instructor: Giovannelli.

FYS 023 - Baseball: The One Constant Through All The Years
Why is baseball the "American pastime"? What is it about baseball that fascinates millions around the world? This seminar explores the game by examining the role of statistics on decision making, in-game managerial strategy and economics as well as investigating the historical significance of baseball. Students examine baseball through various writings, films, game attendance, and game simulations in which they manage their own teams. Critical thinking skills are emphasized in the context of baseball.

Instructor: Nataro.

FYS 024 - Human Aggression and Social Pathology
This seminar studies general theoretical models for human aggression including those that suggest instinctual or genetic bases for aggression and those that propose learning and observation. Students analyze specific forms of human aggression-athletics, sexual aggression, television, wars, and social upheavals-and suggest solutions. The course uses original sources as well as novels, short stories, essays, films, news magazines, and newspapers.

Instructor: Childs.

FYS 025 - The American College Student
This seminar examines the nature of the college student in America, in conjunction with the U.S. system of higher education. It includes a historical overview of higher education in America; the impact of college on students; students' psychosocial, cognitive, ethical, and career development; and an examination of student cultures and subcultures. Special attention is given to research on college student characteristics, attitudes, and values.

Instructor: Krivoski.

FYS 026 - Abortion, Morality, and the Law
At the core of the abortion controversy reside two fundamental and related issues. The first concerns the moral and legal status of the fetus-that is, whether human fetuses are persons possessing legal and moral rights. The second concerns the relationship between the moral and legal rights of pregnant women and the permissibility of abortion. This seminar provides a critical examination of these and related issues.

Instructor: Panichas.

FYS 027 - Life, Liberty, and Equality: Contemporary Political Controversies
Controversies surrounding political and moral issues continue to dominate contemporary public debate and influence the development of policy. In this seminar, students explore and evaluate the many sides of current battles over issues relating to life, liberty, and equality, in particular, debates involving such issues as abortion, euthanasia, the death penalty, pornography, drug testing, affirmative action, and sexual preference.

Instructor: Silverstein.

FYS 028 - Money: The Root of all Evil?
While the most recent financial crisis has heightened awareness of what can happen when the financial systems runs amok, this crisis was just one of several that plagued the markets at various times within the last two centuries. This course focuses on the financial history of currency and the capital markets through a critical examination of their functioning and impact from their beginnings to the present day.

Instructor: Bukics.

FYS 029 - Mind Benders, Ways of Knowing, or a Course in Paradigms
Have you ever experienced a flash of insight when all of a sudden something that was confusing becomes blindingly clear? Some call this the Eureka Phenomenon; some conversion. These flashes liberate people from previous assumptions and lead to revolutionary discoveries. This seminar discusses how shifting paradigms-assumptions about how the world works-create new concepts, views, and ideas (often viewed initially as dangerous or heretical). Readings focus on patterns of inquiry in science, history, literature, psychology, and gender.

Instructor: Donahue, Westfall.

FYS 030 - Vision: It's as plain as the nose on your face or Is It?
This seminar investigates the way that seeing affects every aspect of people's lives. Vision provides essential information and deceives. While the visual arts form the core of the course, the use of images in science, politics, computer technology, advertising and business, movies, and television is explored. Projects and demonstrations take place around campus, and field trips are taken.

Instructor: Mattison.

FYS 031 - What Is a Miracle
This seminar explores miracles and the miraculous in religious traditions from around the world. Students learn about the role miracles play in religious narratives and explore how miracles contribute to conceptions of God and human power. Modern challenges to the reality of miracles are considered. Additionally, the category of "miracle" is analyzed and evaluated from various angles including philosophy, anthropology, and popular culture.

Instructor: Hendrickson.

FYS 032 - Who Am I and Why Am I Here?""
This seminar examines the ways in which young adults have tried to answer some of life's most challenging questions. What is the meaning of life? What brings fulfillment? How do you present yourselves to the world? To what extent are you influenced by peer pressure? Using novels, autobiographies, and films, students consider the ways in which people around the world have sought to answer these questions.

Instructor: Rinehart.

FYS 033 - Wild Imaginings: The Creative Process

An introduction to the verbal art of imaginative extremists through a close study of literature that subverts conventions of logic and tests the boundaries between fantasy and reality. Among the authors considered are Lewis Carroll, Manuel Puig, and Russell Edson. Students analyze the literature and, when appropriate, drafts, letters, and diary entries that illuminate the writing processes of authors.

Instructor: Upton.

FYS 034 - Originality
What is originality? What difference does it make? How can it be faked? These are questions that we will research, emphasizing writing, painting, and music. We will investigate some specific cases of art forgery, plagiarism, and "borrowings." Originality on the part of seminar participants will be encouraged, and possibilities of original work in various academic disciplines (not limited to the humanities) will be investigated.

Instructor: Woolley.

FYS 036 - Trials of the Century
This interdisciplinary seminar will examine the "Trials of the Century" that have captivated the general public's attention because of the highly controversial issues they raised, the publicity they received, and the decisions that resulted. By examining these great trials, using political, historical and legal academic lenses, we will refine our critical analytical skills and better understand both our legal and political systems, and the resulting changes in law and society.

Instructor: Murphy.

FYS 037 - The Human Animal
Some believe that humans, once having evolved culture, were freed from the tyranny of their biology. Others believe that humans are subject, at least in part, to the same biological forces that govern animals. The free-will vs. biological determinism argument continues to rage among thinking people of all disciplines. This seminar examines the issue from the evolutionary biologist's point of view using E. O. Wilson's On Human Nature as the starting point.

Instructor: Leibel.

FYS 038 - Animal Voices
Are human beings the only animals capable of language? That birds and beasts can talk is usually regarded as an artifact of myths, fiction, and fantasy. However, recent findings complicate previously accepted distinctions between human and nonhuman behavior and abilities. This course will consider both scientific and imaginative perspectives on "animal voices." Our readings will come from various disciplines and genres, including animal behavior, linguistics, ethics, medieval fables, graphic novels, and film.

Instructor: Van Dyke.

FYS 039 - Music and Gender
Can we hear gender difference in music? Why are there no "great" women composers? What power does a performance wield? To examine these questions, we will explore issues of sexual aesthetics, power, class, cha(lle)nging the roles, and gender as/and performance. In an active classroom environment and discussion based course, you will challenge, lead, explore and develop your own point of view while you discover your own contribution to the arts through valid argument.

Instructor: J. Kelly.

FYS 040 - Geological Disasters: Agents of Chaos
Earthquakes, volcanic eruptions, landslides, hurricanes, floods, and tsunamis are all part of the geological evolution of the earth. Humans are increasingly exposed to the often severe consequences of the violence of nature. This seminar examines these processes from both technical and personal perspectives to understand why they occur and how human activity has interfered with natural processes, perhaps making many parts of the planet more disaster prone.

Instructor: Malinconico.

FYS 041 - Crazy in Love: Romantic Love in the Western World
This seminar explores how even the most intimate and seemingly personal forms of experience are shaped by culture and history. We'll consider how our ideas about love have evolved over time, from the development of medieval chivalry to the rise of modern psychiatry. Along the way, we'll assess how much scientific accounts of love, as well as our most famous love-stories, mesh with the actual experience of it.

Instructor: Wadiak.

FYS 042 - The Life We Write: An Introduction to Chican@ Literature and Culture
This course will explore Chican@ literary and cultural production from the 1960's to the present day and the manner in which identity has evolved in that time. We will also explore pop culture representations in film, ads, and political rhetoric that have contributed to a problematic articulation of Chican@s in the U.S. imaginary. Authors will include Alurista, Tomás Rivera, Rudolfo Anaya, Lucha Corpi, and Sandra Cisneros.

Instructor: Rojo.

FYS 043 - Charisma
Charisma, meaning "gift of grace," denotes a deeply personal, yet anti-institutional type of authority, shared by certain cult leaders and revolutionaries, religious visionaries and political prophets, antinomians and avant garde artists. There is also the charisma of place and thing, from sacred shrines and objects, to famous art works and national monuments. The course will explore the meaning of charisma, with case studies in enthusiastic religion, political revolution, and antinomian avant garde art movements.

Instructor: Schneiderman.

FYS 044 - Multiculturalism in the Medieval Mediterranean World
The idea of "multiculturalism" is often associated with modernity. The reality is, however, that multiculturalism was a part of the everyday lives of people living from Cordoba to Naples to Jerusalem to Constantinople in the medieval period. Reading both secondary and primary sources (translated form Arabic, Armenian, French, Greek, Persian, Spanish and Turkish), this course will engage with the different ways in which diversities (ethnic, linguistic, racial and religious) were experienced and understood in the medieval Mediterranean.

Instructor: Goshgarian.

FYS 045 - Cotton
We will consider the complex impact of textiles on our lives-from farm, to factory, to fashion, and beyond. We begin with greige goods via an historical and social understanding of the development and maintenance of the global cotton industry. From there, we move to industrial-scale embellishment of the fabric by investigating issues such as the environmental impact of dyes and the politics of prints (locally and globally). We will also have a brief introduction to the politics of fashion and the subversive artistic use of textiles. An undercurrent of long-standing labor issues weaves its way throughout this theme.

Instructor: Kimber.

FYS 046 - Gender, Sexuality, and Media
Gender and sexuality are socially-constructed identities-learned and reinforced by interactions with others as well as the systems we create. In essence, how do we come to identify as a male, female, transgender, gender-fluid, homosexual, heterosexual, bisexual, pansexual, or as none of these things? This course will encourage participants to explore how one specific system, the media, helps us to create our gendered and sexualized selves.

Instructor: G. Kelly.

FYS 049 - Global Food
Foods are material substances that are deeply linked to human sustenance, to sociability, status and sensibility, as well as the sway of the senses-whether sparking desire or disgust. In this sense food intrinsically crosses borders and boundaries in at least two ways: first, food challenges us to adopt interdisciplinary approaches to material goods, considering them from different perspectives and adopting different lenses. Second, foods have always been mobile across the globe, shifting in form and meaning as they move between different settings; in this sense, by tracing the circulation of foods in time and space, we can explore a world of emergent sociocultural relations, seeing links between spheres of production, transport and consumption.

Instructor: Bissell.

FYS 050 - Miles Davis: Popular Music and Race in America

Equal parts race, popular music, and Miles Davis, this seminar invites students to explore issues of race central to the history of black Americans and the United States, alongside the origins and development of American popular music from 1900 through the 1970s. Prepared with historical and musical context, students finally will deal with trumpeter/bandleader/composer Miles Davis, less as an icon than as an exemplar of a black musician making choices and taking chances.

Instructor: Gough.

FYS 051 - Toward Cultural Literacy: De-mystifying the Non-Western World
This seminar engages students in an exploration of important cultural traditions outside of the European-American sphere. Through discussions of readings, films, and examples from the visual and performing arts, students investigate customs and rituals in selected regions of Africa, India, China, Japan, Korea, and Indonesia. Through individual projects and presentation, indigenous cultural data are applied to contemporary issues relevant to becoming informed citizens of the world.

Instructor: Stockton.

FYS 052 - The Great Late Soviet Union
Internationally, one of the most dramatic events of the last decade was the dissolution of the Soviet Union. This seminar familiarizes students through lectures, discussions, readings, and videotapes with the history, culture, and problems of the former Soviet Union. The seminar also analyzes the situation of today's Russia and its relationship to its neighbors.

Instructor: Pribic.

FYS 053 - Overcoming the Wall: German Unification and Its Aftermath
Unification has involved economic and social hardships for both the former East and West Germans. The people have demonstrated their discontent in elections. Chancellor Kohl's CDU/CSU party lost at the polls. The new right-wing Republican party is gaining momentum. Extremist movements, such as the Neo-Nazis, terrorize foreign workers and asylum seekers. This seminar explores such contemporary issues through texts and class discussions, group projects, and field trips.

Instructor: Lamb-Faffelberger.

FYS 054 - The Revolutionary Vision: Europe 1642-1991
This seminar provides a broad overview of European revolutionary thought and its history and of the history of European revolutionary movements from the outbreak of the English civil war in 1642 through the breakup of the Soviet Union in 1991. History, literature, philosophy, art, and film are used to illuminate the nature of European revolutionary ideologies and investigate the social, political, and cultural circumstances that engendered them.

Instructor: Rosa.

FYS 055 - Leaving Downtown: Race, Ethnicity, and the Creation of the Suburbs
Where did residents go when their multi-facial, multi-ethnic neighborhood ("Syrian Town") in downtown Easton, PA was demolished in the 1960s? And why did so many residents join the rapidly growing suburbs surrounding the city? Through interviews with the very people who made this shift, field trips, and interdisciplinary research, students will answer this and related questions while exploring the unforeseen consequences of the suburban revolution.

Instructor: Clark.

FYS 057 - Politics and Polling
We will study the history and the science of polling. Polling became popular in the early 20th century, with spectacular successes in marketing and politics. But low response rates present significant challenges for pollsters in the 21st century. Questions we will consider include: How are polls conducted? Do polls measure public opinion or do they influence public opinion? Are some groups of people "more important" to survey? We will learn to study the science, the history and the future of polling in advance of the 2016 presidential election.

Instructor: Gordon.

FYS 058 - Icons: Art, Magic, Ritual, and Technology
This seminar examines the power of images in different historical periods and diverse cultures. What is it about icons that make people cry, pray, and believe? While the development, meaning, and impact of icons in general is the topic of lectures, students

have the opportunity to study a wide range of popular images-from favorite stars, such as Madonna and Elvis, and computer-designed images, to Egyptian pyramids and Greek temples.

Instructor: Sinkevic.

FYS 059 - Feed the World
This course offers an interdisciplinary look at our food from planting to harvest, distribution and packing, to our tables. Emphasis on combining a social sciences perspective with an engineering human-centered design process to define and address problems of world hunger. Focus on investigation, problem definition, and project-based learning of issues related to global hunger.

Instructor: Stewart-Gambino.

FYS 060 - The Real World: The Challenge of Managing Change in the Business Environment
This seminar introduces students to the dramatic and constantly changing business environment. Topics include those that have impacted, and will continue to impact, all forms of business organization operating in a competitive environment such as the role of changing technology, impact of corporate downsizing, demographic and social trends, business ethics and social responsibility, and changes in the United States business environment from manufacturing to services-based and from large corporations to the rising importance of small businesses.

Instructor: Bukics.

FYS 061 - Your Immune System: Friend or Foe?
Your immune system is necessary for your survival, but it can also cause many different diseases. This course will shed light upon how your immune system can be both good and bad. We will cover a broad range of topics, including the way social, economic, and political factors influence our views of vaccines, allergies, autoimmune diseases and bacteria.

Instructor: Kurt.

FYS 062 - Discussions on Diversity: Strategies for Creating Change
The class will explore the issues pertaining to diversity (e.g. race, class, and gender) with the overall purpose of increasing student's personal multicultural competence and ability to create systemic change. Multicultural competence will be defined as the degree to which one's knowledge, awareness, and skills reflect a multicultural identity. A particular highlight of the class will be to understand "isms," identity development, and multicultural competence from a neurobiomechanics perspective.

Instructor: Silvestri.

FYS 063 - Jazz Issues
This course explores important sociological and musical issues in jazz. Topics include African social and musical influences on jazz, the legacy of slavery, early combo jazz, big bands, bebop, protest music, women in jazz, and racism in America and its effect on jazz. Emphasis is on reading, writing, developing listening skills, discussion, and individual and group presentations. Videos and live performance are incorporated into the course.

Instructor: Wilkins.

FYS 064 - Global Justice
While few people would deny that we have special, and sometimes quite demanding, obligations to help our friends, family, or even our fellow citizens, it is controversial whether we have these same kinds of obligations to complete strangers. The guiding question of this course will be what, if anything, do we owe such people? Three main topics will provide the focus of discussion: international economic inequality, climate change, and war.

Instructor: Jezzi.

FYS 065 - The Uses and Abuses of Science in Science Fiction
In their novels, science fiction writers incorporate many ideas from cutting-edge science, some imaginative and insightful, others blatantly at odds with established scientific principles. Students critically examine applications of science in the novels of Robert L. Forward and Arthur C. Clarke, among others. Readings from the novels are interspersed with readings from books such as The Physics of Star Trek, by Lawrence Krauss, which explain the relevant science in terms accessible to non-scientists.

Instructor: Hoffman.

FYS 066 - How Is Greatness Possible?
Alexis de Tocqueville summed up the problem of greatness in democracies as follows: "ambitious men in democracies are less engrossed than any others with the interests and the judgment of posterity...they care much more for success than for fame." What he called fame might well be called greatness. Starting from the Kantian premise that greatness is possible only because human values make it possible this course examines the various social psychological historical and philosophical requisites for greatness and failure on a grand scale in democracies as well as in other forms of society.

Instructor: Schneiderman.

FYS 069 - Monuments
This seminar examines five major monuments of western architecture: the pyramids of Giza, the Parthenon, Chartres Cathedral, the Brunelleschi Dome of Florence Cathedral, and the Empire State Building. Each is examined in its historical, cultural, and technological context through contemporary and modern sources and, for Chartres and Brunelleschi's Dome, computer analysis of structure. A field trip to New York, visits to Special Collections in Skillman Library to examine the Egyptian papyrus and medieval manuscript pages, guest speakers from the faculty, and student presentations enrich the course.

Instructor: Sinkevic, Ahl.

FYS 070 - Oil, Politics, and the Environment
Oil plays a significant part in global economy, politics, and the environment. The control of the oil market has caused wars and conflicts over the past and present centuries. While it is hard to imagine life without petrochemicals, their increasing production has had adverse impacts on the environment. After brief review of the petrochemical industry, the paradoxical role oil has played in shaping the economic and social structure of both exporting and importing countries will be explored.

Instructor: Tavakoli.

FYS 071 - Race and Class

Are race and class inseparable? Does a consideration of either term inevitably lead to a discussion of the other? How do these arguably overlapping categories determine the way that people think of and define themselves? These questions are addressed in discussions of race and class in literature, popular culture, current events, and daily life.

Instructor: Washington.

FYS 072 - Power, Principle, and Personality in American Leadership
This seminar explores, through biographies, the roles of political principle and public personality in the rise to power and use of power by presidents, governors, and mayors, such as Washington, Lincoln, Nixon, and others. Of special interest is the interactions of image and substance in the exercise of democratic power. Students write a biography of a living leader through personal interviews and documentary research based on insights from the bio- graphical readings.

Instructor: Kincaid.

FYS 073 - Technology and the City: Chicago and New York
This course examines the role that industrial technology played in the rise of the two great American cities--Chicago and New York. It centers on Chicago and uses New York further to illuminate technology's influence on the city building process and the role that cities played in making America a technological wonder and the greatest industrial power on earth by 1900. The course will be taught from an interdisciplinary perspective and with the aim of relating history to our own day and to our own lives.

Instructor: D. Miller.

FYS 074 - Questers of Extremes
After considering a tradition in classical Greek and Roman thought that extolled the value of moderation in thought and behavior, this seminar examines a set of texts by or concerning questers of extremes-figures who distinguished themselves through their pursuit of immoderate, transcendent ends. Particular questers include, but are not limited to, an ancient conqueror (Alexander the Great), a medieval saint (Joan of Arc), a modern novelist (Yukio Mishima), and a contemporary young adventurer (Chris McCandless).

Instructor: Ziolkowski.

FYS 075 - Majesty: Monarchy, the British Royal Family, and its Artistic Celebration and Depiction
As a form of government, what is monarchy and what explains its continued existence in today's world, thousands of years after the institution of the monarch emerged? This course examines: the current British royal family during the 1000 years of its existence, from William "the Conqueror" (1066-87) to his direct descendant Elizabeth II (1952-); the documents defining its evolving constitutional status; and outstanding works of art that depict and celebrate the family (theatre, opera, music, film).

Instructor: Cummings.

FYS 076 - Land of Mystery: The Language and Culture of Modern China
Though China is the world's most populous nation, a military superpower, and an increasingly dominant presence in international commerce, Westerners often view the Chinese and their rich heritage as inscrutable. In this seminar, cultural practices and values of modern China are examined through the eyes of traditional society and the "ancient Chinese proverbs." As an integral part of this experience, students learn the rudiments of Chinese pronunciation and acquire a basic Chinese vocabulary.

Instructor: Yu.

FYS 077 - The Dog Course
"Man's best friend?" Nature's most successful parasite? Employing a range of perspectives-literary, philosophical, archaeological, biological and technological-we will examine specific constructions of the dog at various moments in human history. We will consider issues of evolution, domestication, the morality and technology of breeding, and the psychological comforts of anthropomorphic representation. Because field trips and other required activities will involve contact with dogs, this course is not recommended for those who may be afraid of dogs or have health issues that could be made worse by interacting with dogs.

Instructor: Falbo.

FYS 078 - Baseball
This seminar will examine baseball from a variety of viewpoints: its history, the importance of statistics, the economics of the sport, and its impact on civil rights. Baseball statistics have undergone a renaissance in the past 20 years, and the "Moneyball" approach to scouting has revolutionized the way players are evaluated. We will read and write about baseball, and learn something about its place in American life over the past 100 years.

Instructor: Gordon.

FYS 079 - The Cactus Throne: The Changing Image of Mexico and Its People
Recent events, such as the adoption of NAFTA and political turmoil in Chiapas, have refocused U.S. attention on Mexico. This course explores the internal and external influences that have shaped the character of the Mexican nation and its people. Topics explored include Mexico's evolving global image, its alternating successes and failures at self-government, its cultural achievements, and its multidimensional interactions with its giant northern neighbor.

Instructor: Shupp.

FYS 080 - Creature: Animals in Contemporary Culture
Why are animals and "animality" becoming more frequent themes in recent literature, performance, and visual art? How is this trend to be understood in relation to global climate change, habitat loss, extinction, ecological ethics, and "pet" economies in contemporary culture? This course begins with a broad introduction to the ways animals have been theorized within our own (Western) intellectual tradition, engages major critical questions within animal philosophy in recent decades, and then applies these rubrics to contemporary texts, performances, and artworks that ask us to think about animals in provocative ways.

Instructor: Rohman.

FYS 081 - Highs and Lows: Reading Culture
Why do you know you should read Shakespeare, but you prefer watching Seinfeld? What is taste? What is judgment? What is quality? This seminar begins by trying to define the differences (if, indeed, there are any) between high culture and popular

culture. Students look at culture as a historical construct, examining how different societies have determined the value and prestige of artifacts and ideas, as well as examining how they, as contemporary Americans, classify written and visual texts as "high" or "low."

Instructor: Donahue, Westfall.

FYS 082 - Reason and Folly
Throughout the history of Western culture, folly has been represented as a challenge to the cognitive capacities of rational thinking. As such, it has been the object of fear, fascination, mockery, praise, and ultimately institutional confinement. This course examines the religious, moral, medical, and aesthetic assumptions that underlie such contrasting attitudes and viewpoints, as well as the rhetorical strategies used to articulate them.

Instructor: Duhl.

FYS 083 - Surviving the Zombie Apocalypse
A full-scale, devastating global pandemic of the kind depicted in many contemporary zombie movies would challenge all of humanity to marshal its resources and solve problems both new and age old. In order for human beings to survive such an apocalyptic scenario, we would need to put every bit of learning and human endeavor (intellectual and other) to work. This course will use the pop culture trope of a zombie apocalypse to introduce students to various kinds of academic inquiry.

Instructor: Tatu.

FYS 084 - Music, Art, and Literature in the Year 1944-1945
As is often the case after cataclysmic world events, things change, as the war in Europe transformed into the Cold War between the US and the Soviets, humanity came under threat of nuclear annihilation. Music, art, and literature of this year provide great insight into these events; it will be our task to explore connections between the works of art created in response to the end of WWII and the beginning of the Cold War.

Instructor: O'Riordan.

FYS 085 - Asian Martial Arts in the West
Beginning in the early 20th century, Asian martial arts have attracted the attention of Western audiences. The fighting styles of Judo, Karate, Kung Fu, as well as the internal style of Tai Chi, have demonstrated a strong influence on fighting and self defense in Western culture. This First Year Seminar examines how Asian martial arts function within American culture by investigating topics such as self defense, military strategy, health and fitness, competitive fighting, and popular entertainment.

Instructor: Torres.

FYS 086 - Propaganda
What is propaganda? What are some of the most common propaganda techniques? How, if at all, does propaganda differ from other forms of persuasion? Is the use of propaganda to influence opinion always ethically suspect? How is it suspect? Is it possible that propaganda could be used to communicate accurate information, or must propaganda always be misleading? This First Year Seminar examines these and related questions from an historical, sociological, psychological and philosophical perspective.

Instructor: Shieber.

FYS 087 - Distant Mirrors, Performing Selves
Traditional performance has defined the individual self as a mirror of the community that creates and participates in a theater event. Has the theatricalization of everyday life through television, advertising, and the Internet changed this? Or is the mirror just more high-tech? Students seek answers to these questions by examining the origins of theater in late medieval Europe and test assumptions by creating an actual communal performance in which all seminar participants take part.

Instructor: O'Neill.

FYS 088 - Mad, Bad, and Dangerous to Know: The Appeal of Evil in Western Culture
Evil has been seductive since the Serpent "invaded" the Garden. In readings ranging from the Bible to gansta rap this seminar considers four paradigms of evil: theological philosophical psychological and political. Students define their own concepts of evil and discuss how culture constructs evil as the ultimate form of alienation-as sickness as secular immorality as political opposition and as religious perversion.

Instructor: Donahue, Tiernan, Westfall.

FYS 089 - Virtue
We will approach the topic of virtue from both a theoretical and a practical perspective. The course will be structured around inquiries into the nature and causes of different sorts of human behavior, from self-discipline and studiousness to anger and resentment. Students will critically consider their own motivations and the causes of their actions. Students will be required to engage in self-transformation projects of their own design intended to alter their own dispositions and habits.

Instructor: Gildenhuys.

FYS 090 - Life Writing
This seminar explores the art and craft of biography and autobiography. In journals, essays, and class presentations, students contribute to the seminar's investigation of the reasons for examining a life, of the stories that come from the inquiry, and of the effects of such stories on readers. Readings are from biographies, autobiographies, journals, diaries, and letters-which serve as models and primary materials for each student's project in life writing.

Instructor: Johnson.

FYS 091 - Serious Games and Critical Contexts
Video games now rival established media forms like film, television, and books. Games are not just about entertainment. Scientists, the military, and corporations have used games to develop human resources, solve research problems, and communicate persuasive messages. This class will examine the role of "serious" video games in contemporary society, considering the potential for games to be: 1) a form of learning; 2) an act of political persuasion; 3) a mode of art.

Instructor: Laquintano.

FYS 092 - Forging the Human: Sci-Fi and Fantasy in Russian and East-European Culture
Artists have long relied on the science fiction and fantasy genres as subtle but precise tools for social and political critique. This

seminar examines 20th century literary and cinematic explorations into future worlds and fantastic transformations of humanity in the volatile regions of Russia and East Central Europe. We consider how technology, revolution, race hatred, and shifting gender norms, prompted artists to radically reimagine the boundaries of the human.

Instructor: Ceballos.

FYS 094 - Bread
This class is an investigation of bread. Our investigation will lead us to understand bread through the filters of science and technology, politics, art, poetry, and religion; through our own experience making and eating bread (yes, lots of delicious bread!); through the methods of production and distribution of bread in local, national, and global markets. The course will unpack our relationship with bread and the many ways it informs our cultural and political world view.

Instructor: Gil.

FYS 095 - Visualizing Immigration
How is the figure of the immigrant portrayed and construed in the media? How do visual representations of immigration reinforce, disrupt, unravel, or dispel stereotypes of minorities? In this course we will explore the reciprocal relations between visual images (film, political cartoons, photography, and news footage) and perceptions about immigration, and we will analyze the role and the power of the media in defining the "other."

Instructor: Stafford.

FYS 096 - Civil Engagement, Leadership, and Social Change
This course is an introduction to the issues, challenges, and opportunities of civic life in Easton, providing a foundation for understanding the roles of public scholarship, community engagement, and social action in democratic citizenship and global stewardship. Students will examine key research and theory underlying current thinking about community engagement as well as explore strategies for responsible social change and leadership in a small urban community.

Instructor: Winfield.

FYS 097 - Latinos, Latinas, and the U.S
This seminar focuses on diverse literary expressions of the Latino/a experience in the U.S., especially from Mexican- and Caribbean-American writers. The representations of Latinos/as in these readings is contrasted with those in popular cultural texts, such as TV and film, in order to highlight the diversity of cultural identities and practices among Latino/a communities. Students also gain a better understanding of how Latinos/as use writing as a means of "inventing" themselves.

Instructor: Donnell.

FYS 099 - Satan, Devils, Demons, and the Other
Is Barney the Dinosaur really Satan? Are devil worshippers sacrificing young women? This seminar examines cases in which particular groups of people have been identified as a source of evil, e.g. Jews in medieval Europe, Satanists and New Agers in twentieth-century America, America as the "Great Satan." Under what circumstances are certain groups likely to be deemed evil? What are the dynamics and consequences of attributing evil to particular groups of people?

Instructor: Rinehart.

FYS 101 - TenLive Concerts
Writing about live performing-arts events challenges us to express ineffable experiences with words. Impressions, comparisons, and descriptions are useful ways to start. But there are also artists' social, historical, and cultural contexts to consider. We will hear from the artists themselves and learn about how they would like us to experience their work. We can express valid arguments through both analytic and subjective perspectives, and we may even apply theories or induce our own.

Instructor: Munisteri.

FYS 102 - On Cooking, Culture, and Cinema
This seminar uses representations of food in visual and print media as a vehicle for exploring U.S. and world cultures, how different people live, and cooking and eating as intimate reflections of cultural identity. Analysis of this topic involves critical oral and written reflection on a variety of readings (recipes and cookbooks, newspaper reviews, and novels) and visual representations (television cooking shows, film, and live demonstrations). Selection, preparation, and sampling of diverse foods are also required.

Instructor: Geoffrion-Vinci.

FYS 103 - The Problem of Peace in the Modern World
This course examines the ways that citizens and politicians worldwide have addressed the "problem of peace" in the modern era. It asks some basic questions: When is war justified? Is peace best pursued through political institutions or moral campaigns? Is peace simply the absence of war or something more substantive? The links (and tensions) between peace movements and other movements, like those for national liberation, women's rights, and civil rights, are also explored.

Instructor: Sanborn.

FYS 104 - Encounters with Infinity
Infinity and the infinite have occupied the thoughts and inspired the imaginations of artists, philosophers, scientists, and mathematicians for centuries, and the history of the study of the infinite is permeated with paradoxes and counter intuitive results. We explore some of the infinite and the related mathematical developments that have been called "the greatest achievements of purely rational human activity."

Instructor: Hill.

FYS 106 - Mate Choice: From People to Peacocks
Sexual reproduction is a driving factor in the animal world, but how do the principles of mate choice apply to humans? In this course, students will investigate the underlying biology of mate choice in non-human animals, and assess if these principles can be applied to humans as well. Students will then examine this topic from additional perspectives, including how social factors and laws affect both short and long term mate choice decisions in humans.

Instructor: Butler.

FYS 107 - Innovation of Warfare
Advances in military technology, their application in weapon systems, and the development of tactics that employ them, are strongly influenced by military traditions, politics. and societal

values. Innovation in tactical air power in the Pacific Theater of World War II was of particular importance as it became the determining factor there.

Instructor: Van Gulick.

FYS 108 - The Art of Letter Writing
This course investigates letter writing in all of its manifestations, from the traditional penned letter to the formal business document, from editorial commentary to email messages. Readings include epistolary fiction (letter novels) from different eras and countries, as well as excerpts from authentic correspondence of illustrious political or literary figures. A selection of film adaptations of epistolary novels are also featured.

Instructor: Lalande.

FYS 109 - Understanding Design
In this seminar course, students use observational drawing, journaling, readings, discussion, and focused writing to develop their observational skills and their understanding of basic design concepts. Students study and evaluate the design of products and spaces and individually and collectively explore and reflect on the elements of good design.

Instructor: Roth.

FYS 110 - E Pluribus Unum: The European Union and the Surrender of Sovereignty
After a long history of fragmentation, conflict, and pessimism, Europe has come to embrace a new era of mutual trust, optimism, and self-confidence, with European Union countries ceding long-cherished sovereignty to a supra-national body, launching a common currency, and reaching out to integrate the new democracies of Eastern and Central Europe. Through readings, films, discussion, and writing, students are engaged in an exploration of the factors that were central to this transformation from nation-state to "United Europe" and of the challenges the EU faces in redefining its own borders and methods of governance.

Instructor: Schumacher.

FYS 111 - Social Justice and the Birth of the Interfaith Movement
Beginning with the World's Parliament of Religions in 1893, interfaith dialogue and cooperation has been an important part of our understanding of the role of religion/spirituality on a global state. Understanding religious and spiritual traditions around the world through engagement in interfaith and interreligious dialogue is becoming an increasingly vibrant and integral part of a liberal arts curriculum. This First Year Seminar will explore social justice issues through the lens of the interfaith movement.

Instructor: A. Hendrickson.

FYS 112 - Once Upon a Time: Fairy Tales from the Brothers Grimm to Disney and Beyond
How well do you really know Cinderella and Snow White? This course will trace these staples of popular culture to their roots in the German folklore tradition and investigate their enduring transnational popularity. We will read and analyze the Brothers Grimm's classic fairy tales in their historical and cultural context, discuss the function and meaning of fairy tales and how they change over time, and study contemporary fairy tale adaptations for the stage, film, and television.

Instructor: Gallagher.

FYS 113 - Womens Coming-of-Age Narratives: A Multicultural Exploration
Many coming-of-age narratives have been considered masterpieces of literature. However, most of these stories have been about boys becoming men. (For example, Catcher in the Rye, A Separate Peace, Huckleberry Finn, and Invisible Man.) Young girls face very different challenges and expectations as they grow to become women. The course examines coming-of-age stories by women from a variety of backgrounds, countries, and eras to begin to understand the forces being exerted on girls in order for them to become women in their societies. Students examine the universal in a womans experience of coming of age.

Instructor: McMahon.

FYS 114 - The Values of Cinema
Learn how to look at works of cinematic art in an informed and reflective way. We will emphasize the importance, to properly understanding and evaluating a movie, of considering all of its cinematic features, including genre, relationship to other works, screenplay, camera work, music, etc., and of becoming informed on whatever is relevant to the content conveyed-all features that a casual viewer might miss. The seminar includes film screenings outside of regular class time.

Instructor: Giovannelli.

FYS 115 - Predicting Human Behavior: The Science and Culture of Testing
Tests are often used to predict behavior, but what can they really tell us? From early attempts like phrenology to more current predictive and diagnostic methods such as personality measures (e.g., the Rorschach inkblot test), cognitive ability tests, SATs, and employee selection tests, assessment has been a controversial subject. The course explores examples of tests used in their historical and cultural context. Students take a hands-on approach to test construction, administration, interpretation, and evaluation.

Instructor: Vinchur.

FYS 116 - The Manipulation of Appearances
Social commentators lament an apparent new rise in dishonesty, the inauthentic" and "spin" in contemporary American society. Such critics are late to the party-individuals and institutions have manipulated appearances for their own ends for centuries. In this seminar we will ask: How do people manipulate appearances successfully? What are some consequences of rampant deception in everyday life? To explore those questions we will study theories of deception and impression management and analyze examples like deceptive advertising political spin and lying in social and work relationships."

Instructor: Shulman.

FYS 118 - Fear
Fear is a pervasive aspect of society. Since the events of 9/11, issues surrounding fear, terror, and personal and national security have become nightly news as well as the foundation for a new national policy. TV shows with fear-based plot features have proliferated. This seminar takes an interdisciplinary approach to the understanding of fear as a primary emotion and as an

influence in society. Through discussion, reading, writing, presentation, and other assignments, students examine fear critically from scientific and sociological perspectives.

Instructor: Reynolds.

FYS 119 - Great Breakthroughs
What are the greatest scientific or technological breakthroughs of human history? Students answer this question by learning and applying the scientific principles, the ingenuity, the technological and social context, and the repercussions of many great breakthroughs. The theme of the course is the debate and comparison of inventions, concepts, and innovators of different eras, from the dawn of recorded history to the present, from the printing press to YouTube, from the ballista to the atomic bomb.

Instructor: Kurtz.

FYS 120 - Theater and Visual Culture
Our first books are picture books, but as we learn to read, the images disappear and our education focuses on reading and writing WORDS. Yet thousands of images surround us each day-in advertising, media, and theater-yet we are rarely taught how to read, analyze, or acknowledge as intellectual property the non-verbal modes of communication. This course will introduce students to techniques for analyzing visual images, focusing on: static images (such as print advertising), "sequential art" (such as graphic novels) and the "languages" of the stage (such as collaborative performance). We will discuss how we receive and respond to images, and how those images function artistically, ethically, and culturally.

Instructor: Westfall.

FYS 121 - Election Rhetoric
Access to the American political system is not fully realized until citizens learn to make critical inquiries into candidates' positions. But political rhetoric does not make full access easy. This course looks to equip students with the rhetorical know-how to analyze and critique the language of political campaigns. By paying close attention to how candidates phrase responses, frame issues, and define themselves and each other, students learn how language can be used to divide and unite.

Instructor: Donahue.

FYS 122 - Psychology and the Media
The media has powerful effects on our beliefs, attitudes, and behaviors. In turn, psychology can help us understand how we consume and relate to the media. This seminar will introduce students to the wide variety of ways in which media and psychology interact. Selected topics include advertising and persuasion, self-help forums and mobile health, news coverage of psychology-related stories, media depictions of violence, and how psychopathology is (mis)portrayed in various media outlets.

Instructor: Wenze.

FYS 123 - Elvis Everywhere
Elvis may have left the building, but he has not left popular culture. In some form or another, Elvis transcends topics ranging from art and film to Elvis as a religious icon. This tutorial examines how Elvis discourses function within popular culture (investigating topics such as race, art, and religion) and examines how these and other aspects of Elvis culture relate to the broader context of American popular culture.

Instructor: Torres.

FYS 124 - Meaning and Morality in Fiction
Have you ever been captivated by a book or movie? This seminar explores the complex nature of enjoyment of fiction, including such paradoxes as being moved by fictional entities we do not even believe to exist and deriving pleasure from fiction that scares or saddens us. Students compare their engagement with fiction to childhood games of make-believe, and ask whether a work's moral failings are grounds for condemning its aesthetic value.

Instructor: Gilligan.

FYS 125 - Love and War in Indian Thought
This course focuses on a close reading of one of the classic texts of the Indian tradition, the Bhagavad-Gita, placing it within its contemporary context (that of India, ca., 200 C.E.), but also attending to its effects on modern thought. Along with the original texts, this course draws on a wealth of Indian and non-Indian materials-from artistic representations to elements of popular culture-in exploring the Gita in terms of both text and context.

Instructor: Tull.

FYS 126 - Satire, Media, and Politics
What is satire? What role does satire play in a political election? In this seminar, we will consider the impacts and ethics of contemporary political satire, from *Saturday Night Live* impersonations to "fake" new programs like *Last Week Tonight*. With the presidential election as a backdrop, we will practice evaluating satire, determining its object, and recognizing common genres and techniques. Using these new analytical tools, we will reflect on the relationship between satire and citizenship.

Instructor: Shreve.

FYS 128 - Germany's Third Reich
Some of the most tragic events in human history took place during the Third Reich in Germany (1933-45). This seminar takes a closer look at the events and policies that caused the creation of the Hitler dictatorship. It also analyzes the Nazi regime with special attention given to the Holocaust and World War II.

Instructor: Pribic.

FYS 129 - War Stories
Through the analysis of firsthand nonfictional or autobiographical accounts of war, students will gain a better understanding of the physical, psychological, and emotional impact that war has on both combatants and noncombatants. Course materials, which include letters, diaries, interviews, narratives, and novels, are drawn from a wide variety of wars and emphasize the experiences of individuals of different nationalities, classes, religions, races, and genders.

Instructor: DeVault.

FYS 130 - Fabulous Fictions: Fairy Tales and the Modern World
The demands of mass marketing and entertainment have tamed once socially responsible and politically aware folk and fairy tales. Using a historical approach, this seminar explores traditional and contemporary adaptations of these genres to better understand the critical reflection, ethical interrogation and

political examination elicited by fairy tale texts. Selections include works by the Brothers Grimm, Shakespeare, Alice Munro, Peter Cashorali, and filmmaker M. Night Shyamalan.

Instructor: I. Smith.

FYS 131 - Order and Justice in the World Community: The Resolution of National Disputes
This seminar takes a comparative approach to explore how different societies deal with internal conflicts resulting from religious, linguistic, racial, or other divisions. By identifying several prominent conflicts and analyzing ways to solve them-through power sharing (e.g. Belgium), federalism (e.g. Canada), minority recognition (e.g. Spain), etc.-we explore the goals of solutions, particularly in terms of justice and order.

Instructor: Peleg.

FYS 132 - Pursuits of Happiness
What is happiness? How should we pursue it? Are we misguided in our expectations of happiness? Conversations about happiness extend beyond the fields of philosophy and religion, as psychologists, economists, and neuroscientists grapple with defining and measuring this often elusive state of being. We will enter this age-old conversation and examine happiness from a multidisciplinary perspective. Throughout the course, we will engage with a wide range of texts, exploring both the internal and external conditions that may shape happiness for the individual and society.

Instructor: Paddock.

FYS 133 - Human Flight: Magic and Madness
Do you dream of flying or does that terrify you? Is flying just the fastest way to travel or something more? This seminar studies the innovators whose vision and relentlessness enabled human flight. Students are invited to scrutinize their own perceptions of flight, as well as the influence of culture, media, and world events on those perceptions. Economic, environmental, and social impacts are considered to ascertain the role of human flight in a sustainable future.

Instructor: Wallace.

FYS 135 - Entrepreneurial Environment: Exploring Innovation, Risk and Value
This course explores the entrepreneurial environment of business: Are entrepreneurs born or made? What cultural and economic factors support the high rate of enterprise creation? How has American history been influenced by the creation and development of business ideas? Course materials include case histories as well as readings from historical, cultural, philosophical, and economic perspectives. Students will learn from entrepreneurs and organizations that support entrepreneurship through site visits.

Instructor: Bukics.

FYS 136 - Learning Science
Learning is central to our lives as students, professors, and citizens. This seminar will focus on the science of learning and how it is applied by individuals and institutions. Sources drawn from psychology, sociology, and other social sciences will inform our discussion of how you can improve your own academic performance and how institutions of higher education can support those goals.

Instructor: Talarico.

FYS 137 - Unity of the Sciences and Ethical Consequences
This course studies the conceptual unity of the physical sciences, giving an overall sketch from the physics of atoms and molecules to biochemistry and into the more speculative realm of the mind. Is there really any underlying unity across this wide spectrum of knowledge? And if so, what would be the consequences for the humanistic aspects of knowledge involving our culture and ethics? This seminar will compare different approaches to this conceptual unity and discuss their strengths and weaknesses.

Instructor: Haug.

FYS 138 - Theater and Social Justice
For thousands of years, the theater has both entertained and provided a forum in which social issues can be explored. This seminar will investigate, through readings and performances, how theater provides an immediate and strong voice to debate social and political problems. Students will have opportunities, through writing, discussion, and theatrical performance, to explore social and political issues and the ways in which dramatic works can inspire social change.

Instructor: Lodge.

FYS 139 - Race, Gender, and Social Issues in Public Policy
This course explores how issues of race, gender, and social class permeate everyday life and how they are addressed in American law and public policy. Using sources from many disciplines including economics, law, and sociology, students explore issues of racial and ethnic identification, the role of race and gender in determining social class, and changes in the racial and ethnic mix of the U.S. population. Particular attention is given to how race, gender, and ethnicity determine social class and how public policy both shapes social class differences and works to mitigate them.

Instructor: Averett.

FYS 140 - The Right to Privacy
The Supreme Court has affirmed a fundamental right to privacy that protects citizens not only from governmental intrusions into their possessions and homes but also from governmental interference with personal decisions on matters such as the gender of sexual partners and whether to terminate a pregnancy. This seminar addresses fundamental questions regarding this right including what privacy is, why privacy is valuable, and whether and to what extent privacy ought to be legally protected.

Instructor: Panichas.

FYS 141 - The Mathematics of Social Justice
Alexander Hamilton said, "The first duty of society is justice." Today there is vociferous argument about the prevalence of justice. To what degree is society just? Are there practical ways to make it more just? This course considers the importance of understanding data and applying mathematics to ask these questions and to explore meaningful answers. Using mathematics that everybody is taught, we'll try to make sense out of conflicting opinions, so as to discover the importance of quantitative literacy for all citizens in a democracy.

Instructor: Root.

FYS 142 - Taking It To The Streets: The Theory And Practice Of Community Arts In Urban America
What role does community arts play in helping people articulate their identity? Whose voices inspire artistic expression? Students investigate social movements, specifically how community arts began and evolved in urban America. Student teams design a project for children and youth that will be implemented through the Kids in Community (KIC) after-school program. No artistic experience necessary.

Corequisite: Two hours a week of local community service.. Instructor: Winfield.

FYS 144 - Science: A Human Endeavor
How do scientists approach problems? Do social, cultural, and political factors influence their work? How has science changed the cultural norms of society? This seminar explores the world of science and medicine through the biographies and writings of Peter Medawar, James Watson, Rosalind Franklin, Trofim Lysenko, Lewis Thomas, and others.

Instructor: Miles.

FYS 145 - Quilts: Fabric that Communicates
Beginning with the history of quilting and its impact on American folk art, this course covers how quilts have been used as a means of expression and communication. The multimedia class offers hands-on quilting education, guest speakers, and films. The class explores color theory and fabric patterns, styles of quilts, quilts in different cultures, and quilts in literature. This class will test your artistic ability while simultaneously challenging your intellectual senses.

Instructor: Piergiovanni.

FYS 146 - Paradoxes
Paradoxical statements are heard every day. Some are logically unsound; others are surprisingly true. How can the two be distinguished? In this seminar, students examine some paradoxes that are important rhetorical devices (yet lack significance) and others that have proved formative in the development of certain bodies of knowledge (Arrows theorem, the paradoxes of Galileo, Simpson, and Zeno, and the cause/effect paradoxes of quantum mechanics, for instance). Oral presentations are fundamental to the student-centered class structure.

Instructor: Traldi.

FYS 147 - A War within a War: The American Bombing Campaigns against Nazi Germany and Imperial Japan
What is the impact of warfare on the human condition? Students engage this question through works of history, fiction, and film about the massive American bomber campaign against Germany and Japan in World War II. They examine the military impact of strategic bombing, its morality, and the appalling costs, both mental and physical, inflicted on its victims-both the non-combatants who were bombed and the young air crews who did the bombing.

Instructor: Miller.

FYS 148 - Melding Mind and Machine
From gaming to restoring motor activity, Brain-Computer Interface (BCI) has provided humankind with an alternate means to control an external device. Invasive and Non-Invasive BCI devices use detected brain activity to control assistive devices, such as a robotic arm, wheelchair, or game controller. In this seminar we will explore the ethical considerations surrounding the research and development of BCI technology as we continue to blur the lines between human and machine.

Instructor: Gabel.

FYS 149 - Living with a Serial Killer: Life on Planet Earth
Floods, hurricanes, landslides, earthquakes, tsunamis...the planet has a full arsenal of weapons with which to kill you. Worse yet, this killer doesn't profile its victims; we're all potential targets. During the 20th century millions of people lost their lives to natural disasters. Can we do anything about these hazards? Should we manipulate earth systems and natural processes? Can we make matters worse? This seminar examines the legal, ethical, and financial ramifications of these questions.

Instructor: Germanoski.

FYS 151 - In the Media
Movies, social media, newspaper articles, and television can inform, transport, and entertain. Documentaries often lay out ethical, leadership, business, or government controversies, but these issues arise in fictional work as well, such as the movie Inception. In this course, students use various media products as the starting point for discussions of ethical standards and normative claims.

Instructor: N. Crain.

FYS 153 - Nanotechnology: Less Really is More
Proponents of nanotechnology claim it will ease world hunger, revolutionize health care, and provide virtually unlimited clean energy. Imagine materials 100 times stronger than steel, computers one billionth the size of a laptop, and nanomachines implanted into your body to modify your DNA, enhance your senses, and improve your ability to process complex information. In this course we review the science behind nanotechnology, discuss its applications, and explore the ethical and economic implications of this emerging technology.

Instructor: Schaffer.

FYS 154 - Nanotechnology and Modern Society
This course will develop the language and introductory scientific basis of nanotechnology, which will provide the technological foundation for discussions of ethical and societal issues related to various uses of nanotechnology. Such discussions are necessary if we as a society are to better address such issues that have already arisen and others that will no doubt arise in the future.

Instructor: Ferri.

FYS 155 - Asian Immigration and Assimilation into America
This course will explore the history and issues involved in the immigration and assimilation of various Asian ethnic groups into the United States and American culture. Students will read and view textual, video, and audio material to determine how a large and diverse group of people have experienced American culture and beliefs and how they have adapted. The students will also learn how issues such as age, ethnicity, gender and religion have affected how these immigrants have perceived American culture and society and vice versa.

Instructor: Liew.

FYS 156 - Narratives of Mental Illness

Obsessive-compulsive disorder, Tourettes syndrome, depression, eating disorders-this seminar introduces students to a wide range of texts (memoirs and first-person narratives, films, painting, and medical and philosophical treatises) that focus on the experience of living with mental illness. Particular attention is paid to the style and form of textual representations of psychological disorders, as well as to the cultural and philosophical questions such texts raise about the very category of "mental illness."

Instructor: Cefalu.

FYS 157 - Islands and Isolation
Islands are, almost by definition, unique. While being temporary homes to an increasing number of tourists, they also harbor endemic biological oddities and are among the most fragile ecosystems on Earth. This seminar examines the situation of isolation across the fields of geology, evolutionary biology, human geography, and literature. Topics include the dynamics of isolated populations, the historical importance of islands, and the effects of isolation on culture and the human psyche.

Instructor: Sunderlin.

FYS 158 - Nonviolence: Theory and Practice
This course explores both the theoretical development of nonviolence and the practice of nonviolence as a means for waging and resolving conflict. Using the examples of Mohandas Gandhi and India's independence movement, the 1989 revolutions in Eastern Europe, the power of music in the anti-apartheid movement in South Africa, as well as the personal testimonies of individuals and various groups pursuing nonviolent change in the Lehigh Valley, this course explores the principles of nonviolence in action.

Instructor: Fabian.

FYS 162 - Music in European Society
The course does not assume knowledge of music on the students' part; nor does it require that they master notation or become conversant with musical analysis. Rather, the course examines developments in European history that have left their traces in the music. It relates music to developments in European culture and explains the distinctive characteristics of the music of a period in relation to those larger developments that underlie its cultural productivity.

Instructor: Cummings.

FYS 163 - Power and Political Cartoons
What makes a political cartoon powerful? Through oral and written analysis of cartoons, we will explore the political and cultural power of this important visual medium. As you study political cartoons and craft your own, we will discuss the significance of the creative process, point of view, cultural sensitivity and offensiveness, and censorship. Researching a political cartoon's cultural specificity will help us interpret its message and evaluate its creativity and effectiveness.

Instructor: J. Kelly.

FYS 164 - 'Us' and 'Them': The Human Group Imperative
Will our future be one of continued divisiveness? Or are we 'progressing' towards global species consolidation and a decline in human diversity? In this seminar, we will examine evolutionary history to understand the human imperative to categorize people, exploring how 'race', ethnicity, nationality, and religion are used to define 'in groups' and 'out groups'. We also will ask if such groups are natural or artificial human constructs, acknowledging that such categorization leads to competition, stereotyping, discrimination and war.

Instructor: Leibel.

FYS 165 - Stories from the Archive
How do we tell stories about the past? How do we find things to tell stories about? These two questions form the core of this seminar, which introduces students to methods of archival research as well as practices in writing academic and creative narratives based on that research. Readings in history and historical fiction, film screenings, and field trips to historical sites will be among the assignments that build into students' individual projects.

Instructor: Phillips.

FYS 166 - Atheism and Skepticism
Why have people chosen to be atheists or skeptics? What arguments have they used to support their positions? Several recent bestselling books have criticized organized religion as a dangerous delusion, and scientists are currently searching for a possible biological (rather than supernatural) basis for religious faith. Criticism of religion, however, has a long and colorful history. In this course, we will study examples of atheism and skepticism in different cultural contexts from Asia and the West.

Instructor: Rinehart.

FYS 167 - Beyond Belief
ESP, the occult, urban legends, conspiracy theories, and "weird" science...Beliefs are perhaps the most central of all cognitive phenomena, yet there is widespread disagreement concerning what exactly beliefs are or how they are to be understood. In this seminar we will use examples of problematic beliefs-in order to shed light on our own beliefs and how we formed them.

Instructor: Shieber.

FYS 169 - The 1960s: The Causes and the Effects of Social Change
The Civil Rights Movement, the Antiwar Movement, the Space Race, and, of course, Sex, Drugs and Rock 'n Roll...Through an examination of written and oral histories, documentary film, the poetry, music and visual arts of the Sixties, students will explore the underlying causes for change during the nation's most tumultuous decades. In addition to the causes, students will determine for themselves the influences that the 1960s have had on the present day.

Instructor: Newman.

FYS 170 - Art, Morality, and the Limits of Expression
"Morally offensive...", "A danger to society..." Contemporary artistic creations sometimes elicit strong negative reactions, especially when they provoke moral, religious, or other cultural sensibilities, or when they are perceived as potentially influencing people's behavior in undesirable ways. In this seminar we will focus on such issues as freedom of expression and censorship, the status and role of propaganda, and the interpretation and reception of art, examining them from philosophical, legal, and social points of view.

Instructor: Giovannelli.

FYS 171 - The Sounds of Silence
Is silence a rare commodity in the Information Age? Is "noise" everywhere, or do sound and silence emerge in patterned ways? Are all silences identical? This course explores the many "sounds" of silence. We seek it at a meditation class, and consider how it structures everyday conversation and even life on a college campus. We turn to conspiracies of silence, and ask how social silencing works: who silences whom, how, and why?

Instructor: Andrea Smith.

FYS 172 - Adventure and Exploration Meet the 21st Century
Why do people seek out adventure? How do they justify the risks? This seminar explores the challenges adventurers face and the sacrifices they make. Personal and biographical accounts of polar, desert, and mountain explorations are critically analyzed, including the 1996/2006 Everest expeditions. Students will examine personal and societal pressures that compel individuals to risk all, along with the importance of leadership and teamwork. Modern adventures, including extreme sports and virtual worlds, will also be discussed.

Instructor: Raich.

FYS 173 - ¡Latin@s!
Popular media from the news to film is filled with references to Latinos and Latinas, but what do we really know about them? This course explores the Latinization of the United States, highlighting the social, demographic and cultural forces that have shaped Latino/a experiences in recent decades. Specific course content includes social scientific studies of Latino/a immigration and community formation, and representations of and by Latinos/as in novels, essays, TV and movies.

Instructor: Donnell.

FYS 174 - This IsYour Brain on Drugs
How does our culture view drugs, drug use, and the effects of drugs on our brains and behavior? In this course we will consider a range of perspectives on the issue from biology, neuroscience, psychology, and philosophy. We will also consider how scientific and popular debates have changed over time. Working in small groups, students will research a specific drug and at the end of term present their case for legalizing the drug or not.

Instructor: Dearworth.

FYS 175 - Science or Pseudoscience?
Many of today's important issues have a scientific component. From global warming to personal nutrition and health, and everywhere in between, scientific-sounding claims are made to bolster arguments and persuade readers and consumers. How can we sensibly distinguish genuine science from pseudoscience? In this course, we will examine what distinguishes science from pseudoscience, and why it matters. Students will observe claims, in advertising and the news, investigate them, and report on their findings.

Instructor: Dougherty.

FYS 176 - America at War in the 20th Century
This course traces the evolution of the art of war in the 20th Century American democracy. Emphasis is placed on the origins of wars, strategies, tactics and their fluid nature as the United States adjusted to changing social, political, economic and technological developments. The greatest emphasis is placed upon the role and experience of the "fighting man" through a series of ten guest speakers, all of whom experienced front line combat.

Instructor: Tiernan.

FYS 177 - The Year 1912-1913: Music, Art, and Literature Anticipating WWI
The year 1912-13 witnessed the creation or introduction of several remarkable works of art: musical compositions such as Mahler's Ninth Symphony, Stravinsky's The Rite of Spring, and Schoenberg's Pierrot Lunaire; visual art by Picasso, Chagall, and others; literature by Cather, Conrad, Kafka, Lawrence, and others. Our tasks in this seminar will be to explore the connections between these and other works of art in the context of pre-WWI society and make meaningful comparisons between art of different disciplines.

Instructor: O' Riordan.

FYS 178 - Mental Illnesss, Disability Studies, and Popular Culture
Obsessive-compulsive disorder, depression, eating disorders...This seminar introduces students to a wide range of texts (memoirs and first-person narratives, films, paintings, and medical and philosophical treatises) that focus on the experience of living with mental illness. Particular attention will be paid to the style and form of textual representations of psychological disorders, as well as to the cultural and philosophical questions such texts raise about the very category of "mental illness."

Instructor: Cefalu.

FYS 179 - Leveraging Social Entrepreneurship to Alleviate Poverty and Unfreedoms
Market-based social entrepreneurship as an approach to addressing poverty, unfreedoms and the lack of localized agency among the poor in economic development has seen a rise in prominence. This is often attributed to the failures of national governments, multi-lateral agencies, and conventional philanthropy to respond dynamically to the challenges posed by changing global and technology landscapes. These failures also reflect a reliance on an outmoded development paradigm that is both inattentive and unresponsive to the modern needs of income poor people to be primary owners of their development experiences, a possibility made more realistic because of globalization and technological change. In essence, as first noted by Adam Smith and reported in Amarta Sen, freedom of exchange and transaction is in itself part and parcel of the basic liberties that people have to celebrate, and as Sen himself points out, "the freedom to participate in economic interchange has a basic role in social living."

Instructor: Hutchinson.

FYS 181 - No Child Left Behind? Education, Social Justice, and the United States
Can schools change society? This seminar surveys historical, sociological, legal, and political perspectives on the role of education in advancing social justice in America. Students will reflect on personal educational paths, learn about and apply critical theory, and consider divergent views on the responsibility of education to remedy past ills related to race, class, gender and other social issues. The course also situates the U.S. educational system within the increasingly competitive global community.

Instructor: McKnight.

FYS 182 - Finding Happiness
Happiness seems to be something we all want; yet it remains elusive to many of us. What exactly is this thing we are looking for and how can we improve our chances of finding it? In this class we will attempt to figure out what happiness is and whether there are any mental habits, behaviors, or social arrangements that have been empirically demonstrated to contribute to or detract from happiness. Readings will draw from a number of different disciplines including philosophy, psychology, literature, history, religion, and economics.

Instructor: Masto.

FYS 183 - A Sense of Place: Gender, Environmentalism, and the First-Year Experience.
This course is intended to challenge you, as first-students who have left home perhaps for the first time, to think about what it means to belong to a place. In the weeks and months ahead of you, you will have to navigate a new space and carve new identities for yourselves-as students, roommates, sons or daughters, citizens-from within this space. This course will ask you to reflect openly on your own experiences and to look beyond them as well.

Instructor: Gilligan.

FYS 186 - Literacy in the Digital Age
This seminar will examine the ways in which technology influences reading, writing, and learning. The readings, writing assignments, projects, and field experiences in the course will encourage you to examine your own experiences and beliefs about literacy, and the impact of technology on those experiences, while providing clear, logical, and well supported reasons for believing as you do.

Instructor: Tatu.

FYS 188 - Democracy 2.0: Movements and Markets in the Participation Economy
The tide of declining civic participation seems to be turning. Facebook groups, cellphone polling, and Twitter revolutions have given everyday people a chance to share their opinions at formerly unheard-of-scales. But some worry that "Democracy 2.0" has become big business. Is all of this engagement really about empowerment? This seminar will explore the economic and political potential of participatory technologies from the standpoint of emerging research on the entanglement of social movements and markets.

Instructor: Lee.

FYS 189 - Silk Roads and Sea
From the 2nd c. BCE to the 15th c. CE, the Eurasian continent was profoundly transformed by the "Silk Roads," a series of overland and maritime trade routes stretching between China and Rome. This course will explore not only the exotic goods that were traded, including silk, porcelain, gold, and even horses, but also the transmission of religious beliefs (Buddhism, Islam, and Christianity), artistic and musical practices, and technologies between peoples of vastly different cultures.

Instructor: Furniss.

FYS 190 - Biology of Women
A course on the distinct biology of women, the roles of reproductive science in society, and the empowerment of women through knowledge of their own bodies. Topics include: female development and anatomy, endocrine cyclicity, contraception, sexually transmitted infections, infertility, pregnancy, birth and breastfeeding, menopause, and women's diseases and cancers. Although primarily a discussion class, students will collect data on themselves, conduct several laboratory practica, and keep body journals.

Instructor: Edlund.

FYS 191 - Crossroads of the 21st Century
Our society finds itself at a number of critical crossroads. How we proceed will affect our own health, the health of the environment, and may redefine what it means to be human. We will take an interdisciplinary study of: (1) the future of food and its sources (2) the future of energy generation and consumption, and (3) what it means to be human in an era of highly advanced engineering and technological abilities.

Instructor: Mylon.

FYS 192 - Facing the Fetus: Perspectives on the Abortion Controversy
Is abortion moral? Should it be legal? Is the availability of abortion required for the exercise of liberty and the achievement of equality? How are debates about these questions mobilized in the political arena? This course will examine philosophical, legal, and political perspectives on the abortion controversy.

Instructor: Silverstein.

FYS 193 - Meaning in Light: Cinema and Philosophy
Film's potential to help us gain philosophical understanding and achieve personal, moral growth have been subject to intense scholarly investigation. In this seminar, we will explore a few fundamental issues regarding life's meaning and value with the help of films, while inquiring into whether and how film as art can contribute to knowledge and moral understanding. Assignments include readings mostly drawn from contemporary philosophy and film viewings to be completed outside of class.

Instructor: Giovannelli.

FYS 194 - Cries, Pleas, and Roars: Statements of Identity in Modern Music
Humans are frequently requested to define our existence via our experiences, our relationships, and our values. As members of numerous collectives (ancestral, social, educational, etc.), it seems our identity is often pre-determined. Some details of our existence require an uncomplicated explanation; some necessitate more reflection. This course will examine how artistic expression through music provides a narrative to our individuality. In the process, student analysis will ascertain if musical messages are forthright, ambiguous, or contradictory.

Instructor: Roadfeldt.

FYS 195 - Russia Today
"A riddle wrapped in a mystery inside an enigma," is how Winston Churchill famously described Russia. Decades later, after the Cold War and amidst the resurgence of Russia's influence on the world stage, this seminar asks the question: What is Russia today? Taking into account conservative and liberal movements, we will study mass media, contemporary literature

and cinema, and activism under Putin with an eye to challenging our assumptions about Russia culture, politics, and history.

Instructor: Ceballos.

FYS 196 - Exploring Chinese Culture
What does it mean to be Chinese? What are some central aspects of Chinese culture? How do the traditional values and beliefs continue to shape contemporary China? Through a combination of lectures, discussions, and cultural events, this seminar will provide the students with a grasp of significant cultural achievements in China and the critical vocabulary that is essential to discuss and analyze Chinese culture and related issues in an intelligent and informed manner.

Instructor: Luo.

FYS 197 - Deconstructing "Africa"
The African continent has been subject to a wide range of perspectives from the Greco-Roman period to the present, many of which have misrepresented the diversity, sophistication, and contributions of African people and communities to world history. This seminar introduces students to African life in the past and present beyond existing stereotypes. Taking an Afro-centric view, it examines African agency through history, philosophy, fiction, art, and film to explain why the 21st century will ultimately be known as the African Century.

Instructor: Lee.

GEOL - GEOLOGY AND ENVIRONMENTAL GEOSCIENCES

GEOL 100 - Introduction to Geology: From Fire to Ice
A broad introduction to the geological processes acting within the earth and on its surface that produce volcanoes, earthquakes, mountain belts, mineral deposits, and ocean basins. The course considers the dramatic effects of plate tectonics, as well as the enormous periods of time over which geologic processes take place, also familiar features of the landscape formed by landslides, rivers, groundwater, and glaciers. Practical aspects are learned through discovery-oriented laboratory exercises, which include several field excursions. Lecture/laboratory. Preference to first- and second-year students, geology majors, and environmental science minors. [NS]

Instructor: Carley.

GEOL 110 - Introduction to Geology: Environmental Geology
From human perspective on the earth's surface, the planet appears almost infinite. From an Apollo spacecraft, however, earth is simply a larger spaceship with more resources, but nonetheless finite. The course examines the interplay between land-use activity and geologic processes such as flooding, shoreline erosion, and soil erosion. Students explore groundwater resources, geological constraints on waste disposal, and impacts of resource utilization, such as acid rain and the greenhouse effect. Lecture/laboratory/ field excursions. Preference to first- and second-year students, geology majors, and environmental science minors. [NS]

Instructor: Germanoski.

GEOL 115 - Introduction to Geology: Earth-Evolution of a Habitable Planet
Earth's climate has changed dramatically over its history, moving between completely ice-free intervals to periods of global glaciations. How and why did these major climatic changes occur? What can history teach about the future of the climate? This course identifies the major components of the climate system and explores factors and processes that influence the system over a variety of timescales. Using major lessons learned from Earth's history, this course considers the climatological impact of human activity in this century and examines current ideas about the climatic future. [NS]

Instructor: Lawrence.

GEOL 120 - Introduction to Geology: Geological Disasters-Agents of Chaos
Earthquakes, volcanic eruptions, landslides, hurricanes, floods, tsunamis, and asteroid impacts are all part of the geologic evolution of the earth. For many different reasons, humans are exposed to the often severe consequences of living in areas vulnerable to the violence of nature. This course examines these processes from both scientific and personal perspectives to understand why and where they occur and how human activity has interfered with natural processes, perhaps making the planet more prone to disaster. Lecture/laboratory. Preference to first- and second-year students, geology majors, and environmental science minors. Not open to students who have taken GEOL 150. [NS]

Instructor: Malinconico.

GEOL 130 - Introduction to Geology: Dinosaurs, Darwin, and Deep Time
Human occupation of this planet has been confined to the amazingly brief, last sliver of geologic time. This course is an introduction to the immensity of deep time before our existence. The class explores how the history of gradual processes, exceptional events, and biotic evolution has shaped our world and, ultimately, us. Course topics include the fundamentals of earth materials, plate tectonics, and paleobiology. [NS]

Instructor: Sunderlin.

GEOL 150 - The Geologic Evolution of the Hawaiian Islands
This course provides students with an understanding of how volcanic, geomorphic, and coastal processes have shaped, and continue to shape, the Hawaiian Islands. The course focuses on volcanism, land form development, and coastal processes. The Hawaiian Islands provide a unique opportunity to study active volcanic processes building the islands in conjunction with geomorphic processes that alter the volcanic landscape. The Hawaiian landscape ranges in age from 25 million years to minutes old. Students see volcanic processes creating the islands and how the soils, landscapes, and coasts have evolved through time. [NS]

Instructor: Germanoski, Malinconico. Offered: Interim Session.

GEOL 160 - Geology from A (Arches) to Z (Zion): The Geology of National Parks in the Western United States
Students develop an understanding of basic geological processes and how they shape the Earth by visiting different national parks in Colorado, Arizona, New Mexico, California, and Utah. Topics covered in an introductory geology course are learned in an

experiential field experience instead of typical lecture-lab. For example, in the canyon lands (Grand, Bryce, and Zion) students examine the fossil record preserved in the rocks; in California, they study geological hazards (earthquakes, landslides, and volcanism) by field studies of the San Andreas Fault, mass-wasting in Pt Reyes National Seashore, and volcanism at Lassen volcano. [NS]

Instructor: Malinconico, Sunderlin. Offered: Interim Session.

GEOL 170 - Geological and Paleobiological Evolution of Ecuador and the Galapagos Islands
This course will examine the coupled natural history of earth and life over geological time scales. We will focus on the origin of oceanic crusts and hot spot island archipelagos, the development of continental mountain ranges, and the relationship of geological processes to biogeography and biological evolution. [NS]

Instructor: Malinconico, Sunderlin, Hill. Offered: Interim Session.

GEOL 180 - Iceland: Geology and Natural History of a Young Island
Iceland is a geologically new and unique island. The dynamic glacial environments, sub-polar climate, and thunderous river systems of the country sit atop an active volcanic system on a divergent plate boundary. This intensive field course explores the geological processes that shape the island's landscape and the climate and life of a sub-polar biome. The course also addresses aspects of Iceland's human ecology from its early settlement to modern issues of energy, agriculture, and sustainability. [NS]

Instructor: Sunderlin, Malinconico.

GEOL 190 - Climate Change and Human Civilizations
All organisms are sensitive to their environment. Humans are no exception. Using scientific and historical sources we will examine the relationship between climate and humans throughout human history. In addition to a brief introduction to the Earth's climate system and several case studies of the impacts of changing climate on past human societies, this course will explore modern human-induced climate change and consider what lessons might be learned from the experiences of our ancestors. [STSC]

Prerequisite: A 100-level laboratory science course, preferably in Geology. Instructor: Lawrence.

GEOL 195 - The Earth in Eruption: Physical Volcanology
More than 500 million people live near the more than 1500 known active volcanoes and are constantly facing serious threats from eruptive activity. This course is a comprehensive overview of the processes that control when and how volcanoes erupt. We will focus on where volcanoes occur, what makes them erupt and the nature of volcanic eruptions and their products and how they differ, and finally on how volcanoes affect humans and the environment. Preference to first- and second-year students [STSC]

Prerequisite: Any 100 level Geology course. Instructor: Lawrence, Malinconico.

GEOL 200 - Earth and Planetary Materials
Introduction to the crystallographic, structural, and chemical characteristics of rock-forming minerals. Consideration of the processes and variables that control mineral formation. Igneous, metamorphic, hydrothermal, and sedimentary environments in which common minerals form. X-ray powder diffraction techniques used to identify earth materials and to determine unit-cell dimensions. Laboratory includes discovery-oriented exercises in X-ray diffraction, mineral identification, and crystallography, as well as high-temperature experiments in phase equilibria. Lecture/laboratory.

Prerequisite: Any 100-level geology course and elementary chemistry, or permission of instructor. Instructor: Carley.

GEOL 205 - Oceanography
This course explores the physical, chemical, and biological systems of the oceans and human impacts on these systems. Topics include the origin of the oceans, marine geology, ocean circulation, ocean exploration, coastal and open ocean processes, and marine ecosystems. Through a series of case studies we will examine the impacts of humans on marine environments at both the global and regional scales. Priority given to geology majors, environmental science and studies majors, and first- and second-year students.

Prerequisite: Any 100-level geology course or permission of instructor. Instructor: Lawrence.

GEOL 210 - Hydrogeology
The study of groundwater occurrence, flow, quality, and utilization. The characteristics of the geologic environment which determine the hydrogeologic system are discussed. Principles of groundwater flow, surface water and groundwater interaction, aquifer response to pumping, and regional groundwater flow are examined. The course also focuses on groundwater contamination and remediation (clean-up"). Field projects use a well-field at Metzgar Fields and local remediation sites. Lecture/laboratory. [NS]"

Prerequisite: Any 100-level geology course. Instructor: Germanoski.

GEOL 211 - Rivers and Watersheds: Form and Function
This course examines the role of rivers in the landscape within the context of their watersheds. Through a combination of lectures, field and lab exercises, and research projects, students will explore the relationships between river hydrology, river morphology, sediment transport, and watersheds. The course will also evaluate how dams and other human disruptions can disturb the natural equilibrium in these dynamic systems. In addition to theses scientific approaches,the course will also consider rivers as a focus of philosophical and artistic expression.

Prerequisite: EVST 100 or GEOL 110 or CE 321 or permission of instructor. Instructor: Germanoski, Brandes.

GEOL 215 - Sedimentology and Stratigraphy
Sediments and sedimentary rocks record information about Earth's surface environments and their change through geologic time. This course is a detailed study of the development and structure of both sedimentary deposits and the stratigraphic record. Focus topics include modern and ancient depositional systems, field stratigraphy, and basin analysis.

Prerequisite: Any 100-level geology course or permission of instructor. Instructor: Sunderlin.

GEOL 220 - Paleolimnology
Paleolimnology is the study of the physical, chemical and biological properties of lake sediments in order to reconstruct past

environmental conditions. This course includes an overview of modern lake processes, an introduction to paleolimnological techniques, and evaluates contributions of paleolimnological research to our understanding of global change. This course includes a series of integrated field and laboratory investigations resembling an authentic research project focused on a local lake.

Prerequisite: Any introductory geology course. Instructor: Cook.

GEOL 229 - Geographic Information Systems and Remote Sensing in the Geosciences
A broad introduction to the use of Geographic Information Systems (GIS) within the geosciences. The relationships between geography, geology, and society will be pursued. Students will be exposed to both pertinent computer and analytical skills common to GIS, including both field and computer based projects that explore spatial data (regions, rocks), and their associated attributes (feature data). [NS]

Prerequisite: Geology 100 level course or permission of the instructor. Instructor: Wilson.

GEOL 300 - Earth Surface Processes
Comprehensive analysis of geological processes that produce, maintain, and change the earth's surface. Topics include tectonics and land forms, rock weathering, soil development, hill slope processes, and river and glacial erosion and deposition. Explore where earth surface processes and land forms are viewed as interacting components of a complex system. The operation of geomorphic systems is examined from a process-response perspective. Laboratory includes map and aerial photo analysis as well as field work and a project. Lecture/laboratory. [W]

Prerequisite: Any 100-level geology course. GEOL 200 and GEOL 317 are recommended. Instructor: Germanoski.

GEOL 307 - Igneous and Metamorphic Petrology
An examination of igneous and metamorphic rocks as records of the crustal evolution of the earth. The origins and existence of these rocks are examined in view of chemical phase equilibria and igneous and metamorphic processes. Laboratory work emphasizes the identification and classification of igneous and metamorphic rocks using hand samples, thin section identification, X-ray powder diffraction, analytical techniques, and field relationships.

Prerequisite: GEOL 200. Instructor: Carley.

GEOL 315 - Paleoclimatology and Paleoceanography
Understanding Earth's climate system and predicting future climatic change requires both the study of the climate processes that operate within the Earth system as well as detailed studies of climate changes in the past. Direct human observations of climate have captured only a very small fraction of the potential range of Earth's climatic variability. In contrast, the geologic record provides a rich archive of past variations in climate. In this course, we will explore the processes that control Earth's climate, investigate and interpret the geologic record of past climatic changes, and examine methods used to reconstruct past climates. [W]

Prerequisite: GEOL 115, GEOL 130, or GEOL 205 or permission of the instructor. Instructor: Lawrence.

GEOL 317 - Structure and Tectonics of the Earth
An examination of global tectonics and the response of rocks to stress at all scales, with an emphasis on an understanding of the relationship of structural geology to tectonic theory. This includes a systematic study of folds, faults, joints, foliations, and lineations from which the geometric relationships and deformational history of the earth's crust can be deduced. Lecture/laboratory/required weekend field trips. [W]

Prerequisite: Any 100-level geology course. GEOL 215 (or concurrent) recommended. Instructor: Malinconico.

GEOL 320 - Paleobiology
An organismal and systems approach to the study of the marine and terrestrial fossil record. The course focuses on diversification and extinction of biotas in the context of the environmental history of Earth. Lecture, weekly laboratory, and one weekend field trip.

Prerequisite: Any college level Geology or any Biology course. Instructor: Sunderlin.

GEOL 321 - Geochemistry
An introduction to the chemical and thermodynamic principles and processes that control geological phenomena both at the earth's surface and deep within the earth. Consideration of solid-earth equilibria (igneous, metamorphic, sedimentary, and weathering reactions), isotope geochemistry oxidation-reduction, natural aqueous solutions, and solid-aqueous equilibria. Lecture/problem-solving.

Prerequisite: GEOL 200 and elementary calculus, or permission of instructor. Instructor: Carley.

GEOL 322 - Environmental Geophysics
Introduction to the geophysical techniques used to study large- and small-scale features and processes of the Earth. Emphasis placed on the fundamental principles of gravity, magnetism, seismology, heat transfer, and electrical methods as they apply to environmental problems through classroom lectures and laboratory and field exercises. Lecture/laboratory.

Prerequisite: Any 100-level geology course. GEOL 317 and introductory physics recommended. Instructor: Malinconico.

GEOL 351-360 - Geological Problems
Original research problems in the geosciences: environmental studies, mineralogy-geochemistry, sedimentology-oceanography, geomorphology-groundwater, structural geology-tectonics, geophysics, petrology-petrogenesis, paleontology-stratigraphy, and additional subjects of specialized interest. For advanced geology and geoscience students.

Prerequisite: Requires departmental permission. Instructor: Staff.

GEOL 495-496 - Thesis
Individual field and laboratory problems involving the preparation of a thesis. Open to qualified students only. [One W credit only upon completion of both 495 and 496]

Instructor: Staff.

GERM - GERMAN

GERM 101 - Elementary German I
Fundamentals of spoken and written language. Development of reading, writing, speaking, and listening skills. An introduction to

the culture of Germany and German-speaking countries. Class/laboratory. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department.

Instructor: Staff.

GERM 102 - Elementary German II
Fundamentals of spoken and written language. Development of reading, writing, speaking, and listening skills. An introduction to the culture of Germany and German-speaking countries. Class/laboratory. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [H]

Prerequisite: GERM 101 or equivalent proficiency. Instructor: Staff.

GERM 108 - Independent Study Project in Beginning and Intermediate German
The course provides students, who take German at Jacobs University Bremen during the spring semester, with the opportunity to fulfill the German language sequence on either the beginning (GERM 102) or the intermediate level (GERM 110 or GERM 112) by completing an independent study project that has to be approved by the German instructor prior to departure. While abroad, students work under close guidance of the instructor and meet regularly using online communication media. At the end of the semester, students submit their final project for assessment by the German instructor. 0.50 credit course. [H]

Prerequisite: Permission of the German instructor and the Department Head prior to departure. Instructor: Staff.

GERM 111 - Intermediate German I
Review of fundamental principles of grammar and syntax and expansion of vocabulary with short literary and cultural readings. Attention to improving reading, sharpening conversational skills, and developing a deeper understanding of the culture of Germany and other German-speaking countries.
Class/laboratory. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [H]

Prerequisite: GERM 102 or equivalent proficiency. Instructor: Staff.

GERM 112 - Intermediate German II
Review of fundamental principles of grammar and syntax and expansion of vocabulary with short literary and cultural readings. Attention to improving reading, sharpening conversational skills, and developing a deeper understanding of the culture of Germany and other German-speaking countries. Class/laboratory. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [GM2, H]

Prerequisite: GERM 111 or equivalent proficiency. Instructor: Staff.

GERM 201 - Advanced German
This course is designed for students who have advanced German proficiency. Intensive review and practice of fundamental principles of grammar and syntax, and the expansion of vocabulary with a variety of cultural texts. Attention to improving reading, sharpening conversational skills, and developing a deeper understanding of major historical and contemporary aspects of German civilization and the culture of German-speaking countries. [H, GM2]

Prerequisite: GERM 112 or equivalent proficiency. Instructor: Staff.

GERM 202 - Advanced German
This course is designed for students who have advanced German proficiency. Intensive review and practice of fundamental principles of grammar and syntax, and the expansion of vocabulary with a variety of cultural texts. Attention to improving reading, sharpening conversational skills, and developing a deeper understanding of major historical and contemporary aspects of German civilization and the culture of German-speaking countries. [H, GM2]

Prerequisite: GERM 112 or equivalent proficiency. Instructor: Staff.

GERM 211 - Advanced German
Students will expand and deepen their cultural literacy and interpretive skills by exploring issues of social, cultural, and political significance in German-speaking countries. Through focusing on a variety of textual materials on such topics as identity and multiculturalism, migration and immigration, matters of social justice for women and minorities in modern and contemporary Germany, Austria, and German-speaking Switzerland, students will expand their skills in understanding and using the German language in a broad variety of cultural contexts. Students will receive advanced training of the four skills (listening, speaking, reading, and writing). Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [H]

Prerequisite: GERM 112 or equivalent proficiency. Instructor: Staff.

GERM 212 - Vienna and Berlin in Architecture, Literature, and Film
This course focuses on Vienna and Berlin during the 20th century, and how the past shaped the present. Texts and films present the cities' fascinating art and architecture that reflect the cities' histories and help deepen our understanding of such topics as women's rights and the emergence of the "new" woman, anti-Semitism and the rise of National Socialism, forced migration, the reemergence of Austria as a neutral nation, coming to terms with the Nazi past, the second feminist movement, and challenges for today's Berlin and Vienna as world-class cities.[GM1]

Prerequisite: GERM 211 or equivalent. Instructor: Bettray, Lamb-Faffelberger.

GERM 225 - Business German
This course is designed for students who already have a firm grasp of German language skills (e.g., based on at least four years of high school instruction). Focus on business culture, terminology, and vocabulary, and information about Germany today and other German-speaking countries and their place in both the European and the world markets. Readings of business-related texts and oral presentations. [H]

Prerequisite: GERM 112 or equivalent proficiency. Instructor: Staff.

GERM 311 - German and Austiran Identities as Reflected in Contemporary Media
This course studies texts from newspapers, magazines, and the Internet, and critically views newsreels and video documentaries. Focus on contemporary issues and sociopolitical developments in Germany and German-speaking countries. Emphasis on everyday conversational and idiomatic German. [GM1, H]

Instructor: Lamb-Faffelberger, Bettray.

GERM 312 - Exploring German America
This course critically examines diverse readings in German poetry, prose, and drama of the previous two centuries with a focus on critical analysis of contextual meaning and the structure of literary texts. Introduction to literary terminology and techniques of interpretation. Literature as a reflection of Zeitgeist (social taste or the characteristic spirit of the times) that gave form to the cultural outlook of an epoch or generation). [GM1, H]

Instructor: Lamb-Faffelberger, Bettray.

GERM 321 - A Journey through German Cultural History: Texts and Contexts before 1750
This course chronologically traces the development of forms of artistic expression in German literature, respectively within each new historical, cultural, and sociopolitical framework. Representative readings from the beginnings of German literary writings in the seventh century through the Middle Ages, the Renaissance, the Baroque, to the Age of Enlightenment. Discussion of intellectual and philosophical movements. [H]

Instructor: Bettray, Lamb-Faffelberger.

GERM 322 - German Literature and Culture after 1750
This course chronologically traces the development of forms of artistic expression in German literature, respectively within each new historical, cultural, and sociopolitical framework. Representative readings from the Classical Era of the late eighteenth century to the present. Emphasis on characteristics and trends of major literary movements. Introduction to notable modes of artistic expression such as Classicism, Romanticism, Realism, Naturalism, Impressionism, Expressionism, and Modernism. [GM2, H]

Instructor: Lamb-Faffelberger, Bettray.

GERM 423 - German Literature and Culture in the Age of Imperialism
Highlights characteristics of social perceptions as reflected in literary movements. Analysis and interpretation of literature as a medium for critiquing historical and social developments. Literary responses to political absolutism through the growth of liberalism and nationalism. Social forces reflected in literature from the Age of Enlightenment through Storm and Stress, Classicism, Romanticism, Realism, and Naturalism. [GM2, H, W]

Prerequisite: Completion of at least one 300-level course. Instructor: Lamb-Faffelberger, Bettray.

GERM 424 - From Modernism to Postmodernism and Beyond: Literature and Film of the German-Speaking World in the Twentieth Century
This course provides a comprehensive overview of poetry, prose, and drama of the twentieth century. Focus is on matters of literary style, as well as major social, political, and cultural movements that influenced and shaped literary and artistic expression from the turn of the century to the present. [GM2, H, W]

Prerequisite: Completion of at least one 300-level course. Instructor: Bettray, Lamb-Faffelberger.

GERM 431 - Literature and Film as a Mirror of Socio-Historical Issues in the Contemporary German-Speaking World
This course analyzes literature after 1945, first and foremost the short story as a reflection of the forces of social change in Germany and other German-speaking countries. Emphasis is on the relationship of artistic expression and history, social issues, political conviction, and personal experience. Focus is on techniques for interpretation of literature. [GM2, H, W]

Prerequisite: Completion of at least one 300-level course. Instructor: Bettray, Lamb-Faffelberger.

GERM 441 - Junior/Senior Seminar
This content-driven course focuses on investigations of an influential literary or intellectual movement or trend, an individual author or the study of a genre, a literary masterpeice, or a significant theme in German literature. [H, W]

Prerequisite: Completion of at least one 300-level course. Instructor: Lamb-Faffelberger, Bettray.

GERM 460 - Reading and Research in German
This course provides qualified students with the opportunity to investigate an area of special interest. Students work on their projects independently under the guidance of their mentor and submit a research paper and/or a substantial oral presentation. Hours arranged.

Prerequisite: Permission of the research instructor. Instructor: Bettray, Lamb-Faffelberger.

GERM 495-496 - Thesis in German
Tutorial sessions related to an investigation of the specific area chosen by the student for an honors essay. Hours arranged. [One W credit only upon completion of both 495 and 496]

Prerequisite: Open to majors who are candidates for departmental honors. Permission of the research instructor.. Instructor: Bettray, Lamb-Faffelberger.

GOVT - GOVERNMENT AND LAW

GOVT 101 - Introduction to United States Politics
An examination of the American political system, its institutions and processes. Topics studied include political behavior, the Constitution, the Congress, the Presidency, the courts, and current foreign and domestic issues. Recommended to students who have not had an adequate secondary school preparation in American government. [SS]

Instructor: Kincaid, Murphy, Clarke, SoRelle.

GOVT 102 - Introduction to International Politics
This course reviews the main issues and problems confronted by the international system and the literature devoted to them. The course deals with phenomena such as peace and war, integration and disintegration, economic and military assistance, formulation and execution of foreign policy. Special emphasis is placed on stability and change in the global system. [SS]

Instructor: Cho, Fabian, Park, Peleg.

GOVT 103 - Introduction to Comparative Politics
A survey of governments and politics in the industrialized and Third World countries. The course examines the question of what it means to compare political systems and explores the historical setting, nature of political participation, political values, governmental structures, and political performance of selected countries in Western Europe, Asia, the Middle East, Africa, Latin America. [SS]

Instructor: Fabian, Stewart-Gambino, Van Dyck.

GOVT 104 - Introduction to Political Theory
This course introduces students to several of the most important thinkers and themes in the tradition of political theory. The topics and texts of the course vary, but students can expect to confront such issues as justice, equality, and power, and to read both classic and contemporary authors.

Instructor: Feola, Miller, Silverstein.

GOVT 207 - Racial and Ethnic Minorities in American Politics
This course examines the role of racial and ethnic minority groups in United States politics. We will focus on four main minority groups (Blacks, Latinos/Hispanics, Asian Americans and American Indians) assessing their access, engagement, and influence in governmental processes historically and today. Specific topics covered include: the social construction of race, how race has shaped American political institutions over time, minority political attitudes and behavior, and the degree to which racial and ethnic minorities are represented in various levels of government. A strong focus will be placed on the salience of race in the post-Obama era. [GM1]

Instructor: Staff.

GOVT 211 - State and Local Government and Politics
Examines what state and local governments do and why. Topics include state constitutions; state legislative, executive, and judicial processes and policymaking; state and local budgets, taxes, and spending; county, municipal, special-district, and school-district governments and services; state and local parties, elections, interest groups, and media; intergovernmental relations; Native American tribes, homeowner associations, and associated states; and selected policy issues such as civil rights, crime, business and economics, health care, and environmental protection. [SS, V, W]

Instructor: Kincaid.

GOVT 213 - Law and Society
Investigation of the dynamics of the legal process in the regulation of social conflict, change, and control. Topics include philosophical sources; the administration of criminal and civil justice; and litigation as politics. [W]

Instructor: Silverstein.

GOVT 215 - Campaigns and Elections in the U.S.
Elections rest at the heart of America's representative democracy. This course offers a general introduction to the U.S. elections, with special attention paid to electoral campaigns. We will explore such questions as: What legal structures shape how American elections are conducted. What strategies do candidates follow to win elections? What is the purpose of political parties in elections? Do race, gender, religious, and other social identities affect electoral outcomes? What role do media play in elections?

Prerequisite: GOVT 101 or permission of instructor. Instructor: SoRelle.

GOVT 218 - Politics of Public Policy
This course explores how politics influence each step of the U.S. policy making process. We will explore how political dynamics shape why some issues get on the agenda while others do not; why some solutions are considered and others ignored; and how citizens, interest groups, elected officials, and bureaucrats sway policy outcomes. We will examine these questions using case studies of several current economic, social, regulatory, and foreign policy issues in the U.S. [SS, W]

Prerequisite: GOVT 101 or PSTD 251 or permission of instructor. Instructor: SoRelle.

GOVT 220 - The United States and Latin American Relations

It is impossible to understand the expansion of the US's international role in the past two hundred years without knowledge of our country's relationship to the rest of the Americas, particularly the nations in Latin America. This course introduces students to the United States historical relationship with Latin America from the early 1800s to the present day. Students examine events and US policies from multiple ideological and national lenses, critically evaluating the debates that color so-called "objective" accounts of history.

Prerequisite: GOVT 102 or GOVT 103. Instructor: Stewart-Gambino.

GOVT 223 - Politics of Africa
Analysis of selected sub-Saharan states with particular attention to common institutional features such as ethnic pluralism, weak political parties, dominant public bureaucracies, dependence on external forces, and the problems associated with them, especially limited capacity to innovate, rural stagnation, ethnic competition, corruption, and military intervention. The South African situation is likewise examined.

Instructor: Staff.

GOVT 225 - Politics of Russia, the Other Post-Soviet States, and Eastern Europe
After a brief introduction to the political geography and history of the former Soviet Union and Eastern Europe before World War II, this course focuses on developments in this region during and after the Cold War. The final section of the course examines the post-1989/90 transition process toward democracy and a market economy in Russia, the other post-Soviet states, along with Central and Eastern Europe, including the Balkans.[GM2, SS]

Instructor: Fabian.

GOVT 226 - Political Regimes and Regime Change
There are two main types of political regime: democracy and everything else. Historically, democracies have differed from non-democracies in two key ways: (1) they have permitted citizens to remove governments regularly and peacefully, and (2) they have not killed large numbers of their own citizens. Why did the West democratize early? Why has most of the developing world democratized since the 1970s? Under what conditions do

regimes (i.e., democracies and non-democracies) achieve long-term stability? [W]

Prerequisite: GOVT 101, GOVT 102, GOVT 103, or GOVT 104 or permission of instructor. Instructor: Van Dyck.

GOVT 227 - Latin American Politics
This course examines the dynamics of political and economic change in modern Latin America, with a focus on six countries: Argentina, Brazil, Chile, Mexico, Peru, and Venezuela. Topics include industrialization and the advent of mass politics, Marxist revolutions and movements, military coups and dictatorships, the neoliberal turn, the third wave of democratization, the challenge of democratic consolidation, and the recent resurgence of the left. The course compares a variety of theoretical approaches (modernization, dependency, cultural, institutionalist, leadership-centered) in an effort to explain both general processes of change and important differences between countries.[W]

Prerequisite: GOVT 102 or GOVT 103 or permission of instructor. Instructor: Van Dyck.

GOVT 230 - International Politics of the Middle East and Persian Gulf
The course examines topics such as the Arab-Israeli conflict, the struggle for domination in the Arab World, the role of the superpowers in the region, and the politics of oil. An analysis of international political processes in some of the Middle Eastern countries is used to examine explanations for the foreign policies of these countries. The course assesses different solutions to problems confronted by the nations of the Middle East. [GM2, W]

Instructor: Peleg.

GOVT 231 - Global Environmental Politics
Global Environmental Politics bridges international politics and environmental issues, offering an explicit focus on environmental problems and policies in the global context. Students in this course will study the development of global environmental regimes and analyze the successes and continuing deficiencies of political responses to various environmental issues, such as air pollution, water quality, and waste management, climate change, and energy use. [SS, V, W]

Prerequisite: GOVT 102 or permission of instructor. Instructor: Fabian.

GOVT 232 - International Political Economy
Investigates the dynamics of wealth and power at work in the contemporary world. The course combines the analysis of politics, governance and institutions, and the production and distribution of wealth with the study of the social, cultural, and moral contexts in which power operates and wealth is created. The goal is to equip students to analyze various economic and political dimensions of the contemporary world, focusing specifically on the function and limits of the market system, the impact of the "globalization" of international trade and finance for nation-states and democratic politics, the causes of poverty and the problems of "underdevelopment" facing the world's poorest countries, the lasting impact of the 2008-2009 financial collapse and economic crisis, and the importance of relations of class, gender, and ethnicity for the distribution of wealth and power around the world.

Instructor: Staff.

GOVT 235 - International Law and Organization
A study of the rules of public international law, especially as they are related to the development of international organizations. Attention is paid to the emergence of global organizations and regional organizations, including the United Nations, NATO, the World Bank, and the International Monetary Fund. Efforts to regulate and limit international conflict, within and outside of international organization, are discusses.

Prerequisite: GOVT 102 or permission of instructor. Instructor: Staff.

GOVT 238 - East Asian International Relations
This course explores the major analytical perspectives on the sources of stability and conflict in East Asian international relations and evaluates them by using empirical evidence from the East Asian region since the "clash civilizations" in the nineteenth century up to the current regional order. Topics for discussion include U.S. strategy in East Asia, the impact of the rise of China on regional security, nuclear proliferation, territorial disputes, nationalism, economic interdependence and regionalism. [GM2, SS]

Prerequisite: GOVT 102 or permission of the instructor. Instructor: Park.

GOVT 241 - The Politics of Fashion
Examining the fashion system, a multi billion dollar worldwide industry, this course raises issues of appearance, beauty, gender, and sexuality; power, liberation, and oppression; class distinctions and equality. To develop a political theory of fashion, the course studies the practice and production of clothes and style, and analyzes texts from literature, sociology, history, and cultural studies. [W]

Prerequisite: GOVT 104, or permission of instructor. Instructor: Miller.

GOVT 242 - African American Political Thought
This course explores classic texts, questions, and debates addressed by contemporary African American political theory. We will ask: What are the similarities, differences, and overlaps among varying strains of African American political thought? How do they each deal with core concepts of freedom, identity, citizenship, and community? How do they respond to one another through time? Throughout the course, we will consider our times in light of this history of political thought. [GM1, H, V, W]

Prerequisite: AFS 102 or A&S 214 or ENG 246 or GOVT 104 or HIST 119 or HIST 261 or PHIL 102. Instructor: Miller.

GOVT 243 - Ancient and Medieval Political Theory
This course concentrates on Greek political thought in the forms of tragedy, history, and philosophy. The nature of democracy, equality, power, limits, gender, and justice are explored in texts by Aeschylus or Sophocles, Thucydides, Plato, Aristotle, and selections from the Old and New Testaments. [W]

Instructor: Staff.

GOVT 244 - Modern Political Theory
An examination of selected theoretical texts from the Renaissance to the French Revolution. The separation of political theory from religious discourse, the rise of the state, and the development of liberal and democratic thought are examined. Machiavelli,

Hobbes, Locke, Montesquieu, and Rousseau are usually treated. [SS, V, W]

Prerequisite: GOVT 104, or permission of instructor. Instructor: Feola, Silverstein.

GOVT 245 - Early American Political Thought
This course studies the theoretical and political struggle to define American politics that took place among Puritans, radical democrats, liberal individualists, and liberal nationalists. Early nineteenth-century reactions to the liberal founding are also explored. Authors studied often include Winthrop, Franklin, Jefferson, Paine, the Federalists, Emerson, and Douglass. [W]

Prerequisite: GOVT 104, or permission of instructor. Instructor: Miller.

GOVT 246 - Recent American Political Thought
The themes of racial conflict, equality, the rise of the state, social darwinism, education, and the changing role of women are explored. The course does not emphasize the historical contexts of ideas, but seeks to discover what is true and relevant for the present in texts written from the Civil War to the present. [W]

Prerequisite: GOVT 104, or permission of instructor. Instructor: Miller.

GOVT 248 - Capitalism and its Critics
This course examines both the political goods that are associated with capitalism (freedom, democracy, etc.)-and challengers (classic and contemporary) who argue that this economic form has rather more problematic social effects. We will read texts that address a wide range of questions, ranging from poverty, to capitalist labor markets, to the marketization of greater domains of life (e.g. bodily organs, water, education), to the impact of market values on democratic practice. [SS, V, W]

Prerequisite: GOVT 104 or permission of instructor. Instructor: Feola.

GOVT 258 - Political Opinion and Participation in the U.S.
This course examines Americans' political views and behaviors, including what citizens think about and do politically, as well as why they make the political choices they do. Topics include the causes and effects of partisanship; whether Americans' political choices are "rational"; who tends to vote (and why); the impact of values and group identities on political choices; political persuasion and influence; and the role of cognition and emotion in political decision-making. [SS]

Prerequisite: GOVT 101, or permission of instructor. Instructor: Staff.

GOVT 270 - Chinese Foreign Policy
This course examines the sources and conduct of Chinese foreign policy from both historical and theoretical perspectives. The first part of the course explores major factors that influence China's foreign relations, including the international system, domestic politics, and nationalism. The second half of the course turns to the practice of Chinese foreign policy over a wide-range of issue areas, such as China's relations with the United States, trade, regionalism, nuclear proliferation, energy and climate change. [SS]

Prerequisite: GOVT 102, GOVT 103, ASIA 101, or permission of instructor. Instructor: Cho.

GOVT 309 - Scope and Methods of Political Science
Acquaints students with social science inquiry-the process by which political scientists develop research questions and attempt to find answers. The course explores various approaches to political inquiry, ways to structure and critique arguments, methods to conceptualize a research question and develop causal models, means to create a testable hypothesis, and how to evaluate various methods of data collection. The final section focuses on data processing, analysis, and introductory statistics. Helps evaluate political science material and to enables them to undertake a social science research project.[W]

Prerequisite: One introductory-level course or permission of instructor.

GOVT 310 - Politics, Policy, and Law in American Federalism
Explores American federalism as a system of democratic self-rule and share rule, and examines how federal-state-local government relations shape law, politics, and policy in the United States. Topics include: covenantal origins and constitutional theory of American federalism; historical transformations; legal, political, administrative, and fiscal dynamics of intergovernmental relations; and the impacts of federalism on such policy issues as civil rights, business and the economy, taxation, environmental protection, and foreign affairs. [GM1, SS, W]

Instructor: Kincaid.

GOVT 311 - Constitutional Law and Politics in the United States
Constitutional adjudication as a political process which generated and manages social conflicts regarding the basic allocation of governmental authority in the American system. Topics include judicial review, limits on executive and legislative power, federalism, and the court and social change. [W]

Prerequisite: GOVT 101 or permission of instructor. Instructor: Murphy.

GOVT 313 - First Amendment in the United States: Law and Politics
This course examines the development of constitutional doctrine as it relates to the First Amendment of the Bill of Rights. Topics include freedom of expression, church-state relations, and freedom of the press. [W]

Prerequisite: One of the following: GOVT 101, GOVT 213, GOVT 311, GOVT 314, GOVT 315, or permission of instructor. Instructor: Murphy, Silverstein.

GOVT 314 - Liberty in the United States: Law and Politics
Many of the social conflicts that the law considers relate to claims of right grounded upon conceptions of liberty as a fundamental value of the constitutional system of the United States. This course explores the concept of liberty, its place in United States law and politics, and its application to questions of constitutional and political rights. Topics include privacy, and criminal justice. [W]

Prerequisite: One of the following: GOVT 101, GOVT 213, GOVT 311, GOVT 313, GOVT 315, or permission of instructor. Instructor: Murphy.

GOVT 315 - Equlaity in the United States: Law and Politics

Many of the social conflicts that the law considers relate to claims of right grounded upon conceptions of equality as a fundamental value of the constitutional system of the United States. This course explores the concept of equality, its place in U.S. law and politics, and its application to questions of constitutional and political rights. Topics include discrimination on grounds of race, gender, etc., and remedial programs such as busing and affirmative action. [W]

Prerequisite: One of the following: GOVT 101, GOVT 213, GOVT 311, GOVT 313, GOVT 314 or permission of instructor. Instructor: Silverstein.

GOVT 320 - The Presidency and Executive Politics
This course explores the dynamics of executive politics, with primary emphasis upon the structure and operation of the United States Presidency. Topics include the organization of the Presidency and the Executive Branch, models of presidential power and leadership, the process of presidential selection, relationships with other parts of the political system, and executive politics and public policy. [W]

Prerequisite: One of the following: GOVT 101, GOVT 211, GOVT 311, GOVT 321, or permission of instructor. Instructor: Clarke.

GOVT 321 - Congress and the Legislative Process
This course analyzes the process of lawmaking in the United States Congress within the context of the legislative process generally. Topics include the structural and functional development of the institution, the rules and norms which govern interaction, congressional elections, leadership and party organization, relationships with other parts of the political system, and public policy.

Prerequisite: One of the following: GOVT 101, GOVT 211, GOVT 311, GOVT 320, or permission of instructor. Instructor: Clarke.

GOVT 329 - The Politics of Social Movements
A historical and theoretical examination of social movements and their political ramifications. An examination of both nonviolent participatory movements and the politics of violence and revolution. Several different movements are examined in detail. [SS, V, W]

Prerequisite: One course from GOVT 221-GOVT 239 or permission of instructor. Instructor: Fabian.

GOVT 331 - Politics of the European Union
Major changes are taking place in governance, decision making, and relations between the people, institutions and states that form the European Union. These changes are the main topics covered in this course: the origin and history of European integration, common agricultural policy, monetary integration and relations with other parts of the world. Each year, with a select focus on one EU member and one specific policy, the class will participate in the Mid-Atlantic European Union simulation, held in Washington, DC.

Prerequisite: GOVT 102 or GOVT 103. Instructor: Fabian.

GOVT 332 - Globalization and Security
This course explores the various ways in which globalization is (re)shaping the concept and practice of international as well as national security. Throughout the course, we will examine the major concepts and issues in the globalization of security from both at theoretical and empirical standpoint. Topics for discussion include migration and national security, terrorism and asymmetric warfare, defense privatization, economic sanctions, and collective security. [W]

Prerequisite: GOVT 102 or permission of instructor. Instructor: Park.

GOVT 334 - American Security Policy
A study of the formulation, implementation, and effects of U.S. foreign policy. The course will examine and analyze U.S. defense and foreign policy vis-à-vis Europe, Asia, Latin America, and Africa; the decision-making community, and such concepts as globalism, imperialism, nuclear and limited war, insurgency, threat perception, confrontation and coexistence, and foreign policy ethics. [W]

Instructor: Peleg.

GOVT 336 - International Conflict
This course comprises an assessment of armed violence at the onset of the 21st century. Armed conflict is both a very timely matter of inquiry and an enduring concern stretching back to the earliest days of interactions among human communities. This course surveys and critically examines theoretical and empirical scholarship on the causes of war and armed violence. The course seeks to probe the causes of contemporary conflict and to examine some of its distinctive characteristics. On the basis of these discussions, the course also evaluates the effectiveness of a range of strategies for preventing, abating, and terminating war and armed conflict. [SS, V, W]

Prerequisite: GOVT 102 and one course from GOVT 221-GOVT 239 or permission of instructor. Instructor: Fabian.

GOVT 341 - Contemporary Political Thought
This course studies those nineteenth- and twentieth-century thinkers most discussed by political theorists today. We will attempt to chart both the institutional forms of, and theoretical responses to, modern power. Hegel, Marx, Freud, Nietzsche, Weber, and Foucault are often studied in this course. [W]

Prerequisite: GOVT 104, or permission of instructor. Instructor: Feola.

GOVT 366-367 - Special Topics
An offering on a subject selected by the instructor to meet student and departmental needs as conditions permit. Announcement of the subject is made in advance.

Prerequisite: Permission of instructor.

GOVT 380 - Internship
A combination of independent activities including selected reading, satisfactory completion of an internship or working assignment in a public agency, and a written report covering both reading and work assignments. Limited in enrollment by the availability of acceptable projects.

Instructor: Fabian.

GOVT 390-391 - Independent Study
Subjects are chosen and arrangements are made to suit the needs of each student in consultation with the instructor.

Instructor: Staff.

GOVT 401 - Representation, Apportionment and Democratic Participation
At the core or representative democracy is the notion that the people can be substantively present in the process of governance even though literally absent. This seminar will use theoretical, empirical, legal and comparative perspectives to explore this paradox. Topics include apportionment, gerrymandering and voting rights. Satisfies exposure to international politics subfield. [W]

Prerequisite: One of the following: GOVT 215, GOVT 310, GOVT 311, GOVT 313, GOVT 314, GOVT 315, HIST 258, or permission of instructor. Instructor: Staff.

GOVT 405 - US Foreign Policy in a Changing World
This seminar deals with the challenges to American foreign policy in the contemporary world. It compares the predictable environment of the Cold War and the competition with the Soviet Union to the unchartered waters of the post-Cold War era. The seminar begins by analyzing alternative paradigms of today's world both in terms of the distribution of power (uni-, bi-, tri-, or multi-polar system) and in terms of the fundamental nature of international conflict (state-based power politics, clash of civilization, religious fundamentalism). It then examines possible U.S. responses to this "deregulated" world dealing with classical dilemmas of American foreign policy (e.g. isolationist tendencies vs. interventionism, U.S. as a world policeman vs. a "reluctant sheriff"). The seminar will cover U.S. policy vis-a-vis different regions and countries (Europe, the Middle East, the Persian Gulf, Russia, the Peoples' Republic of China) and toward a variety of issues (human rights, weapons of mass destruction, NATO expansion). Satisfies exposure to international politics subfield. [W]

Prerequisite: GOVT 102 plus one from GOVT 221-GOVT 238 or GOVT 334, or permission of instructor. Instructor: Peleg.

GOVT 407 - Law and Social Movements
This course examines the relationship between law and social movement activism. The course explores whether or not the use of the legal system by social movements contributes to their attempts to advance reforms. Particular attention will be paid to the development of law by the following social movements in the United States: the civil rights movement, the women's rights movement, the movement for gay and lesbian rights, and the animal rights movement. Satisfies exposure to U.S. politics subfield. [W]

Prerequisite: One of the following: GOVT 213, GOVT 311, GOVT 313, GOVT 314, GOVT 315, or permission of instructor. Instructor: Silverstein.

GOVT 410 - Personality and Supreme Court Decision Making
This course examines the relationship between the evolution of the personalities of members of the United States Supreme Court and their decision making. Particular attention will be paid to the application of the "life cycle" paradigms to the jurisprudence of various justices. Satisfies exposure to U.S. politics subfield. [W]

Prerequisite: One of the following: GOVT 311, GOVT 313, GOVT 314, GOVT 315, HIST 258, or permission of instructor. Instructor: Murphy.

GOVT 412 - Politics of European Integration
This will be an advanced course on the challenges as well as the opportunities for further integration that face the European Union. Drawing the lesson from centuries of divisions, tensions, conflicts and war, European leaders initiated what can now be regarded as the most successful experiment of regional integration in the world. This course analyzes the process of European integration since 1945 by reviewing the EU's history of enlargement, its main institutions and key policies. Satisfies exposure to international politics subfield. [GM2, SS, W]

Prerequisite: GOVT 102 plus one from GOVT 221-GOVT 238, or permission of instructor. Instructor: Fabian.

GOVT 414 - Political Thought through Literature
In this course we will study some dimensions and themes of politics that can be reached by literature differently than by traditional works of political theory. We will read classic texts and think about their political meanings, understanding politics in its broadest sense. Works that may be treated in the course include Sophocles, Three Theban Plays, Leo Tolstoy, The Death of Ivan Ilyich, Edith Wharton, The Custom of the Country, Ralph Ellison, Invisible Man, and Don Dellilo, White Noise. Satisfies exposure to political theory subfield. [W]

Prerequisite: GOVT 104 or permission of instructor. Instructor: J. Miller.

GOVT 415 - Nationalism in World Politics
This course explores the concept and practice of nationalism, with a particular emphasis on the role that it plays in world politics. We will survey the main concepts and theories in the study of nationalism, identify the major actors and processes in the politics of nationalism, examine the emergence of nationalism as a major force in international relations, and investigate various links between questions of national identity and interstate cooperation or conflict. [GM2, SS, W]

Prerequisite: GOVT 102, plus one of the following: GOVT 223, GOVT 225, GOVT 227, GOVT 230, GOVT 231, GOVT 238, GOVT 332, GOVT 334, GOVT 336, or permission of instructor. Instructor: Park.

GOVT 416 - Critical Theory: Power and Resistance
Should theorists just describe the world or, in cases of injustice, should they endeavor to change it? This course will explore an interconnected set of efforts to fulfill this latter task, through a wide variety of texts concerning power, domination, and the possibility of liberation. Although we will begin with Marxist concerns for class and exploitation, the second half of the course will interrogate forms of violence associated with race, normality, and gender. [W]

Prerequisite: GOVT 104 and one from GOVT 241, GOVT 243, GOVT 244, GOVT 245, GOVT 246, GOVT 248, GOVT 341, PHIL 260 or permission instructor. Instructor: Feola.

GOVT 418 - Democracy, Inclusion, Exclusion
Inclusion is often cited as a core democratic value. What exactly does it require, however? And, to what degree do liberal democracies meet (or fail to meet) this ideal? This course will explore the promise and limits of this political ideal, and chart a variety of concrete ways that groups are excluded from full political membership. Over the semester, we will consider these questions through issues of immigration, race, poverty and mass incarceration. [SS, GM1, GM2, V, W]

Instructor: Feola.

GOVT 419 - Global Governance
This seminar explores the main actors and processes of global governance. We will assess the role of power, international institutions, transnational networks, and ideas. Specific topics of inquiry include global economic governance, the environment, third-world state building, international justice, military intervention, nuclear proliferation, and global terrorism. We will apply competing analytical approaches to different issue areas, as the intersect with nature and management of global governance in the 21st century. [SS, GM2, W]

Prerequisite: GOVT 102 plus one from GOVT 221-GOVT 238, GOVT 270, GOVT 322-GOVT 336 or permission on instructor. Instructor: Cho.

GOVT 420 - Topics in Latin American Politics
This course is an advanced seminar covering Latin American politics from the 1930s to the present, with a focus on Argentina, Brazil, Chile, Mexico, Peru, and Venezuela. The course is organized thematically, exploring topics such as the perils of presidentialism; the roots of party system stability; the recent resurgence of populism; the decline of corporatism; the rise of new social movements; the Catholic Church; state weakness; and the left turn. [W]

Prerequisite: GOVT 102 or GOVT 103, and one additional International or Comparative elective. Instructor: Van Dyck.

GOVT 421 - American Political Economy
This course examines the political development and function of the U.S. political economy. We will explore how political institutions and policies shaped economic arrangements from the founding to the present, and how economic interests, inequality, and identity influence U.S. politics today. The course will also explore in depth four aspects of U.S. political economy: the rise of finance, the welfare state, business regulation, and organized labor. This seminar will devote considerable attention to original research. [W]

Prerequisite: GOVT 101 plus one of the following: GOVT 211, GOVT 215, GOVT 218, GOVT 258, GOVT 310, GOVT 320, GOVT 321, PSTD 251 or permission of instructor. Instructor: SoRelle.

GOVT 495-496 - Thesis
An independent research project on a topic to be selected by the student and approved by the department. A student must undertake such a program for two semesters to graduate with honors. [One W credit only upon completion of both 495 and 496]

Instructor: Staff.

GRK - GREEK

GRK 101 - Elementary Greek I
Emphasis on achieving skills necessary for sustained reading of Attic Greek texts. Inductive system of continuous reading complemented by deductive study and exercises in grammar, syntax, vocabulary, and composition. Recitation.

Instructor: Dubischar.

GRK 102 - Elementary Greek II
Emphasis on achieving skills necessary for sustained reading of Attic Greek texts. Inductive system of continuous reading complemented by deductive study and exercises in grammar, syntax, vocabulary, and composition. Recitation. [H]

Prerequisite: GRK 101 or equivalent proficiency. Instructor: Dubischar.

GRK 111 - Intermediate Greek I
Fall: A close reading of at least one major dialogue of Plato with attention to the intellectual, moral, and cultural climate of classical Greece. Spring: A close reading of at least one tragedy of Sophocles or of Euripides with attention to its dramatic art and intellectual and moral content. Recitation. [H]

Prerequisite: GRK 102 or equivalent proficiency. Instructor: Dubischar.

GRK 112 - Intermediate Greek II
Fall: A close reading of at least one major dialogue of Plato with attention to the intellectual, moral, and cultural climate of classical Greece. Spring: A close reading of at least one tragedy of Sophocles or of Euripides with attention to its dramatic art and intellectual and moral content. Recitation. [H]

Prerequisite: GRK 111 or equivalent proficiency. Instructor: Dubischar.

HEBR - HEBREW

HEBR 101 - Elementary Hebrew I
Fundamentals of the spoken and written modern language. Development of listening and speaking skills and of facility in reading and writing standard, unvowelled texts. Introduction to the culture of Israel. Class/laboratory. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department.

Instructor: Staff.

HEBR 102 - Elementary Hebrew II
Fundamentals of the spoken and written modern language. Development of listening and speaking skills and of facility in reading and writing standard, unvowelled texts. Introduction to the culture of Israel. Class/laboratory. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [H]

Prerequisite: HEBR 101 or equivalent proficiency. Instructor: Staff.

HEBR 103 - Accelerated Elementary Hebrew
A one-semester course, this is an intensive elementary course for motivated beginners. The program stresses a content-based approach to language learning and is designed to help students develop interpretive, interpersonal and presentational communicative skills in Modern Hebrew while exploring key cultural perspectives and practices of Hebrew speakers all over the world. Students will spend three hours of classroom instruction and one hour working either individually or collaboratively in the language resource center. [H]

Instructor: Staff.

HEBR 111 - Intermediate Hebrew I

Review and expansion of the basic grammar, vocabulary, and idioms. Development of skills of self-expression and conversation. Readings in short stories and in newspaper and magazine articles, and monitoring of television broadcasts in the language laboratory to gain a deeper understanding of Israeli culture. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [H]

Prerequisite: HEBR 102 or equivalent proficiency. Instructor: Staff.

HEBR 112 - Intermediate Hebrew II
Review and expansion of the basic grammar, vocabulary, and idioms. Development of skills of self-expression and conversation. Readings in short stories and in newspaper and magazine articles, and monitoring of television broadcasts in the language laboratory to gain a deeper understanding of Israeli culture. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department.[GM2, H]

Prerequisite: HEBR 111 or proficiency. Instructor: Staff.

HEBR 290 - Independent Study in Hebrew
These courses are intended to expand the student's basic capabilities in the four linguistic skills-listening, speaking, reading, and writing. Enrichment of written grammar review with emphasis on the expansion of vocabulary and stylistics. Examination of cultural and contemporary issues through use of texts, films, television, music, and the Internet.

Prerequisite: HEBR 112 or equivalent proficiency. Instructor: Staff.

HEBR 291 - Independent Study in Hebrew
These courses are intended to expand the student's basic capabilities in the four linguistic skills-listening, speaking, reading, and writing. Enrichment of written grammar review with emphasis on the expansion of vocabulary and stylistics. Examination of cultural and contemporary issues through use of texts, films, television, music, and the Internet.

Prerequisite: HEBR 112 or equivalent proficiency. Instructor: Staff.

HIST - HISTORY

HIST 105 - History of the Modern World
This course surveys modern world history from 1450 to the present. It focuses on global processes and regional particularities throughout the world (including the United States). Each instructor will choose several themes for students to engage with through targeted readings and class discussion in small sections. In addition, there is a weekly "lab" in which all students enrolled in the class will engage in large group activities like attending outside lectures or watching selected films.[SS]

Instructor: Staff. Offered: Fall semester.

HIST 111 - Witchcraft and Evil Spirits in Europe 1100-1700
This seminar addresses the problem of witchcraft in early modern Europe, especially the great increase in trials and executions of accused witches in the years 1400-1700, the so-called "witch craze." Students will read historical sources and write a substantial research paper addressing whether there really were witches in Europe and why there was a great upsurge in European witchcraft trials and persecutions from 1428-1700. Students prepare weekly reading reports and oral reports on primary source material. [SS, W]

Instructor: Fix.

HIST 112 - Slavery and the Civil War
This course will use the American Civil War to introduce students to history as a story-telling art and a mode of critical thinking. [SS, W]

Instructor: D. Miller.

HIST 113 - Jacksonian Democracy
This course examines the events and ideas of the Jacksonian era, focusing especially on the period from 1828 to 1845. We consider different explanations for the rise of Jacksonian Democracy and different perspectives on what Jacksonian Democracy meant. The course introduces students to the ways in which historians study and interpret past events. Students learn how historians analyze primary sources and develop their own analytical skills through intensive writing assignments. [SS, W]

Instructor: Rosen.

HIST 114 - Food Histories in the Americas
What can food tell us about the past? In this writing-intensive history course, we will consider this question by focusing on two main themes: (1) the business and politics of food production and consumption; and (2) the links between cookbooks, identity, and memory. Like the foods we will discuss, our analysis will traverse the Americas. Students will write and present a research paper that uses one or more cookbooks for this region as primary sources. [SS, W]

Instructor: Pite.

HIST 115 - The Crusades
This course examines the history of the Crusades that dramatically shaped the relationship between Eastern Christianity, Islam and Western Christianity. The ideological, religious, political and economic factors that led to the Crusades will be treated, as well as the ways in which the consequences of the Crusades altered East-West relations. We will carefully study primary sources composed by Western Christian Crusaders, Byzantine (Eastern Christian) authors, Muslim philosophers and many others. [GM1, GM2, SS, W]

Instructor: Goshgarian.

HIST 116 - The Holocaust
This seminar is an overview of the Holocaust, using a wide variety of historical sources such as several document collections, literature, films, and several complementary historical texts. Weekly participation is expected, and students keep a lengthy journal as a means of class preparation and learning. We also spend much class time discussing both the "nuts and bolts" of student research papers, and the content of these papers as well. No prior knowledge is expected, just a willingness to work hard. [SS, W]

Instructor: Weiner.

HIST 118 - The Cold War

The Cold War was a political contest between the USA and USSR that took on increasingly apocalyptic dimensions as the nuclear age developed. But the war also extended well beyond the political. It also framed discussions about cultures and economies, history and the future, and the nature of civilization. This course allows students to explore various aspects of this conflict through the study of primary sources from around the world and through their own writing. [SS, W]

Instructor: Sanborn.

HIST 119 - Race and Ethnicity in America
The story of American history has, in many ways, been the story of white supremacy. The struggles to invent, define, and control race and ethnicity in North America took place over centuries, and transformed governments, labor systems, and even environments. Students will read and debate historical scholarship on topics ranging from Indian empires to slavery, immigration, civil rights, and mass-incarceration. Students will also learn how to research, write, and revise a historical research paper. [GM1, SS, W]

Instructor: Zallen.

HIST 120 - Introduction to History: History in Pictures
This course is an introduction to the interpretation and analysis of visual sources of history. Visual artifacts will be treated as both objects that make arguments and claims, but also as artifacts that preserve evidence and can be used as data. Famous photographs in the history of documentation, such as Crimean War, "Earth-View", and the Abu-Ghraib photos will be analyzed as images that "made history." We will also study photographs forensically, to ascertain true facts about the past. We will also mine photographs from magazines, newspapers, online collections and websites such as Flickr to analyze groups of images systematically. [SS, W]

Instructor: Barclay.

HIST 121 - Introduction to History: Partition of the Indian Subcontinent
One of the most violent and disruptive events of the 20th century, the Partition of the Indian subcontinent into the nation-states of India and Pakistan in 1947 continues to play a staggering role in the post-colonial histories of both countries. This course will go into the high politics of the Partition, its human costs, and its continued impact on everyday life through oral history. The course will also examine the impact of Partition in literature and cinema. [GM2, SS, W]

Instructor: Kanjwal.

HIST 206 - The Politics and Practice of History
This course trains students in the skills, methods, philosophies, and practices of the discipline of history. Students learn how the practice of history has changed over time, the problems and potential of historical evidence, and the role history plays in forming structures of individual and collective awareness. Strong emphasis is placed on learning key research and analytical skills. Potential history majors should take this course in their sophomore year. Open to majors and non-majors. [SS]

Instructor: Staff.

HIST 207 - The Middle East (600-1200): The Islamic Enterprise
This course studies the Middle East from the 7th century through the early thirteenth. The goal of the course is to provide a survey of the political, social, and cultural movements of this region over the course of six hundred years. Questions that frame the course include: How did the political/social culture of Islam develop? What were the reactions to it? How did the expansion of new linguistic and cultural groups into areas of the Middle East affect the region? [GM2, SS, W]

Instructor: Goshgarian.

HIST 208 - The Middle East (1200-1700): Arabs, Crusaders, Mongols, Turks and More
This course studies the Middle East from the 13th through the 17th century. The goal of the course is to provide a survey of the political, social, and cultural movements of this region over the course of five hundred years. This course will offer students an opportunity to learn a great deal about Islam, the fall and development of empires, and the importance of urban and social history. [SS]

Instructor: Goshgarian.

HIST 209 - The Middle East (1700-2003): Empires, Nations, East" and "West""
This course studies the Middle East from the 18th through early 20th century. The goal of the course is to provide a survey of the political, social and cultural movements of this region over the course of three hundred years. How do we define the Middle East? What role did Europe play in the early modern Middle East? What did "modernizing" leaders aim to do in Egypt, Iran and Turkey? What roles has the U.S. played in the Middle East since WWI?

Instructor: Goshgarian.

HIST 212 - The Middle East in the Mind of America, America in the Mind of the Middle East
This course covers a century of political and cultural interactions between one country (the United States) and a large, culturally, linguistically, and politically diverse region (the Middle East). The class studies, in particular, the variety of ways in which individuals, institutions and administrations in the United States and the Middle East have perceived of and imagined one another through the lens of academic articles, mainstream press, speeches, literature, personal histories and the visual arts. The course will entail analysis of perceptions and misperceptions as historically construed cultural categories. [SS, GM1, W]

Instructor: Goshgarian.

HIST 213 - Pre-Colonial African History: Human Origins through the Atlantic Slave Trade
This course explores the rich and varied civilizations and cultures in Africa, as well as how elements of these cultures have been carried throughout the world. We begin with human origins on the continent and examine African kingdoms, trade, and technology before the era of Atlantic trade. We look at the origins of scientific racism and debates about African participation in and resistance to slaving. This course provides a survey of the major social, economic, religious, and political movements in Africa through the era of the Atlantic slave trade. [GM2]

Instructor: Staff.

HIST 214 - Africa History: 1800-present

Focusing on sub-Saharan Africa, we begin by exploring the impact of the abolition of the Atlantic slave trade on Africa and move to the establishment of-and resistance to European colonial rule. We look at the impact of the two world wars on Africa as well as the rise in nationalism and movements for independence. In the post-colonial period, we explore Cold War politics in Africa, and address issues including the end of Apartheid South Africa. It is helpful but not necessary for students to have taken HIST 213. [GM2]

Instructor: Staff.

HIST 215 - History of Technology
A study of technology from the irrigation cities of the ancient world through militarily financed systems of the late twentieth century. The course stresses the important role played by cultural influences in determining the nature, extent, and direction of technological development. Attention focuses on processes of invention and innovation and their impact on the growth of modern Western civilization. Open to B.A. and B.S. engineering majors without prerequisites. [SS]

Instructor: Jackson.

HIST 216 - Modern South Africa
This course introduces students to the politics, cultures, and histories of South Africa. Beginning in the seventeenth century, themes in this class include the growth of regional African states, the arrival of European settlers, the mineral revolution of the late nineteenth century, and political activism during the twentieth century, involving such figures as Steve Biko and Nelson Mandela. Course materials will include novels, memoirs, and film, in addition to historical scholarship. [GM1, SS]

Instructor: Lee.

HIST 217 - From Leprosy to Ebola: Health in African History
Africa has long been associated with disease and disaster, and this course will explore the formation of this negative stereotype by unpacking Africa's reputation as the "dark continent." Through the lens of such health topics as epidemics, humanitarianism, sexuality, and medical research, we will analyze how the current prejudice of Africa as a place of sickness and misfortune arose, and how Europe and America became complicit in and benefited from the ill health of Africans. [SS, GM1]

Instructor: Vongsathorn.

HIST 219 - Political Ecology of Africa: Histories of Environment, Society and Power

What stories have people told about the African environment and what purposes have those stories served? This course studies the environmental history of Africa with reference to politics, economics, and power. How have indigenous societies interacted with their environments over time? How have colonial states, non-governmental organizations, aid and conservation agencies understood and represented the relationship between people and the environment in Africa? The course covers major themes in political ecology and critical environmental history. [GM2, SS, V]

Instructor: Carpenter.

HIST 221 - The Medieval World
A study of European history from the fall of the Roman Empire to the fifteenth century. The course focuses upon the interplay of political, economic, and ideological forces in the development and decline of medieval civilization, and attempts to assess the relationship of the Middle Ages to the Italian Renaissance. [SS]

Instructor: Fix.

HIST 222 - Emergence of Western Europe
Europe from the Renaissance to the early Enlightenment. The first half of the course concentrates on the Renaissance, the second half on the foundations of modern Europe. The emphasis in the second half is on the interrelationship of socioeconomic change, the new European political order, and the intellectual revolution of the sixteenth and seventeenth centuries. [SS]

Instructor: Fix.

HIST 225 - The Age of Revolution
The course centers on the French Revolution, beginning with an examination of its 18th-century social, economic, and intellectual roots, continuing with the Revolution itself, and ending with an assessment of its aftermath up to 1848. An underlying theme of the course is the connection between the Industrial Revolution and the political revolutions of 1789, 1830, and 1848. [SS]

Instructor: Fix.

HIST 226 - Sex in Modern Europe
This course takes a historical approach to the study of one of the most basic human practices: sex. We will focus on the history of sex and gender (the social organization of sexual difference) in modern Europe. We will trace how particular sexual behaviors have been practiced and/or prohibited, the ways that medical, moral and political authorities attempted to discipline sexuality, and the ways that gender affected political, social, and economic processes across the continent. [GM1, GM2, H, SS, V]

Instructor: Sanborn.

HIST 227 - Europe: 1850-1917
This course examines the operation of the European state system, the impact of the industrial revolution, nationalism, and imperialism on European politics and culture, and the tensions and crises that culminated in the breakdown of the European state system during World War I. [SS, V, W]

Instructor: Weiner.

HIST 228 - Europe: World War I to the Present
This course examines the development of European politics and culture since World War I, with particular emphasis on the impact of the Great War and the Russian Revolution, the age of the dictators, the origins and impact of World War II, and the rebuilding of European society since 1945 under the shadow of Soviet-American hegemony. [GM2, SS, V, W]

Instructor: Weiner.

HIST 230 - Early American History, 1600-1840
This course is an introduction to American political, economic, and social history in the colonial revolutionary, and early national periods. The course examines the place of the American colonies in the Atlantic World; European-Indian relations; slavery and the origins of racism; the causes and impact of the American Revolution; the rise of political parties; industrialization and

commercial development; reform movements; and changes in social structure, religion, ethnicity, and gender roles. [SS]

Instructor: Rosen.

HIST 231 - Capitalism Takes Command: U.S. History, 1840-1940
This course explores how, from 1840-1940, struggles among North Americans over questions of land, race, gender, labor, and ideology shaped the rise of modern capitalism and democracy in the United States. Topics include: Indian wars and western expansion, slavery and the Civil War, white supremacy and patriarchy, immigration and industrialization, the Progressive Movement, World War I, civil rights and the Ku Klux Klan; the Great Depression; and the New Deal. [SS]

Instructor: Zallen.

HIST 232 - American Revolution and Civil War: A Political History
This course examines American political history in two crucial time periods: 1760-1789 and 1850-1880. The course provides students with a broad base of knowledge about the American Revolution and the Civil War, an understanding of how developments during the two eras defined the American political structure, and an awareness of the place of the American Revolution and the Civil War in historical memory. [SS]

Instructor: Rosen.

HIST 233 - Creating a Nation: U.S. History, 1789-1826
This course examines the creation of an American political system and the development of American identity during the first few decades of the nation's history. Topics include the allocation of power among the President, Congress, the federal courts, and the states; the establishment of a national economy and a system for raising revenue; the defense of the country against foreign threats; the challenges of sectional and racial divisions; and the evolution of American nationalism. [SS]

Instructor: Rosen.

HIST 234 - Slavery, Civil War, and Reconstruction
This course examines American slavery, the Civil War, and the Reconstruction era. [SS]

Instructor: Staff.

HIST 236 - Recent America: The Great Depression - 2001
American politics from the Age of Roosevelt to the Age of Reagan. Topics include the New Deal; World War II and the home front; Truman and the Fair Deal; McCarthyism; corporate culture of the 1950s; the Civil Rights movement; the Great Society; the politics of protest; the quest for equality; the rise and decline of Reaganism. [SS]

Prerequisite: Sophomore standing or higher. Instructor: Jackson.

HIST 237 - The Story of World War II
World War II was perhaps the greatest story, as well as the greatest catastrophe, in human history. This course tells the epic story of the war through the words of American soldiers, sailors, and airmen, as well as nurses, war correspondents, and innocent civilians caught in the ruin and agony of the world's first total war, a war fought without mercy or letup. Primary sources include letters and diaries from the front lines, war reportage, and novels and films made during and after the war. [W]

Instructor: Miller.

HIST 238 - Global Stimulants: Histories of Coffee, Tea, and Yerba Mate
For more than five hundred years now, the desire for global stimulants has shaped patterns of colonialism, imperialism, labor, and social relations. Adopting a global history approach, this course will center the histories of three stimulating, caffeine-rich beverages-coffee, tea, and yerba mate. Our coursework will include an analysis of relevant secondary scholarship with primary historical source work, and will culminate in student-designed digital collections that feature a global stimulant. [GM2, SS]

Instructor: Pite.

HIST 241 - History, Art, and Culture of Russia and Eastern Europe
This course introduces students to the major issues addressed by scholars of Russia and Eastern Europe in a number of different disciplines: history, art, literature, government, economics, religious studies, and music. Each week, we treat a different era of history, reading literature, viewing slides, listening to music, and discussing social and political developments. Students will read the Great Russian writers, examine religious culture and architecture, and learn about life in Russia and Eastern Europe today. [H, SS]

Cross-Listed as: ART 241, REES 241. Instructor: Sanborn, Sinkevic.

HIST 243 - Imperial Russia
This course surveys 1,000 years of Russian history, from the founding of the first state in Kiev in the 9th century to the end of the Great Reforms in the 19th century. Students read primary documents, recent scholarship, and Russian literature in an effort to understand Russia's old regime. Topics addressed include Russia's position in Asia and Europe, the nature of the autocracy, the impact of serfdom, and attempts to create a public sphere. Lecture/discussion. [GM1, GM2, H, SS]

Instructor: Sanborn.

HIST 244 - Russia from Lenin to Putin
This course surveys Russia's history over the past century.Beginning with the years of war and revolution from 1914-1921, we continue with an appraisal of Stalin and Stalinism, a discussion of the Soviet experience in World War II, and a study of the years of "mature socialism" between 1953-1991. The course concludes with an examination of post-Soviet Russia and the nature of life, culture, and politics in Russia today. [GM1, GM2, H, SS]

Instructor: Sanborn.

HIST 245 - Latin America: The Colonial Period
This course examines the colonial era of a region now called Latin America. It will begin with the period preceding the arrival of Christopher Columbus and end with the early nineteenth-century wars of independence. Focusing on the interactions between Native Americans, Africans, and Europeans, we will explore the evolution of a number of multiethnic societies. We will consider how colonialism survived for three hundred years, why the system collapsed, and what legacies it left behind. [GM2, SS]

Instructor: Pite.

HIST 246 - Latin America: The National Period
This course examines the history of Latin America from the early nineteenth century until the present by exploring the social, political, cultural, ideological, and economic issues that surrounded the development of modern nation states. We will not attempt the impossible task of "covering" all of modern Latin American history. Instead, we will focus on revealing case studies that help us to better understand the historical trends, power dynamics, and regional diversity of the Americas. [GM2, SS]

Instructor: Pite.

HIST 247 - East Asia from Neolithic to Feudal Times
Survey of Japanese and Chinese prehistory and respective myths of origin. Introduction to canonical texts of each tradition. Course members analyze persistence, diffusion and change in the domains of East-Asian state-craft, economic life, social organization and culture.

Instructor: Barclay.

HIST 248 - East Asia's Last Dynasties: Japan, Korea and China, 1600-1900
A comparative study of institution-building, economic life, and social history in China, Korea and Japan from 1600 to 1900. Themes include: impact of economic growth and urbanization on agrarian societies; the transition from empire to nation-state; and the interactions of China, Japan, Korea and the Western powers on the eve of dynastic collapse. [GM2, SS]

Instructor: Barclay.

HIST 249 - 20th Century East Asia: Imperialism and Anti-Imperialism in China, Japan, Korea and Taiwan
An historical analysis of how East Asia's four major states-China, Japan, South Korea, and Taiwan-modernized amidst forces of global integration and regional conflict between 1850 and 1945. Instead of "reacting to the West," this course argues that the economies, polities, and national identities these four nations formed with reference to one another, in the context of Japanese imperialism and Chinese, Korean, and Taiwanese anti-imperialism. [GM2, SS]

Instructor: Barclay.

HIST 250 - East Asian Social History: Work, Family and School in Japan, China
Memoirs, diaries, fiction and documentary are utilized to probe the history of everyday life in modern East Asia. Persistence and change in so-called traditional patterns of economic, family and educational behavior in comparative perspective. The problem of "culture" as an explanatory device for behavior in each country will frame our approach to the materials. [GM2, SS]

Instructor: Barclay.

HIST 252 - Transformation of the American Environment
This course examines the relationship of environment (and environmental change) to American history. Topics include the impact of colonial settlement and 19th century industrial expansion on the environment; the effect of transportation technologies on land use; the conflict between environmental protection and conservation as exemplified in the progressive era battle over construction of Hetch Hetchy Dam in Yosemite National Park; and the origins of environmental movement of the 1960-70's. [SS]

Instructor: Jackson.

HIST 253 - European Thought, Society, and Culture: From the Middle Ages to the 17th Century
European culture and society from the High Middle Ages to the present. The courses offer a variety of texts from literature, philosophy, political theory, and economics, through a perspective provided by works on social history. [SS]

Instructor: Fix. Offered: Fall.

HIST 254 - European Thought, Society, and Culture: From the 18th Century to the Present
European culture and society from the High Middle Ages to the present. The courses offer a variety of texts from literature, philosophy, political theory, and economics, through a perspective provided by works on social history. [SS]

Instructor: Fix. Offered: Spring.

HIST 258 - U.S. Constitutional History
This course analyzes the history of the U.S. Constitution from 1787 to the present. We focus primarily on two main topics in constitutional history: (1) federalism, property rights, and economic regulation and (2) civil rights and civil liberties. The main objective of the course is to provide students with a broad understanding of the changing role of the Constitution in American society and the ways in which the Supreme Court's interpretations have been shaped by social, economic, and political developments. Additionally, the course assignments and classroom exercises are designed to help students strengthen their ability to read written texts closely, think logically and analytically, and articulate their ideas clearly and persuasively. [SS]

Instructor: Rosen.

HIST 261 - Making African America, 1500-1880
Making America into African America was a process of extraordinary violence, economic productivity, and transcendent humanity. Focusing on the lived politics of the millions of unfree African Americans and their struggles to build new worlds in and against American slavery, students will explore how the making of African America radically transformed Atlantic capitalism and the United States, from the transatlantic slave trade, to Haiti, to the overthrow of U.S. slavery in the nineteenth century. [GM1, SS]

Instructor: Zallen.

HIST 265 - Modern Jewish History
A survey of the Jewish experience in modern times which focuses primary attention on developments in Europe, the United States, and the Middle East, and analyzes such issues as the process of Jewish emancipation, the rise of political anti-Semitism and the Holocaust, the Zionist movement and the emergence of the state of Israel. Readings include documents, memoirs, short stories, and secondary sources. [GM1, SS, V]

Instructor: Weiner.

HIST 276 - Conquest: A History
This course will examine the global history of conquest from ancient times to the present. We will study conquests by

Assyrians, Persians, Greeks, Mauryans, Chinese, Romans, Mongols, Malinke, Aztecs, Incas, Songhai, Ottomans, Mughals, Spanish, British, Manchus, Asante, Russians, Americans, Japanese, and others throughout history. We will consider why they conquered, what their ideologies and justifications were, how they achieved and maintained their conquests, how the conquests fit with contemporary legal standards, and what the impacts of the conquests were. [GM2, SS]

Instructor: Rosen.

HIST 280-281 - Internship in History
The department will arrange internships each semester for qualified juniors and seniors with such agencies as Historic Easton, the Canal Museum, Main Street Program - Easton, PA, Historic Bethlehem, etc. Written reports and conferences required. Enrollment limited by availability of acceptable projects.

Instructor: Miller.

HIST 290-291 - Independent Study
Qualified students may develop, in consultation with an instructor in the department, a single-semester course directed to a particular theme or topic of historical inquiry, providing practice in historical research and writing.

Instructor: Staff.

HIST 305 - History Colloquium
Discussion of consequential historical issues and major new monographs. The topic varies according to the scholarly interests of the instructor. This is NOT a history research seminar. [SS, V]

Instructor: Staff.

HIST 310 - Colloquium: Human Rights and Modern War
This is an intensive course focused on the ways that the language and practice of human rights have intersected with the practices and justifications of "modern war." Increasing transnational ties by both states and non-state actors have allowed for the globalization both of rights talk and of the tools and techniques of organized violence. The course will focus both on 20th century genocides and on "wars on terror" in the US and Russia. [GM1, GM2, SS, V]

Prerequisite: Permission of instructor required in all cases. Instructor: Sanborn.

HIST 315 - Colloquium: Nation-Building in Iraq, Japan and Vietnam
National-building efforts in Japan, Vietnam and Iraq will be treated as interrelated case studies. Course members will analyze and discuss scholarly works and primary sources directly concerning U.S. interventions in Iraq, Japan or Vietnam, as well as theoretical works that illuminate connections and points of comparison. Writing will emphasize synthesis and criticism of secondary works. [GM2, SS]

Prerequisite: One of the following courses: HIST 105, HIST 249, GOVT 102, GOVT 103, or permission of instructor. Instructor: Barclay.

HIST 345 - Colloquium: History of Argentina
This class explores the history of Argentina during the past two centuries. We will analyze specific topics including: Independence, Immigration, Peronism, Consumption, and Political Violence. In so doing, we will encounter several intriguing historical figures, including Juan and Evita Peron. In considering their stories alongside others, we will focus on the ways in which Argentines have sought to create a sense of national community deeply inflected with gender, class, race, and ethnic markers. [GM2, SS]

Prerequisite: HIST 245 or HIST 246 or permission of instructor. Instructor: Pite.

HIST 352 - Seminar: Topics in Early Modern European History 1348-1813
This course is a discussion based Seminar Course with various topics in the history of Early Modern (1348-1815) Europe. Topics will include the Renaissance, the Reformation, the Scientific Revolution, the Age of Exploration, the Thirty Year War, The Enlightenment, and the Napoleonic Age. The grade will be determined by class discussion/attendance and two 20-page papers. [SS, W]

Prerequisite: HIST 206. Instructor: Fix.

HIST 354 - Seminar: World War I
This course focuses on the social and political history of the "Great War." During World War I, European empires engaged in savage armed conflict with one another, and the outcome for much of the continent was personal loss and political anarchy. Students will become acquainted with the key scholarship on this period and will write major research papers of their own. Students fulfilling the REES capstone must focus their paper on Russia or Easter Europe. [GM1, GM2, SS, W]

Instructor: Sanborn.

HIST 358 - America in the 1920's and 1930's
This seminar focuses on American social and cultural history in the tumultuous years between World War I and II. Topics include the new American Automobile culture, the rise of advertising, the evolution of radio, Prohibition and organized Crime, Architecture and Urban Planning, Visions of Cities of the Future, immigration restriction, the Klu Klux Klan, the controversy over teaching Darwin in public schools, major fiction and films of the period, racial tension and violence, and radicalism and reform during the Great Depression. Students will be introduced to these topics through primary sources, including newspaper, magazines, novels, and films. This is a seminar. Heavy emphasis is placed on written assignments and in-class discussion. [W]

Instructor: Miller.

HIST 359 - Seminar in Early American History
Each year this course addresses a major topic in early American history. The course may examine a particular time period in depth or it may focus on a theme in early American history. In this seminar, students will read and discuss historical literature on the chosen topic, and they will write a research paper based on extensive use of primary sources. [SS, W]

Instructor: Rosen.

HIST 362 - Terrorism and Self-Defense: The Boxer Rebellion
Course participants will examine the various causes of the Boxer Rebellion in China ca. 1897-1901. Were Boxer atrocities an outbreak of irrational violence (terror), or acts of local self-defense against over-bearing imperialists? This seminar

emphasizes historical analysis of the Boxers and current debates about the nature of documentation and historical memory. [W]

Prerequisite: One of the following courses: HIST 206, HIST 231, HIST 243, HIST 246, HIST 248, HIST 249 HIST 250, HIST 261 or permission of instructor.. Instructor: Barclay.

HIST 363 - Imperialism, War and Visual Culture in East Asia: 1874-1945

This course focuses on Japan's East Asian empire (in Taiwan, Korea, China, and several Pacific Islands), and the war against America (1941-45), through the lens of visual-studies scholarship and still- and moving pictures. Beginning with late 19th century Japanese wood-block prints and ending with 1940s propaganda films, we chart the relationship between the visualization of war, image propagation, and the mobilization of the national peoples in whose names wars are launched and sustained. [GM2, W]

Prerequisite: HIST 206, HISt 248 or HIST 249; or FAMS 101 or FAMS 220 or permission of instructor. Cross-Listed as: FAMS 363. Instructor: Barclay.

HIST 365 - American Technological Development
The growth of American technology is examined from the Colonial era through the twentieth century. Topics include the proliferation of arms in the 17th century New England; the factory as system and community; interchangeable parts and the role of the military in technological development; the origins of "Fordist" mass production and the assembly line; issues of safety and government regulation of technology; and the business of early 20th century hydraulic design. [SS, W]

Prerequisite: HIST 215 or HIST 252, or permission of instructor. Instructor: Jackson.

HIST 368 - Seminar in Latin American History
This seminar provides advanced students with an opportunity to conduct research on a subject of their choosing related to the specific theme of the course. In addition to reading and discussing secondary scholarship, students will routinely report the results for their research to the seminar and write a substantial seminar paper based primarily on their analysis of primary sources. Students with appropriate language skills are particularly encouraged to work with sources in their original languages. [GM2, SS, W]

Prerequisite: HIST 206 or permission of instructor. Instructor: Pite.

HIST 371 - Seminar: Native American History
Humans had been transforming the Americas and themselves for over 500 generations before Columbus "discovered" the New World. This course takes a long view of North American history by placing native people at its center. Students will read, research, and write about: native histories before European contact; how people of Indian, European, and African descent came together to create new, often violent worlds; and how native people have been written out of U.S. history. [SS, GM1, W]

Instructor: Zallen.

HIST 373 - The Early Ottoman Empire: People(s), State and Society
This seminar offers an inter-disciplinary approach to the study of the rise and establishment of the early Ottoman Empire. Covering the rise of the early Ottoman state from the perspective of the mechanisms by which a small frontier principality became a world empire, it focuses intimately on the first centuries of the Ottoman enterprise such that a deeper understanding of the way in which empire is built can be understood. This course will examine the ways in which the Ottoman state centralized its resources and the populations it conquered. Using a wide array of primary sources, this course will also encourage students to engage with texts in order to encourage students to actively participate in the conversation on the rise and establishment of the Ottoman Empire. [GM1, GM2, SS, W]

Prerequisite: HIST 105, HIST 206. Instructor: Goshgarian.

HIST 374 - Politics and the Arts: France, 1919-1945
An analysis of major historical and artistic developments during the late Third Republic and World War II, with particular emphasis on the interconnection of history, literature, and the other arts. The course is value-oriented, focusing on the individual's capacity to resist totalitarianism, the role of artists and intellectuals in society, and modern alienation. [GM2, SS, V, W]

Instructor: Weiner.

HIST 375 - Seminar in African History
Each year this course addresses a major topic in African History. The course may examine a particular time period in depth or it may focus on a theme in African history. In this seminar, students will read and discuss historical literature on the chosen topic, and they will write a research paper based on extensive use of primary sources. [W]

Prerequisite: HIST 213 or HIST 214 or permission of instructor. Instructor: Staff.

HIST 495-496 - Thesis
Guided by a member of the staff, the student writes a thesis in a specialized field. If at the end of the first semester the student's project appears to have honors potential, the student may apply to pursue graduation with honors. Upon satisfactory completion of the essay, the student takes an oral examination on the thesis and its historical field. Signature of Department Head or Instructor required. [One W credit only upon completion of both 495 and 496]

Instructor: Staff.

IA - INTERNATIONAL AFFAIRS

IA 200 - Globalization and Its Critics
This interdisciplinary course introduces students to the scholarly literature on the origins, developments, and current realities of globalization. It covers the arguments of main proponents and critics of globalization from a political, social, economic, and environmental perspective. It also enhances their understanding of the basic trends and power dynamics of globalization. The course utilizes quantitative, qualitative, and spatial data analysis to illuminate and critique global economic, political, and social trends.

Prerequisite: Two 100-level courses (from A&S 102, ECON 101, GOVT 102, HIST 105, or REL 101) or permission of instructor. Instructor: Staff.

IA 230 - Global Perspectives on Gender and Equality

This interdisciplinary course tackles fundamental questions about the gendered nature of different societies and political systems around the globe. It questions and challenges social relations that subordinate women to men in politics, society, and culture and investigates such issues as representation, education, work and health. The course also emphasizes how gender intersects with other forms of oppression and social inequality, such as race, class, nationality, and sexuality and investigates what forms of local, international, and transnational resistance and cooperation developed in response. [GM1, GM2, W]

Instructor: von Wahl.

IA 240 - Pursuing Global Sustainability
This course investigates the challenge of achieving global sustainability by looking at a selection of international sustainable development goals. Students will investigate progress toward sustainability across the world, with an emphasis on transnational connections and the holistic nature of the sustainability challenge. Students will explore the importance of measurement and monitoring for global sustainability through direct engagement with and analysis of key sustainability data sets.

Instructor: Gallemore.

IA 250 - Atrocity, Genocide and Reparations
This interdisciplinary course studies the emergence of reparations as reaction to atrocities and genocide on a national and international level across time and place. It introduces conceptual nuance by focusing on the theoretical and practical implications of the emergence and development of nationalism for state violence. The course situates past atrocities historically and discusses cultural, societal and social reactions that have led to symbolic and/or material reparations. [GM1, GM2, SS, W]

Instructor: von Wahl.

IA 261 - Research Methods in International Affairs
The course introduces students to the research methods utilized in the study of international relations. Emphasis is on the interdisciplinary nature of the discipline. Quantitative and qualitative methods are examined. The goal is to provide students with the ability to critically read the sophisticated literature of the discipline and understand its methodology. Required of all International Affairs majors; others with permission of instructor. [W]

Instructor: Staff.

IA 301-302 - Independent Study
Junior and senior International Affairs majors are encouraged to focus on a topic of particular interest to them, under the supervision of a selected faculty member. Generally, this course involves intensive reading and written reports, though other arrangements can be made between the student and faculty member. Students must obtain the approval of the International Affairs chair and the selected faculty member.

Instructor: Staff. Offered: As needed.

IA 310 - Mapping World Cities
This course takes a transnational perspective on the "Urban Century," in which, for the first time in human history, the majority of people live in urban areas. Students will study the development and changing footprint of world cities and world city networks, considering issues including migration, diasporas, land use, transportation, gentrification, agglomeration, and sustainability.[GM2]

Instructor: Gallemore.

IA 320 - Gender and Development
This course examines the construction of the western notion of "development" in historical perspective, especially the gendered assumptions in both the economic and political frameworks. Students examine the gendered allocation of the benefits of growth in various models for development-both theoretically and in specific cases. Students explore the policy ramifications for aid (both private and international). [GM1, GM2]

Prerequisite: WGS 101. Instructor: Stewart-Gambino.

IA 340 - Special Topics in International Affairs
An offering on a transnational, international and/or global subject selected by the instructor to meet student and programmatic needs as conditions permit. Announcement of the subject is made in advance.

Prerequisite: IA 261 or other Research Methods course. Instructor: Staff.

IA 362 - Seminar
Designed as a capstone seminar to provide an opportunity for the major to bring together, through research and the completion of several papers, his or her various experiences in the discipline. Normally the seminar explores a topic or topics of current international interest through an interdisciplinary approach. Required of all International Affairs majors; others with permission of instructor. [W]

Instructor: Staff.

IA 380 - Contemporary Europe: Between Crisis and Cooperation
This interdisciplinary seminar focuses on the analysis of several large-scale crises that have shaken European economies, politics, and societies in recent years. With the help of several case studies, such as the Euro crisis, the refugee crisis, and Brexit, we are asking what situations constitute a "crisis" and for whom or what? How did these crises turn from local or national problems into large-scale European-level crises? How are these national, transnational, and supranational crises linked to the rise of right-and left-wing populism? The course will assess these timely questions and ask why the existing mechanisms of cooperation have become insufficient and how to address these shortcoming. [GM2, W]

Prerequisite: A&S 204 or Govt 102 or Govt 103 or AI 200 or permission of instructor. Instructor: von Wahl.

IA 495-496 - Thesis
Students interested in completing a thesis for program honors are advised to consult with the chair toward the end of their junior year. Following selection of a topic and a thesis director, a research design must be provided at the opening of the fall semester. The student then completes IA 495. If the thesis director and chair conclude that sufficient progress has been made, the student takes IA 496 and completes a thesis for submission for honors. [One W credit only upon completion of both 495 and 496]

Instructor: Staff.

IDEA - IDEAL

IDEA 310 - Leadership
This course considers leadership through case studies, discussions, and seminars from high-impact leaders. Topics include leadership styles, whether leadership is innate or can be learned, characteristics leaders share, and transformational leadership. Intelligence and leadership is analyzed with a particular focus on the relationship between leadership and emotional, social, and global intelligence. Finally, case studies are used to examine crisis leadership and the characteristics that enable individuals to deliver extraordinary performance under unimaginable challenges. [V, W]

Prerequisite: Junior class standing or permission of instructor. Instructor: Staff.

IDEA 375 - Cultural Conservation and Nanotechnology
This course is a year long, interdisciplinary, experiential program applying nanoscience to preserving cultural heritage. Spring activities include laboratory practica, fresco-making workshops, and presentations of conservation history. Students spend June at the Research Center for Colloids and Nanoscience (CSGI) at the University of Florence, pioneer of cutting-edge technologies for painting conservation. Museum and site visits immerse them in Italian artistic culture. In the fall, students share their knowledge, applying the protocols of nanotechnology to preserving American heritage.

Prerequisite: Chem 121 or equivalent; Art 102 or Art 223 or Art 226. Instructor: Ferri/Ahl.

IDEA 376 - Cultural Conservation and Nanotechnology
Students spend five weeks at the Research Center for Colloids and Nanoscience (CSGI) of the University of Florence, which has pioneered in cutting-edge technologies for painting-conservation. Complementary museum and site visits introduce the enrollees to Italian culture. Objectives are to introduce students to the science underlying conservation of the cultural patrimony, the effects such scientific principles have achieved in specific works of art, and the broadest contexts for the production of such a patrimony.

Instructor: Cummings. Offered: Summer.

INDS - INTERDISCIPLINARY STUDIES

INDS 120 - Inside the People's Republic of China
This course introduces the complex interaction between traditional culture, communist thinking, and the forces of modernization in the People's Republic of China. The practices and characteristics of distinct Chinese subcultures are examined by traveling to representative areas: Beijing in the north, Kunming in the southwest, and Guangzhou on the southeast coast. Students meet with government officials and business people, attend arts performances, visit a factory, hospital, and university, and attend supplemental lectures.

Instructor: Barclay.

INDS 123 - The Performing Arts Around the Globe: Focus on Bali, Indonesia & Sydney, Australia
In this course, students will explore the performing arts in Sydney, Australia and Bali, Indonesia. While abroad, students will primarily focus on theater, opera, dance and music, but will also learn about the history and culture of Australia and Indonesia. Through readings, and in lectures, seminars and workshops, students will learn the basic theories, practices and concepts that will enable them to be sophisticated audience members for and even participants in multiple performing arts.

Instructor: Kelly, Lodge.

INDS 127 - Rock, Landform and Water Interactions: New Zealand 2017
This course explores the interdisciplinary nature of environmental science through scientific observation/data collection, discussion, and readings. The course intends to demonstrate connections between Environmental Engineering and the Natural Sciences resulting in knowledge and skills needed to better understand and communicate issues impacting our global community. New Zealand provides the unique environmental setting in which to examine earth functions from a number of different perspectives through land, glacier, water and geological connections. [NS]

Instructor: Staff.

INDS 128 - China: An Ancient Civilization and New Global Power
This interim course will familiarize students with important aspects of the People's Republic of China, an ancient civilization and emerging global power. In a journey of two major cities (Xi'an and Beijing), this course will introduce students to Chinese cultural history, current economic development, and social life. Through directed readings, basic language studies, visits to historical sites, participation in cultural activities and lecture/discussion sessions, students will gain critical understanding of this complex nation. [H, GM2]

Instructor: Furniss, Yang.

INDS 130 - Interconnections in Northeast Asia
This program brings students to China, North Korea, and South Korea to enable them to explore contemporary East Asian politics and culture within a globalizing-and increasingly interdependent-world. With this program, students will not only be able to experience different cultures first-hand, but also investigate variations of socialism, capitalism, historical memory, identity politics, ideology, and the nature of freedom.

Instructor: Alexy, Park.

INDS 135 - Thailand and Myanmar: Challenges of Development
The southeast Asian countries of Thailand and Myanmar (formerly Burma) have developed very differently, despite the fact that they share a similar climate, natural resource endowment, and religion. Students seek to understand these differences through firsthand experience in both countries—approximately two weeks in Thailand and one week in Myanmar. Issues discussed include imperialism, political development, economic planning, and grassroots capacity building.

Instructor: Stifel.

INDS 140 - A History of Japanese Culture and Government, 400-1600 A.D.
This interim course will immerse students in the aesthetic and political history of a nation which gave the world its first novel, Zen Buddhism, epic war poetry, samurai castles, sushi, and a number of internationally admired performance and plastic

artistic traditions. Through a combination of directed readings, language study, site visits to major monuments, participation in cultural demonstrations, and lecture/discussion classroom activities, students will gain a basic grounding in Japan's premodern history. [H, GM2]

Instructor: Barclay, Ikegami.

INDS 145 - India: Faces of Globalization-Impact and Challenges
This course examines globalization in India as it impacts different segments of society. Students will learn about India's successes, opportunities, and challenges that have followed in the wake of globalization; its contribution to recent advancements toward making technology more accessible to the general population; and its role for improved agency and economic benefit to the community. Planned course activities include class discussions, lectures by local experts and with Lafayette Alumni, and excursions/visits to landmark sites in and near Mumbai and Jaipur/Agra. [SS, GM1, GM2]

Instructor: Bookwala, Stewart-Gambino, Ghai.

INDS 150 - Turkey: The Cradle of Civilizations
Turkey, known to Romans as Anatolia, has seen the rise and fall of many civilizations. This course critically examines the Byzantine, Ottoman Turkish, and Helenic periods from cultural and artistic viewpoints. These civilizations have left clear and lasting impressions, both architecturally and artistically in Anatolia, and on the development of Western civilization. Sites of historic, architectural, and artistic importance in Istanbul, Ismir, Bursa, and Iznik (Nicaea) are studied through visits and on-site lectures.

Instructor: Staff.

INDS 165 - The Open Wall and the New Europe of the 21st Century: Berlin, Prague, and Munich
With the opening of the Berlin Wall, Germany and the rest of Europe are facing rapid political, social, and economic changes. This course reexamines the events leading to two world wars, the division of Europe, and the new European reality in the 21st Century. Through visits to historical sites, meetings with people in East and West, readings, and class discussions, students obtain an understanding of the events and ideologies that made history and today's new reality in Europe. [GM1, SS, V]

Instructor: Pribic, Weiner.

INDS 170 - Modern Sub-Saharan Africa: Kenya and Tanzania
This course combines a firsthand look at the sociocultural environment and natural resources that shape development and change in Kenya and Tanzania. Particular attention is devoted to the rich indigenous history and traditions that provide social and economic purpose for art, the foundations for democratic institutions, support for dignity, industriousness, and accommodation for development. This course examines the degree to which Kenya and Tanzania have achieved their development objectives by managing cultural acculturation, natural resources, and modernization. [GM2]

Instructor: Ahene.

INDS 171 - Madagascar-Lafayette Initiative for Malagasy Education (LIME)
Students in this course will participate in a peer-to-peer mentoring program between Lafayette students and high school students from Madagascar to prepare the latter for the process of applying to colleges in the U.S. The students will work with Malagasy students identified by the United States Embassy over a 1.5 year period, and will do so in person during the three week trip to Madagascar that constitutes this course. [GM2]

Instructor: Stifel.

INDS 172 - Voices of South Africa: Cultural Diversity, Hegemony and Agency
South Africa, the "Rainbow Nation," is built on the diversity of its people practicing many cultures and religions, and speaking 11 official languages. In 1994, the first democratic elections were held ending four decades of apartheid. Its society drives an energetic world of culture that draws on African, European, and Asian roots and breathtaking scenery to forge a distinct identity. However, South Africa also suffers under the HIV/AIDS pandemic. This course introduces students to South Africa and confronts a variety of its "voices". [H, SS, GM1]

Instructor: Ahene, Lamb-Faffelberger.

INDS 173 - Religion, Society
This course is an intensive introduction to the social and religious dynamics of Kenya. East Africa is a unique living laboratory for exploring African religious thought and practice for a number of reasons: Early anthropological studies of stateless societies in East Africa have played a very prominent role in the development of theories and methods for the academic study of non-western religions; Kenya has ethnolinguistic diversity simply not present throughout the rest of the continent where Bantu, Nilotic, and Kushitic languages and social systems have developed in close proximity; Kenya has an extremely complicated history of missionization both during and after the colonial period, which has spawned myriad independent churches, connections with transnational churches and theologies, as well as neo-traditional revivalist movements; and Kenya's coastal communities have historically played key roles in the Indian Ocean slave trade, engaging these communities in a thousand year conversation concerning what constitutes "proper" Islamic belief and practice. To explore these dynamics of continuity and change, students will have the opportunity to immerse themselves in three of Kenya's distinct communities: the Kikuyu, the Maasai, and the Swahili. Besides studying intensive Kishwahili on the coast for one week, students will stay in Maasailand in southern Kenya. While learning on the move, students will not only engage with academic literatures specific to the study of African religions and societies, but will also have a genuine opportunity to engage with Kenyans in a meaningful way. [H, SS, GM1, GM2, V]

Instructor: Belletto, Blunt.

INDS 174 - Global Senegal: Alternative Modalities
This course provides an intensive learning experience in a French-speaking West African country. English is widely spoken by young urban residents who study it in school, and roughly 42 percent of the country's population lives in Dakar, the capital, and its surrounding towns. Senegal is well known for its local intelligentsia, especially historians and economists, and is an international site of study of the pre-colonial, colonial, and post-colonial experience in Africa. [GM2]

Instructor: Swanson, Wilson-Fall.

INDS 175 - Back to the Roots of Western Civilization: Greece and Italy
An on-site study of two great pillars of civilization that form the intellectual and spiritual foundations of the western world: Greece, where democracy--"people power"--and a love of beauty and rational discourse originated; and Roman Italy, where the genius for civilization and government made of the classical heritage a great legacy. Students encounter the enduring force of these cultures. On site they learn and experience for themselves, the tangible heritage of each civilization in architecture and plastic arts. Grand public monuments and private structures embody fundamental ideas that have become part of the way Western citizens think and feel. Lectures and discussions complement contributions of local guides.

Instructor: Cohn.

INDS 177 - Mexico Through the Centuries
This course will give students the opportunity to learn about Mexican history and its relation to the present day. Students will explore the manner in which pre-Columbian traditions and Mexico's colonial heritage and modern socioeconomic pressures are manifested in many of its present day attitudes and customs. Students will explore various UNESCO World Heritage Sites and inform themselves as to the impact these spaces have in contemporary Mexico.

Instructor: Rojo, Schettino.

INDS 180 - The Colorful Sunset of the Habsburg Empire: An Apocalyptic Waltz
World War I ended in the disintegration of the Habsburg monarchy that for centuries had united peoples of widely differing races and languages. This course focuses on the cultural upheaval in the twilight years of the empire (c. 1870-1919) by indicating how these apocalyptic years found expression in the culture, art, and intellectual work of the most famous luminaries of the period.

Instructor: McDonald, Shieber.

INDS 185 - Guatemala: Innovations in Development
Guatemala is a country at the crossroads. Free from the instability generated by the civil war, it is a developing country. Strides have been made towards an economy where markets prevail and citizens find opportunities for entrepreneurship. The experience includes visits to markets that emerged spontaneously, a coffee plantation, and a volcano. Guest lectures address the architecture, cultural heritage, political and security environment, and challenges facing Guatemala.

Instructor: Staff.

INDS 187 - Sustainable Approaches in the Developing World: Rural Honduras from the Mayans to Present
An intensive study of how agricultural practices, ecology, and access to water are linked to sustainable development in rural Honduras. Students experience sustainable agriculture demonstration sites, the Mayan ruins at Copan, an ecotourism lodge within a National Park, and three days in a rural village working with the indigenous Tolupan in cooperation with Engineers Without Borders. The course culminates in a plenary session integrating the experiences of the course into a framework of sustainable use of natural resources.

Instructor: Brandes, Ferri.

INDS 190 - Politics & Culture of the Caribbean
This course introduces students to the key political and economic issues facing the nations of the Caribbean. Attention is given to the relationship between West Indian culture(s) and West Indian literature(s). Offered in the Bahamas.

Instructor: Staff.

INDS 191 - The Cuban Revolution and its Social Impact: Focus on Healthcare and the Arts
By focusing on healthcare and the arts, students will explore the ways in which the Cuban Revolution has and has not transformed society. Questions of race, class, and gender will be woven throughout as will attention to the intersections of politics, economics, and religion. By traveling the island, experiencing cultural and social activities, and engaging with experts in several fields, students will have an opportunity to critically evaluate the complexities of contemporary Cuba.

Instructor: Basow, Gil.

INDS 195 - The History and Politics of Israel: The Peace Process and Internal Cleavages
This course focuses on the evolving peace process in the Middle East, with particular attention to Israel and the West Bank/Gaza and some attention to the Golan Heights and the relations between Israel-Jordan. Since 1992, there has been an accelerated peace process. The course assesses the implications for Israels international relations and domestic situation against the background of Israels history. Course includes seminar meetings, visits to historical sites (e.g., Massada, Western Wall, Tel-Hai), museums (e.g., Yad VShem), and political locations (e.g., the Knesset), and sessions with political leaders, academic analysts, and public officials.

Instructor: Peleg, Weiner.

INDS 200 - The Land and Imaginative Landscape of Ireland
This course examines the many ways in which the land of Ireland has figured in Irish history and the Irish imagination. The history of Ireland centers on definitions of the land as an economic, political, and symbolic—even religious—value. Using written sources culled from Irish history, ethnography, politics, and literature, along with some guest lectures, and an extensive field program in the Boyne Valley, Galway, Donegal, Dublin, and Belfast, the instructors take students on an exploration of the shifting Irish landscape.

Instructor: Heavey.

INDS 208 - Exploring Peru's Indigenous Populations in the Modern Day
This course in Peru will give students the opportunity to learn about Peruvian society and history. Specifically, students will explore the manner in which indigenous peoples in Peru and their traditional ways have survived even after over 500 years of colonial and post-colonial existence. Students will explore various cultural sites in Lima, Peru's capital city, stay with an indigenous family in Cusco, and finally explore the ancient Ruins of Machu Picchu. [H, SS, GM1, GM2]

Instructor: Rojo, Torres.

INDS 210 - Exploring South America: Brazil, Argentina, and the Andes
Travel to such destinations as Quito, Cuzco, Montevideo, Rio de Janeiro, and São Salvador (Bahia) to investigate the cultural development of South America from pre-Columbian through modern times. Students study Inca, colonial, and postcolonial society, architecture, and art, visiting archeological sites, museums, churches, and other places of interest. The course includes historical and sociological readings and literary texts by such major authors as El Inca Garcilaso de la Vega, Machado de Assis, and Jorge Luis Borges.

Instructor: Jordan, Rosa.

INDS 211 - Interdisciplinary Seminars in Life Sciences: Symposia on Biomedicine, Bioengineering, Biochemistry, and Environmental Science
Interdisciplinarity in sciences and engineering is no longer the exception as traditional divisions between disciplines erode. Some of the most exciting research in science and engineering is currently happening in the white space between disciplines. This course intends to introduce to students to high impact interdisciplinary topics through a combination of primary literature, discussions, and lectures from some of today's high impact academics. 1/2 course credit.'

Instructor: Ferri, Mylon.

INDS 214 - Journey to Rome: Approaching and Exploring the Eternal City
This course will be a double journey in time. We will not only explore the city of Rome (from antiquity to modernity) but also recreate the experience of traveling to the Eternal city in past centuries. The course consists of three parts: first, approaching Rome, following a centuries-old travel route via Munich, Innsbruck, and Verona (4 days); second, excursions in Rome (8 days); third, a trip to Naples and excavated Pompeii (3 days). [H]

Instructor: Dubischar, Sinkevic.

INDS 215 - Medieval Architecture in Northern Europe: Belgium, Germany, and the Netherlands
This course entails on-site study of medieval architecture in Belgium, Germany, and the Netherlands. The architecture is considered as an expression of northern medieval European society and technology. The technical accomplishments of medieval builders are emphasized; Roman architecture, based on large-scale use of masonry arches and vaults, is studied as medieval architecture's foundation. Study of history from the Roman through the medieval period enables students to place the architecture in a societal context.

Instructor: Van Gulick.

INDS 220 - Italy: A Journey through Art, History, and Literature
This on-site course explores the brilliant artistic and literary culture of Florence during the late Middle Ages and Renaissance. Its primary text is the city and its monuments: its buildings, from church to palace; its art, including masterpieces by Giotto, Donatello, Botticelli, and Michaelangelo; and its literature, including such classics as Dante's *Inferno*, Petrarch's sonnets, and Boccaccio's *Decameron*. Visits to Pisa, Siena, Assisi, and Rome enhance understanding of this extraordinary age. [H, GM1]

Instructor: Ahl, Pribic.

INDS 222 - Engineers without Borders Practicum
This 0.5 credit course is available to students actively participating in either the management of or the development of technical or socio-cultural solutions for Engineers without Borders service-learning projects. For the former, students should be members of the leadership board and participate in weekly board meetings and other EWB activities. For the latter, significant work on a technical or socio-cultural project must be completed. Grading for this course is pass-fail. This course may be repeated up to four times for credit. 1/2 course credit

Prerequisite: Permission of the instructor. Instructor: J. Smith.

INDS 224 - The Cultures and Landscapes of Greece: Perspectives of Writer, Ancient and Modern
Traveling around Greece to visit museums and important historical and archeological sites, students will see firsthand the diversity of the country's topography and have the opportunity to study artifacts that give us glimpses into Greece's distant and more modern past. This "field experience" will enhance students' ability to cast a critical eye on the ways writers of imaginative literature have represented institutions and customs, values and priorities of Greeks living in particular locales at particular historical moments, and will help foreground ways in which the natural environment of Greece has both been shaped by and helped to shape the country's ever-changing cultures. [H, GM2]

Instructor: Byrd, Reynolds.

INDS 226 - Constructing Madrid, Spain, and Iberian Worlds
What tools and information do you need to understand Madrid and the Iberian Peninsula in their global and multicultural contexts? We will begin with the flows of capital, people, goods, and ideas through Spain and Portugal, the Mediterranean and Atlantic Worlds, and parts of Asia. Then we will focus on the transformation of urban spaces prior to, during, and after Spain's military dictatorship. The course concludes with an analysis of post-conflict reconstruction processes and their relation to Spain's cultural heritage in the 21st century. [GM1, GM2, V]

Instructor: Donnell.

INDS 230 - Paris, Provence, and the Midi: Cathedrals, Kings, and Pilgrims
This course entails on-site study of French medieval art and architecture in and around Avignon, Toulouse, and Paris. Medieval art and architecture are considered as expressions of medieval society and medieval technology. Study of French history from pre-Roman Gaul through the nineteenth century enables students to place the art and architecture in an appropriate societal context.

Instructor: Van Gulick, Van Gulick.

INDS 240 - From Generosity to Justice: Addressing Social Problems through Action and Reflection
This interdisciplinary seminar centers on questions that arise when students volunteer to work with people in the community who are poor. Specific problems—homelessness, poverty, or crime—as well as the social system in which they exist are studied. [W]

Prerequisite: Sophomore standing or above and one semester of volunteer work. Corequisite: Volunteer experience is also required. Instructor: Beckman, Miller.

INDS 245 - Social, Economic and Ethical Issues in Health Care in the US and UK
This course in conjunction with INDS 371 examines selected social, economic and ethical aspects of the health care systems of the U.K. and the U.S. After providing an overview of the two systems, selected features are compared. Once comparisons are made, the ethical implications of system differences are explored. The course includes lectures, discussions, guest lectures, site visits, student presentations, and short papers. [GM2]

Instructor: B. Hendrickson, Ruebeck.

INDS 250 - French Commerce and Culture in the European Union: London, Paris, and Brussels
An introduction to the business environment of France and its role in the ever-changing economic marketplace of the European Community. The course examines French culture and its impact on the financial, production, and marketing processes through firsthand experiences in the EU organizations and the French marketplace.

Instructor: Bukics, Lalande.

INDS 252 - The Arabian Gulf and the Indian Ocean: Historical and Anthropological Perspectives
This study abroad course provides students with the opportunity to examine the maritime history of the Gulf States and the Western Indian Ocean region. It will also initiate students into some of the challenges and research imperatives for carrying out ethnographies in the Gulf, as the course will cover an introduction to ethnography of the region. Finally, the students will travel between Gulf States, where they will have the opportunity to visit and explore modern Middle Eastern countries and consider the historical and ethnographic information they learned comparatively. Topics such as the position of migrants, African-descended communities, and local class dynamics will be covered, within the over-arching themes of identity and ethnicity. Additionally, students will meet counterparts in each country, thereby gaining knowledge of concerns and interests of young people of the region. [H, SS, GM1, GM2]

Instructor: Vora, Wilson-Fall.

INDS 260 - Scandinavia: Northern Lights (Kierkegaard, Ibsen, Strindberg)
This course examines central themes in the work of Kierkegaard, Ibsen, and Strindberg in their cultural and historical context. It involves reading and discussing a number of their major works, visiting the cities in Denmark, Norway, and Sweden that shaped them, viewing artwork and attending theatrical works that influenced them or that were, in turn, influenced by them, and examining the political, economic, and cultural upheavals in Europe in the 19th century that shaped their thought.

Instructor: Staff.

INDS 270 - A Moveable Feast: American Writers in Paris
American writers have always gone to Paris, but the question is why. The answer lies both in the city itself and in the literature it has inspired. Twentieth-century writers like Ernest Hemingway, Gertrude Stein, James Baldwin, and Gore Vidal are among the literary expatriates students consider while exploring 'their Paris'. Their Paris, vividly imagined and literally experienced, still exists—if you know where to look for it and what to read.

Instructor: Staff.

INDS 271 - Social Values and Technology in Historic Architecture
Study of Roman, Byzantine, and French Medieval architecture as expressions of pre-industrial era architectural technology and societal values. Consideration of the interdependence of societal values and technological progress as reflected in the buildings of the period in question. [V, W]

Instructor: Van Gulick.

INDS 275 - Paris: An Introduction to the French Exception
This course provides students of all majors with an introduction to the world of French culture, particularly with respect to how its role is perceived by the global marketplace. The course examines the economic peculiarities of French culture, such as public financial aid to cinema, books, and TV programs with a critical examination of their advantages/disadvantages with respect to the consequence for French business and French culture. The peculiarities of the French management style, the work environment, and work group dynamics are presented within the context of the global work environment.

Instructor: Bukics, Reyns-Chikuma.

INDS 280 - The Three Faces of Russia: Imperial, Soviet, and Modern
In this course students spend three weeks examining the history and culture of Russia and Latvia while traveling through these two countries. The course is structured around several themes: culture, history (Imperialism, World War II, Glasnost), literature, art, politics, economics, the dilemmas of post communism and contemporary issues. Students are encouraged to learn and absorb materials that fall outside of these categories, but the reading and excursions are focused on these themes. [H, GM1]

Instructor: Pribic, Sajez.

INDS 321-322 - Technology Clinic
A small group of selected students work together with faculty mentors to solve a real-world problem proposed by an industrial or government sponsor, addressing the social, technological, and economic factors relevant to a solution. Students work on campus as a team and at times independently and on-site with the sponsors. [INDS 322 SS,W]

Prerequisite: By nomination. Instructor: Malinconico.

INDS 330 - Grand Challenges Project
In this course a group of students from multiple disciplines will focus on one of the fourteen Grand Challenges. These have been identified by the National Academy of Engineering as the most pressing issues facing global society in the 21st century. The course provides a multidisciplinary experience where students use their disciplinary expertise in combination with the other team members to investigate, address, and develop incremental solutions to the Grand Challenges. 0.25 credits

Prerequisite: Sophomore, Junior or Senior standing. Instructor: Staff.

INDS 361 - The Gothic Cathedral: Structural Rationalism

Gothic cathedrals are considered as representing the physical embodiment of the values of medieval society. The course explores the dependence of their construction on medieval developments in construction technology and the essential interdependence of societal values and technological progress. It also considers how the structural rationalism of Gothic architecture, as interpreted during the nineteenth century, is the foundation for much of modern architectural theory. [W]

Instructor: Van Gulick.

INDS 371 - Health Care Internship
The aspect of this course paired with INDS 245 is a placement in a health care, human services, governmental, or academic institution. The internship will last four weeks, on a daily schedule to be determined by the placement supervisor. This experience will add to the student's understanding of cultural differences in the U.K. and the role this organization plays in it. The internship will begin in mid June and continue through early July. There will also be class meetings on Fridays during the internship period, as reflected in the schedule.

Instructor: B. Hendrickson, Ruebeck.

INS - A.B. IN INTERNATIONAL STUDIES

INS 401 - International Studies Practicum I
The first part of a two course sequence of a professional experience involving total immersion in a non-English-speaking foreign culture. Students practice engineering at an appropriate foreign location. Students document their accomplishments so that they can be evaluated and graded. At least part of the documentation may be required to be in the foreign language spoken.

Prerequisite: Advanced standing in International Studies. Instructor: Smith, Van Gulick.

INS 402 - International Studies Practicum II

The second part of a two course sequence of a professional experience involving total immersion in a non-English-speaking foreign culture. Students practice engineering at an appropriate foreign location. Students document their accomplishments so that they can be evaluated and graded. At least part of the documentation may be required to be in the foreign language spoken. [W]

Prerequisite: Advanced standing in International Studies. Instructor: Smith, Van Gulick.

JAPN - JAPANESE

JAPN 101 - Elementary Japanese I
This course teaches fundamentals of spoken and written language, including real-life situational contexts of greetings, shopping, counting, explaining daily activities, requesting, making plans, and invitations. Students also will learn Japan's three writing systems; *hiragana*, *katakana*, and *kanji* (Chineses characters). Class and laboratory. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department.

Instructor: Ikegami.

JAPN 102 - Elementary Japanese II

This course continues teaching fundamentals of spoken and written language, including real-life contexts of explaining situations, expressing opinions and medical symptoms, comparing items, requesting, introducing family members, and making holiday plans.Students will learn more colloquial expressions by using various patterns and continue studying *kanji* (Chinese characters). Class and laboratory. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [H]

Prerequisite: JAPN 101 or equivalent proficiency. Instructor: Ikegami.

JAPN 111 - Intermediate Japanese I
This course reviews and expands the basic structure patterns and vocabulary from Elementary Japanese with increasing emphasis on reading. More elaborate social and ritual exchanges, as well as casual speech, are developed including real-life contexts of looking for a part-time job, sending a present, planning a trip, dealing with the Lost and Found, and grumbling or gossiping. Continued study of *kanji* (Chinese characters). Class and laboratory. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [H]

Prerequisite: JAPN 102 or equivalent proficiency. Instructor: Ikegami.

JAPN 112 - Intermediate Japanese II
This course continues expanding the basic structure patterns and vocabulary with increasing emphasis on reading. More elaborate social and ritual exchanges as well as honorific/humble speech and passive/causative speech. Real-life contexts are based on business and social settings like at a company, a police station, or a home-stay family. Continued study of *kanji* (Chinese characters). Class and laboratory. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [GM2, H]

Prerequisite: JAPN 111 or equivalent proficiency. Instructor: Ikegami.

JAPN 290-291 - Independent Study in Japanese
These courses are for students who continue studying Japanese beyond the Intermediate level, to the Advanced level, in order to develop their skills. It emphasizes reading more authentic materials such as newspapers, magazines, and Internet articles and on writing compositions or corresponding. Also, students will focus on the skill that they want to improve particularly.

Prerequisite: JAPN 112, equivalent proficiency, or permission of instructor. Instructor: Ikegami.

LACS - LATIN AMERICAN AND CARIBBEAN STUDIES

LACS 104 - Introduction to Latin American and Caribbean Studies:The Arts
This introductory course examines the diverse cultures of Latin America through a study of its arts though readings, sound recordings, films, and lectures. Students encounter the communities, histories, traditions, and newer forms of artistic expression. Our final objective is to relate the Latin American culture with cultura latina in the United States. The course

provides a framework for more advanced studies on Caribbean and Latin American themes. [H, GM2]

Instructor: Torres.

LAT - LATIN

LAT 101 - Elementary Latin I
Emphasis on achieving skills necessary for sustained reading of classical Latin texts. Fundamentals and exercises in grammar, syntax, and development of vocabulary. Some work on Latin roots for vocabulary-building in English and enhancement of knowledge of European languages. Recitation. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department.

Instructor: Dubischar.

LAT 102 - Elementary Latin II
Emphasis on achieving skills necessary for sustained reading of classical Latin texts. Fundamentals and exercises in grammar, syntax, and development of vocabulary. Some work on Latin roots for vocabulary-building in English and enhancement of knowledge of European languages. Recitation. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [H]

Prerequisite: LAT 101 or equivalent proficiency. Instructor: Dubischar.

LAT 111 - Intermediate Latin I
Fall: Reading of short selections in prose and in the poetry of Catullus with attention to the political, moral, and cultural climate of the late Roman Republic. Spring: Reading of at least one book of Tusculan Disputations of Cicero and of selections from the Satyricon of Petronius against the background of the early Roman Empire. Recitation. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [H]

Prerequisite: LAT 102 or proficiency. Instructor: Dubischar.

LAT 112 - Intermediate Latin II
Fall: Reading of short selections in prose and in the poetry of Catullus with attention to the political, moral, and cultural climate of the late Roman Republic. Spring: Reading of at least one book of Tusculan Disputations of Cicero and of selections from the Satyricon of Petronius against the background of the early Roman Empire. Recitation. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [H]

Prerequisite: LAT 111 or equivalent proficiency. Instructor: Dubischar.

LAT 211 - Advanced Latin
Courses such as: Latin Lyric Poetry, Latin Elegy, Latin Prose of the Early Empire, Latin Satire, Medieval Latin, Latin Philosophy, Lucretius, and Cicero. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [H]

Instructor: Dubischar.

MATH - MATHEMATICS

MATH 104 - A World of Mathematics
A non-calculus based course that highlights the nature and significance of mathematics and its widespread applicability across a variety of disciplines. Applications of mathematics and mathematical modeling may come from areas such as financial management, economics, political science, government, medicine, the natural sciences, and the arts. An emphasis will be placed upon developing the student's skills in critical thinking and in applying analytical skills to interpret quantitative information.[Q]

Prerequisite: (Not open to students who have credit for any mathematics course numbered above 120, except by permission of instructor.). Instructor: Staff.

MATH 110 - Statistical Concepts
An introduction to the concepts and reasoning underlying the interpretation of data and chance. Emphasis is on understanding how statistical analysis is used to gain insight into a wide variety of areas of human interest. Topics include elements of descriptive statistics, design of experiments, laws of probability, and inference from a sample to a population (including confidence intervals and hypothesis testing). Not open to students who have credit for any mathematics course numbered above 120, except by permission of instructor. [Q]

Instructor: Staff.

MATH 125 - Modeling and Differential Calculus
An introduction to mathematical modeling and the use of differential calculus. Topics include: analysis and manipulation of elementary functions, including trigonometric, exponential, and logarithmic functions; the differential calculus of such functions; and optimization. An ongoing emphasis will be the use of elementary functions as well as the differential calculus to model phenomena in the natural, social and life sciences. Not open to students who have credit for MATH 161 or MATH 165. [Q]

Prerequisite: Two years of high school algebra. Instructor: Staff.

MATH 141 - Differential Calculus and Economic Modeling
This course in the differential calculus of one and several variables is intended for students who plan to major in Economics or Policy Studies. Mathematical concepts include exponentials and logarithms, limits, ordinary and partial derivatives, techniques of differentiation, contours, and optimization in both one and several variables. Economic concepts and models include supply and demand curves, market equilibrium, present and future value, marginal analysis, total and average cost, elasticity of demand, and optimization subject to a budget constraint. Not open to students who have credit for MATH 161 or MATH 165. [Q]

Prerequisite: Three years of High School mathematics. Instructor: Staff.

MATH 161 - Calculus I
The sequence MATH 161, MATH 162, MATH 263 provides an introduction to calculus for students of mathematics, engineering, and the sciences. Topics include limits, derivatives, techniques of differentiation, definite integrals, the fundamental theorem of calculus, and applications of derivatives and integrals. [Q]

Prerequisite: High school trigonometry. Instructor: Staff.

MATH 162 - Calculus II
A continuation of MATH 161. Topics include techniques and applications of integration, introduction to differential equations, parametric curves and polar coordinates, infinite series and Taylor approximation.

Prerequisite: A grade of C- or better in MATH 161 or MATH 165. Instructor: Staff.

MATH 165 - Calculus I+
A course which covers the same topics as MATH 161 while using a workshop experience and collaborative learning to give special emphasis to the development of problem-solving skills. Enrollment is by invitation of the Department of Mathematics. [Q]

Prerequisite: High school trigonometry. Instructor: Staff.

MATH 166 - Calculus II+
A course which covers the same topics as MATH 162 while using a workshop experience and collaborative learning to give special emphasis to the development of problem-solving skills. Enrollment is by invitation of the Department of Mathematics.

Prerequisite: A grade of C- or better in MATH 161 or MATH 165. Instructor: Staff.

MATH 182 - Discrete Structures
An introduction to discrete structures and algorithms and some mathematical tools and methods of reasoning that aid in their development and analysis. Topics include: sets, counting, probability, algorithms, mathematical induction, relations, graphs, and trees.

Prerequisite: CS 104, CS 105, or CS 106, MATH 161 or MATH 165. Instructor: Staff. Offered: Spring semester.

MATH 186 - Applied Statistics
An introductory course emphasizing standard methods and reasoning used in analyzing data. Topics include exploratory data analysis, design of experiments, least squares analysis, probability, sampling distributions and methods of inferential statistics. Includes an introduction to a statistical computing package. Not open to students who have credit for PSYC 120. [Q]

Prerequisite: MATH 125, MATH 141, MATH 161 or MATH 165, or permission of instructor. Instructor: Staff.

MATH 246 - Evolutionary Game Theory
An introduction to the concepts, techniques, and application of evolutionary game theory. The mathematics of game theory and natural selection offer insights valuable to the study of economics, biology, psychology, anthropology, sociology, philosophy, and political science. This course is intended to serve students with interests in any of these fields learn the approach, requiring minimal mathematical background, with special attention to apparent paradoxes, such as the evolution of altruism. [V]

Prerequisite: MATH 141, MATH 161, or MATH 165 and one of the following: ECON 101, BIOL 102, A&S 102, A&S 103, PSYC 110, GOVT 101, GOVT 102, GOVT 103, GOVT 104, PHIL 145, PHIL 200, PHIL 250, PHIL 260, or NEUR 201. Cross-Listed as: ECON 246. Instructor: Root, Ruebeck.

MATH 263 - Calculus III
A continuation of MATH 162. Topics include vector algebra, vector calculus, partial derivatives, gradients and directional derivatives, tangent planes, the chain rule, multiple integrals and line integrals.

Prerequisite: A grade of C- or better in MATH 162 or MATH 166. Instructor: Staff.

MATH 264 - Differential Equations with Linear Algebra
An introductory course in ordinary differential equations including techniques of elementary linear algebra. Emphasis is on first-order equations, and higher-order linear equations and systems of equations. Topics include qualitative analysis of differential equations, analytical and numerical solutions, Laplace transforms, existence and uniqueness of solutions, and elemental models in science and engineering.

Prerequisite: MATH 263. Instructor: Staff.

MATH 272 - Linear Algebra with Applications
An introductory course in linear algebra emphasizing applications to fields such as economics, natural sciences, computer science, statistics, and engineering. The course covers solutions of systems of equations, matrix algebra, vector spaces, linear transformations, determinants, eigenvalues and eigenvectors. Not open to students who have credit for MATH 300.

Corequisite: MATH 263 or permission of instructor. Instructor: Staff.

MATH 282 - Techniques of Mathematical Modeling
A course that introduces students to the fundamentals of mathematical modeling through the formulation, analysis, and testing of mathematical models in a variety of areas. Modeling techniques covered include proportionality, curve fitting, elementary linear programming, and simulation.

Prerequisite: MATH 162 or MATH 166. Instructor: Staff. Offered: Spring semester.

MATH 286 - Introduction to Probablility and Mathematical Statistics
This course will serve as a one-semester introduction to probability and mathematical statistics, with roughly half of the semester devoted to each. After learning basics of set theory and axiomatic probability, we review random variables, probability mass/density functions, expected value (including covariance and correlation), and expected value and variance of linear combinations. Then we begin inferential statistics (confidence intervals and hypothesis tests), correlation and simple linear regression, and, time permitting, one-way analysis of variance and/or x2 tests. Students may not receive credit for Math 286 if they have credit for Math 186.

Prerequisite: MATH 263. Instructor: Gaugler.

MATH 290 - Transition to Theoretical Mathematics
An introduction to the concepts and techniques that permeate advanced mathematics. Topics include set theory, propositional logic, proof techniques, relations, and functions. Special emphasis on developing students' facility for reading and writing mathematical proofs. Examples and additional topics are included from various branches of mathematics, at the discretion of the instructor.

Corequisite: MATH 263 or permission of instructor. Instructor: Staff.

MATH 300 - Vector Spaces
A first course in theoretical linear algebra, emphasizing the reading and writing of proofs. Topics include systems of linear equations, matrix algebra, vector spaces and linear transformations, eigenvectors and diagonalization, inner product spaces, and the Spectral Theorem. Not open to students with credit for MATH 272.

Prerequisite: MATH 290 or permission of instructor. Instructor: Staff. Offered: Spring semester.

MATH 301 - Case Studies in Mathematical Modeling
A course which engages students in the creation of mathematical models to answer questions about a variety of phenomena. Students work in small teams on a sequence of projects which require the formulation, analysis, and critical evaluation of a mathematical model and conclude with the submission of a written report by each student. [W]

Prerequisite: MATH 272 or MATH 300. Instructor: Staff. Offered: Fall semester.

MATH 306 - Operations Research
A study of some mathematical methods of decision making. Topics include: linear programming (maximizing linear functions subject to linear constraints), the simplex algorithm for solving linear programming problems, sensitivity analysis, networks and inventory problems and applications.

Prerequisite: MATH 272 or MATH 300 or permission of instructor. Instructor: Staff.

MATH 310 - Ordinary Differential Equations
A course in the theory and applications of ordinary differential equations which emphasizes qualitative aspects of the subject. Topics include analytic and numerical solution techniques for systems of equations, graphical analysis, stability, existence-uniqueness theorems, and applications.

Prerequisite: MATH 263, and MATH 272 or MATH 300. Instructor: Staff. Offered: Spring semester of even-numbered years.

MATH 312 - Partial Differential Equations
An introduction to partial differential equations and their applications. Formulation of initial and boundary value problems for these equations and methods for their solution are emphasized. Separation of variables and Fourier analysis are developed. The course includes interpretation of classical equations and their solutions in terms of applications.

Prerequisite: MATH 263. Instructor: Staff. Offered: Spring semester of odd-numbered years.

MATH 323 - Geometry
Various geometries are considered including absolute, Euclidean, and the classical non-Euclidean geometries. General properties of axiomatic systems, models, and the role of Euclidean geometry in the development of other branches of mathematics are discussed.

Prerequisite: MATH 162 or permission of instructor. Corequisite: MATH 263 or permission of instructor; reading and writing proofs will be a significant part of the course, so MATH 290 could be useful, though it is not a prerequisite. Instructor: Staff. Offered: Fall semester of even-numbered years.

MATH 325 - Combinatorics
An introduction to the techniques and theory of enumeration of finite sets. Topics include combinations, permutations, generating functions, recurrence relations, the inclusion-exclusion principle, block designs, and graph theory.

Prerequisite: MATH 263, or permission of instructor; reading and writing proofs will be a significant part of the course, so MATH 290 could be useful, though it is not a prerequisite. Instructor: Staff. Offered: Fall semester of odd-numbered years.

MATH 328 - Number Theory
An introduction to the theory of the integers and techniques for their study and application. Topics include primality, modular arithmetic, arithmetic functions, quadratic residues, and diophantine equations.

Prerequisite: MATH 263 or permission of instructor; reading and writing proofs will be a significant part of the course, so MATH 290 could be useful, though it is not a prerequisite. Instructor: Staff. Offered: Spring semester of odd-numbered years.

MATH 335 - Probability
A development of basic probability theory including the axioms, random variables, expected value, the law of large numbers and the central limit theorem. Additional topics include distribution functions and generating functions.

Prerequisite: MATH 263. Instructor: Staff. Offered: Fall semester.

MATH 336 - Mathematical Statistics
A mathematical development of fundamental results and techniques in statistics. Topics include estimation, sampling distributions, hypothesis testing, correlation and regression.

Prerequisite: MATH 335. Instructor: Staff. Offered: Spring semester.

MATH 343 - Advanced Multivariable Calculus
A continuation of multivariable calculus from MATH 263 , using concepts from linear algebra. Topics include the derivative as a linear transformation, the Chain Rule, the Inverse and Implicit Function Theorems, the Change of Variables Theorem, and the integral theorems of Green, Gauss and Stokes; additional topics may include differential forms and series of functions.

Prerequisite: MATH 263, and MATH 272 or MATH 300. Instructor: Staff. Offered: Fall semester of odd-numbered years.

MATH 345 - Complex Analysis
An introductory course in the calculus of complex functions including the algebra and geometry of complex numbers, elementary mappings, complex derivatives and integrals,Cauchy-Riemann equations, harmonic functions, Cauchy's Integral Theory, Taylor and Laurent series, residues.

Prerequisite: MATH 263. Instructor: Staff. Offered: Fall semester of even-numbered years.

MATH 347 - Financial Mathematics
A wide range of topics in mathematical finance are covered, including: continuous time models such as the Brownian motion model for stock prices, the Black-Scholes model for options prices, the Ho-Lee, Vasicek and other models for interest rates, also different hedging strategies and numerical approaches for derivative pricing such as binomial trees, Monte-Carlo simulation and finite difference methods, and price models for credit

derivatives such as asset swaps, credit default swaps and collateralized debt obligations.

Prerequisite: ECON 101, MATH 335. Instructor: Staff.

MATH 351 - Abstract Algebra I
An introduction to some of the fundamental ideas and structures of abstract algebra. Homomorphisms and isomorphisms, substructures and quotient structures are discussed for algebraic objects such as fields, vector spaces, rings, and groups. Other topics may include factorization in rings, and finite group theory. [W]

Prerequisite: MATH 290. Instructor: Staff. Offered: Fall semester.

MATH 352 - Abstract Algebra II
The course covers field extensions and Galois Theory. Additional topics are included at the discretion of the instructor.

Prerequisite: MATH 351. Corequisite: MATH 300 or permission of instructor. Instructor: Staff. Offered: Spring semester of even-numbered years.

MATH 356 - Introduction to Real Analysis
A rigorous development of the calculus of functions of one real variable including the topology of the real line, limits, continuity, differentiation and integration. [W]

Prerequisite: MATH 290. Instructor: Staff. Offered: Spring semester.

MATH 357 - Real Analysis II
An introduction to metric spaces and measure theory. Topics covered include metric space topology, compactness and completeness, uniform convergence of functions; basic measure theory, construction of Lebesgue measure on the real line, and the definition and basic convergence properties of the Lebesgue integral.

Prerequisite: MATH 356. Instructor: Staff.

MATH 358 - Topology
The main topics are set theory, the separation axioms, connectedness, compactness, and the continuity of functions. Classical general topological spaces are studied including regular spaces, normal spaces, first or second countable spaces, and metrizable spaces.

Prerequisite: MATH 356 or permission of instructor. Instructor: Staff. Offered: Fall semester of even-numbered years..

MATH 360 - History of Mathematics
Mathematics is a living, changing subject whose truths, once identified, have remarkable staying power. In this course students analyze various episodes in the history of mathematics that illustrate how mathematical knowledge has developed over the years. Topics include: Egyptian and Babylonian mathematics, indigenous mathematics from outside of the Western tradition, the contributions of Euclid and Ancient Greek mathematics, the birth of calculus, and selected topics from the 19th and 20th centuries. [W]

Prerequisite: MATH 263 or permission of instructor. Instructor: Staff. Offered: Fall semester of odd-numbered years..

MATH 372 - Mathematics Seminar
This course offers a major branch of mathematics not covered by the regular offerings of the department. Course descriptions are available in the department office.

Prerequisite: Depend on subject matter. Usually, completion of the calculus sequence constitutes a minimal prerequisite. Instructor: Staff. Offered: As needed.

MATH 373-389 - Advanced Special Topics
Chosen from among a wide range of mathematical topics accessible to junior and senior mathematics majors. When offered, the special topic to be studied will be listed in the Semester Course and Hour Schedule, and course descriptions will be available in the department office.

Instructor: Staff.

MATH 391-394 - Independent Study
Study by an individual student, under the supervision of a mathematics faculty member, of a mathematical subject not covered by courses offered by the department. The program of study must be drawn up by the student and the faculty supervisor and approved by an ad hoc committee of the department.

Instructor: Staff.

MATH 400 - Senior Seminar
A course in which each student undertakes a thorough and independent study of one or more topics in mathematics. Students are required to make oral presentations on their work and to prepare written reports on their topics. [W]

Prerequisite: Senior standing and satisfactory completion of at least two 300-level courses in mathematics. Instructor: Staff. Offered: Spring semester.

MATH 495-496 - Thesis
Students desiring to take Honors in Mathematics should inform their department advisers early in the second semester of the junior year. Honors work involves a guided program of independent study culminating in a thesis on a topic to be selected by the student in consultation with his or her adviser and approved by the department. [One W credit only upon completion of both 495 and 496]

Instructor: Staff.

ME - MECHANICAL ENGINEERING

ME 210 - Manufacturing and Design
This course introduces techniques in computer-aided design (CAD) and manufacturing as applied to mechanical components and systems. Manufacturing processes, their underlying physical phenomena, and their relevance to mechanical design are studied. Laboratory work includes the drawing and construction of a pre-designed mechanical system using CAD, conventional fabrication techniques, and computer-aided manufacturing (CAM). All course topics are applied to the design, construction, and competition of a major group project. Lecture/laboratory.

Prerequisite: MATH 161, PHYS 131 or PHYS 151. Instructor: Staff. Offered: Spring semester.

ME 240 - Dynamics
Particle and rigid body kinematics and kinetics. Work, energy, and power. Linear impulse and momentum, angular impulse and

momentum, impact. Students learn the fundamentals of MATLAB programming and practice these skills in the context of moving mechanical systems.

Prerequisite: ES 226; MATH 263. Instructor: Staff. Offered: Spring semester.

ME 290-291 - Introduction to Independent Study-Research
An opportunity for students to undertake independent study/research projects during the sophomore and/or junior year. Projects are selected based on the background and interests of the student, and the availability of staff. A proposal is submitted to a faculty member who serves as the adviser, and to the department head for approval.

Instructor: Staff.

ME 331 - Instrumentation and Data Acquisition
Introduction to the theory and devices involved in the measurement of physical properties of systems. Students will become acquainted with the techniques and difficulties associated with the use of different instruments. Fundamental concepts in computer-based data acquisition, signal conditioning, measurement error, and uncertainty analysis are also covered. The co-requisite laboratory course 311L is structured to provide the hands-on experience and writing skills to deepen the understanding of concepts discussed in the lecture. [W]

Prerequisite: ES 230. Instructor: Staff.

ME 336 - Materials Characterization and Failure
Materials Characterization and Failure is a one-semester course that expands on students' introductory materials science knowledge from the perspective of engineering design and analysis. This course investigates the microstructural behavior of metals and ceramics that drives macroscopic material performance. Emphasis is placed on understanding why specific material selections are appropriate choices for a given application. Topics covered include elasticity, plasticity, strengthening mechanisms, and fatigue. Case studies will be presented that relate course material to engineering failures.

Prerequisite: CHEM 122 or ES 231 or permission of instructor. Instructor: Staff.

ME 352 - Dynamics of Physical Systems and Electrical Circuits
Dynamic physical systems are modeled as networks of interacting energetic elements. Analogies are drawn between mechanical, fluid, electrical, and hybrid systems. Systems are represented using single ordinary differential equations, state-space, and transfer functions. AC and DC circuits and electromechanical systems are analyzed.

Prerequisite: MATH 264; ME 331. Instructor: Staff. Offered: Spring semester.

ME 354 - Thermodynamics
The study of the basic concepts of thermodynamics, including energy, heat, work, enthalpy, and entropy. The study of the first and second laws of thermodynamics for open and closed systems. The application of these laws to the analysis of gas power cycles, vapor power cycles, and refrigeration systems. An introduction to gas mixtures and combustion.

Prerequisite: CHEM 121 and MATH 263. Instructor: Smith.

ME 355 - Mechanical Engineering Design
Students learn methods to design, analyze, and select mechanical components, systems, and structural elements (power transmission systems, pressure vessels, intermediate and eccentric columns, fasteners, and bearings). Static, cyclic, and transient/impact loadings are considered. Students apply closed-form, empirical, and finite element methods of life, load, stress, and deflection analysis to the determination of component behavior and geometry, and material selection. Students are introduced to factor-of-safety, static failure, and fatigue analysis theories as design methodologies.

Prerequisite: ES 230, ES 231 and MATH 264. Instructor: Staff.

ME 362 - Fluid Mechanics
The basic laws of physics and thermodynamics are applied to the study of fluid phenomena. Topics include conservation of mass, momentum, and energy. Basic laws are applied to hydrostatics, external and internal incompressible flow, and fluid machinery.

Prerequisite: ME 354. Instructor: Staff. Offered: Spring semester.

ME 372 - Engineering Design Optimization
An introduction to the theory and practical application of design optimization in the context of engineering. The course will focus on analytic and iterative gradient optimization approaches for single-objective problems with continuous variables. Additional topics will include multi-objective optimization, discrete optimization, topology optimization, and genetic algorithms. Course topics will be practiced and applied in group projects that optimize real-world engineering designs.

Prerequisite: MATH 264 and one of the following: ME 240, CM 151, CM 261, or permission of instructor. Instructor: Staff.

ME 390 - Independent Study/Research
An opportunity for selected students to undertake independent study/research projects during the junior and/or senior year. Projects are selected based on the background and interests of the student, and the availability of staff. A proposal is submitted to a faculty member who serves as the adviser, and to the department head for approval. Each student is required to submit a final paper embodying the results of the study/research.

Instructor: Staff.

ME 391 - Independent Study/Research
An opportunity for selected students to undertake independent study/research projects during the junior and/or senior year. Projects are selected based on the background and interests of the student, and the availability of staff. A proposal is submitted to a faculty member who serves as the adviser, and to the department head for approval. Each student is required to submit a final paper embodying the results of the study/research.

Instructor: Staff.

ME 395-397 - Special Topics
This course considers recent advances and/or subjects of current interest to students and members of the staff. Topic(s) for a given semester are announced prior to registration.

Instructor: Staff.

ME 470 - Heat Transfer
A study of the basic phenomena of heat transfer which includes treatment of steady and non-steady state conduction in one and

two dimensions, natural and forced convection, and thermal radiation.

Prerequisite: ME 362. Instructor: Staff. Offered: Fall semester.

ME 475 - Thermal/Fluids Systems
A capstone course in which students design and conduct experiments to explore the concepts of thermodynamics, fluid mechanics, and heat transfer using modern instrumentation and data acquisition systems. Typical experiments include steam power generation, refrigeration, gas turbine (jet) engine performance, wind tunnel measurements, heat exchanger characterization, and internal combustion engine performance. Students perform thorough data analysis and interpretation, and communicate their work in written reports and oral presentation. [W]

Prerequisite: ME 331, ME 470. Instructor: Rossmann, Sabatino, Smith.

ME 477 - The Need for Speed: Motorsport Engineering
Motorsport Engineering is a one semester course that applies concepts from thermodynamics, fluid mechanics, rigid body dynamics, vibrations, and system dynamics to model and analyze the motion and design of performance road vehicles. Topics include steady state and transient phenomena in chassis, aerodynamics, and power train modeling of cars and trucks. Students will be given the opportunity to analyze data from real vehicles, perform experiments involving engines and aerodynamics, and build a vehicle simulation from the ground up.

Prerequisite: ME 240, ME 354. Instructor: Staff.

ME 480 - Control Systems and Mechatronics
A study of the basic principles and modes of operation of automatic control systems intended to familiarize students with the concepts and design of feedback control systems. The effect of closed-loop classical control on the transient response, error, stability, and frequency response of dynamic systems is investigated. Digital control theory is introduced. Laboratory work includes the use of programmable logic controllers to implement Boolean logic and the analytical and experimental study of closed-loop control systems implemented using operational amplifiers, as well as DC motors, stepper motors, transistor-based motor drive circuits, and AC circuits.

Prerequisite: ME 352. Instructor: Staff.

ME 482 - Advanced Fluid Dynamics with Applications
An elective course in which students will learn to analyze complex 2-D and 3-D fluid flows. Applications can include internal and external flows. Students will learn analytical techniques to model overall performance and make component selections based on system requirements. Students will learn the fundamentals of computational fluid dynamics (CFD) and apply that understanding to the use of a commercial CFD program to simulate the flow in a real engineering application.

Prerequisite: ME 362 or CHE 311 or CE 251. Instructor: Sabatino.

ME 484 - Applied Finite Element Method Analysis
Advanced finite element analysis of components and systems in support of mechanical design. Topics may include complex three-dimensional solid modeling, meshing and error analysis, results verification, optimal design, nonlinear analysis, and design project applications. Effective written and oral presentation results are emphasized.

Prerequisite: ES 230. Instructor: Van Gulick.

ME 485 - Continuum Mechanics
An introduction to continuum mechanics and the mechanics of deformable solids. Topics include vectors and tensors, Lagrangian and Eulerian strain tensors, first and second Piola-Kirchhoff stress tensors, equations of conservation of mass and momentum, constitutive laws for solids, and infinitesimal elasticity.

Prerequisite: ES 230. Instructor: J. Smith.

ME 486 - Compressible Flow
A study of the behavior of compressible fluids including isentropic flow, Fanno and Rayleigh processes, normal and two-dimensional shock waves, and application to selected problems in modern high-speed flows.

Prerequisite: ME 354, ME 362. Instructor: Staff.

ME 487 - Numerical Methods for Mechanical Engineers
This class develops students' familiarity with numerical methods relevant to mechanical engineering. The class presents fundamentals of modern numerical techniques for a wide range of linear and nonlinear elliptic, parabolic and hyperbolic partial differential equations and integral equations central to a wide variety of applications in science, engineering, and other fields. Topics include: integration; initial, eigenvalue, and boundary value problems; finite difference and finite volume discretizations; finite element discretizations; optimization; and direct and iterative solution methods. Examples are drawn from robotics, dynamics, structural analysis, and thermal-fluids applications. Assignments require MATLAB® programming, and assume a prior familiarity with approximation (interpolation, least squares and statistical regression) and root-finding.

Prerequisite: ME 240 or CM 261. Instructor: Somashekar.

ME 489 - Introduction to Biomedical Engineering
Introduces fundamentals and applications of the transport processes- thermodynamics, fluid mechanics, heat transfer, and mass transfer-in the human body and in other biomedical systems. Students study the modeling of normal and abnormal human physiology and the devices for medical therapy. Students develop the tools necessary to obtain quantitative information on biomedical problems involving transport processes.

Prerequisite: ME 362, or permission of instructor. Instructor: Staff.

ME 490 - Fundamentals of Finite Element Theory
This course explores the underlying theory and computational implementation of the finite element method. Students will gain an understanding of finite element formulations, understand how the formulations can be adapted to solve problems in a variety of engineering areas, develop computational tools needed to apply the finite element method, and apply these tools to engineering problems. Student-generated, instructor-supplied, and some commercial software will be employed throughout course.

Prerequisite: MATH 264, ES 230. Instructor: Staff.

ME 492 - Biomechanics

A one-semester course involving the application of solid and fluid mechanics to biological systems. Students will learn the fundamental cell biology and physiology necessary to understand these systems; understand how researchers in biomechanics address biological problems using engineering principles; advance their knowledge of mechanics; and develop the necessary skills to apply the concepts of engineering mechanics to biological systems. Likely topics include musculoskeletal (bone and muscle) mechanics, neuromuscular mechanics and control, and the physics of blood and air flow in the circulatory and respiratory systems. [W]

Prerequisite: PHYS 131 or PHYS 151 and junior/senior standing or instructor approval. Instructor: Staff.

ME 493 - Biomechanics: Analysis of Fundamental Human Motions
This course will study the methods of kinematic and kinetic analysis of fundamental human motions such as walking, jumping, throwing, and batting. Basic skeletal-muscular anatomical structures, kinesiology, and biomechanical conventions are introduced. Motion capture methods are utilized to record basic human motions for subsequent analyses. Methods of analytical and computer modeling are taught as means for analyzing the fundamental kinematic and kinetic behaviors. Human performance and limitations, sports implements, and muscle modeling are included.

Prerequisite: Mechanical Engineering major with senior status or permission of instructor. Instructor: Nesbit.

ME 495-496 - Thesis
This program is designed in accordance with the honors program of the College. Enrollment is limited to selected seniors in Mechanical Engineering. Students who take the honors sequence in place of the senior design sequence (ME 497/ME 498) must fully participate in the lecture portion of ME 497 and ME 498. [One W credit only upon completion of both 495 and 496]

Instructor: Staff.

ME 497 - Senior Design Project I
Project of the student's choice is carried through from problem formulation to completion. This sequence represents the students' major design experience and is based on knowledge and skills acquired in earlier courses. Design criteria and objectives are formulated, and realistic constraints including economic, environmental, sustainability, manufacturability, ethical, health and safety, social, and political are considered. Engineering analysis and synthesis techniques are applied and iterated to obtain an optimal design solution. Students design and conduct experiments to verify design performance. Students document their achievements through oral and written presentations.

Prerequisite: ME 210, ME 354, ME 355. Corequisite: ME 470, ME 480. Instructor: Staff.

ME 498 - Senior Design Project II
Project of the student's choice is carried through from problem formulation to completion. This sequence represents the students' major design experience and is based on knowledge and skills acquired in earlier courses. Design criteria and objectives are formulated, and realistic constraints including economic, environmental, sustainability, manufacturability, ethical, health and safety, social, and political are considered. Engineering analysis and synthesis techniques are applied and iterated to obtain an optimal design solution. Students design and conduct experiments to verify design performance. Students document their achievements through oral and written presentations.

Corequisite: ME 470, ME 480. Instructor: Staff.

MS - MILITARY SCIENCE

MS 101 - Foundations in Leadership
The American Army as an institution, its roots, history, customs and traditions and philosophy of leadership. Emphasis on development and role of a professional officer corps. Includes leadership laboratory. Cadets receive one course credit with the completion of both MS 101 and MS 102.

Instructor: Staff. Offered: Fall semester.

MS 102 - Leadership Assessment and Group Dynamics
Cadets receive one course credit with the completion of both MS 101 and MS 102.

Instructor: Staff. Offered: Spring semester.

MS 201 - Individual Leadership Studies
Maps as tools in basic terrain analysis and as navigational aids and introduction to small unit tactics. Emphasis on application and field exercises at individual and small group levels. Includes Leadership Laboratory and FTX.

Instructor: Staff. Offered: Fall semester.

MS 202 - Topographic Analysis and Land Navigation
Contemporary theories, traits and principles and small unit tactics development. Leadership philosophies, communications, leader-follower relationships, and leadership problem-solving Includes Leadership Laboratory and FTX.

Instructor: Staff. Offered: Spring semester.

MS 303 - Advanced Military Skills
Essential junior officer skills: advanced land navigation, principles of war, small unit tactical planning, tactics and techniques of the soldier, team-leading techniques, oral communications, and trainer skills. Emphasizes application and field experience. Includes Leadership Laboratory and FTX.

Prerequisite: Permission of department chair. Instructor: Staff. Offered: Fall semester.

MS 304 - Advanced Leadership
Critical examination of leadership qualities, traits, and principles with an emphasis on the military environment. Self, peer, and instructor leadership evaluation. Advanced military skills reinforced. Includes Leadership Laboratory and FTX.

Prerequisite: Permission of department chair. Instructor: Staff. Offered: Spring semester.

MS 401 - Developing Adaptive Leaders
Role, authority, and responsibilities of military commanders and staff in personnel, logistics, and training management. Staff procedures, problem-solving, training methods, and oral and written communication skills used in military organizations. Includes Leadership Laboratory and FTX.

Prerequisite: Permission of department chair. Instructor: Staff. Offered: Fall semester.

MS 402 - Officer Responsibilities, Ethics, and Military Professionalism
Development of the profession of arms, its fundamental values, and institutions. Ethical responsibilities of military professionals in contemporary American society. Just war theory, international law of war, and American military law. Also covered are current topics to assist cadets in making the transition to the officer corps and service on active duty or in the reserve forces. Includes Leadership Laboratory and FTX.

Prerequisite: Permission of department chair. Instructor: Staff.

MUS - MUSIC

MUS 101 - Music, Culture, Context
This course explores our globalized musical present and the major forces (social, political, economic, technological) that have shaped it over the last few centuries. Attention is focused on music-making as a form of human activity within and between cultures. Course content ranges over music of diverse times and places. No prior experience in music is needed. [GM2, H]

Instructor: Torres.

MUS 102 - Music in Western Civilization
The focus of this course is the development of music in the civilizations of Europe and America, not only as an art with its own history, but also as a mirror of the artistic, social, political, and economic development of the Western world. Students are introduced to a basic repertoire in classical music. Lecture/listening. [H]

Instructor: Cummings. Offered: Each semester.

MUS 103 - Introduction to World Music Traditions
An exploration of the history, styles, and performance practices of music of African, Asian, and Indian cultures. The study of the music in the context of cultural traditions and institutions and its influence on the music of Europe and America encourages students to examine music from a cross-cultural perspective and to experience the music through performance. Lecture/assigned listening. [GM2, H]

Instructor: Stockton. Offered: Each semester.

MUS 121 - Music Theory I
This introductory course in music theory begins with a review of elemental concepts including pitch and rhythm notation, intervals, scales, and triads. The primary focus is a study of the Common Practice Period encompassing diatonic harmonic practices since the nineteenth century, with correlated sight singing, ear training, and keyboard assignments. One-hour laboratory. [H]

Instructor: Wilkins.

MUS 130 - Class Piano Laboratory
This course is intended for those students who wish to begin study of the piano, particularly those with limited or no music reading skills. The class meets 50 minutes twice a week for 12 weeks. Music reading in both treble and bass clefs, as well as basic piano techniques such as scales, hand position, and other technical concepts are taught. 1/4 course.

Instructor: Fisher.

MUS 140 - Applied Music Instruction (non-credit)
Private instruction for students who wish no academic credit. Twelve private lessons of 45 minutes each. Considered an audited course." (Extra fee)"

Instructor: Staff.

MUS 141 - Applied Music Instruction
This is the primary course for students interested in private instrumental or vocal instruction. Twelve lessons of 45 minutes each. Jury examination is required.0.25 credit course. No more than eight 0.25 credit courses may be counted toward the 32/38 course credit requirement for the degree.(Extra fee)

Instructor: Staff.

MUS 142 - Intensive Applied Music Instruction
This course is reserved for advanced students who have completed a minimum of two semesters of Music 141 with grades of A." Both jury examination and exemplary recital participation are required. Twelve lessons of 60 minutes each. 0.25 credit course. No more than eight 0.25 credit courses may be counted toward the 32/38 course credit requirement for the degree. (Extra fee)"

Instructor: Staff.

MUS 150 - Choir
Active participation in an approved musical ensemble. Regular attendance at rehearsals and all performances in addition to other requirements as deemed necessary. 0.25 credit course. No more than eight 0.25 credit courses may be counted toward the 32/38 course credit requirement for the degree.

Instructor: Staff.

MUS 151 - Jazz Ensemble
Active participation in an approved musical ensemble. Regular attendance at rehearsals and all performances in addition to other requirements as deemed necessary. 0.25 credit course. No more than eight 0.25 credit courses may be counted toward the 32/38 course credit requirement for the degree.

Instructor: Staff.

MUS 152 - Chamber Ensembles
Active participation in an approved musical ensemble. Regular attendance at rehearsals and all performances in addition to other requirements as deemed necessary. 0.25 credit course. No more than eight 0.25 credit courses may be counted toward the 32/38 course credit requirement for the degree.

Instructor: Staff.

MUS 153 - Orchestra
Active participation in an approved musical ensemble. Regular attendance at rehearsals and all performances in addition to other requirements as deemed necessary. 0.25 credit course. No more than eight 0.25 credit courses may be counted toward the 32/38 course credit requirement for the degree.

Instructor: Staff.

MUS 154 - Concert Band
Active participation in an approved musical ensemble. Regular attendance at rehearsals and all performances in addition to other requirements as deemed necessary. 0.25 credit course. No more than eight 0.25 credit courses may be counted toward the 32/38 course credit requirement for the degree.

Instructor: Staff.

MUS 155 - Jazz Combo
Active participation in an approved musical ensemble. Regular attendance at rehearsals and all performances in addition to other requirements as deemed necessary. 0.25 credit course. No more than eight 0.25 credit courses may be counted toward the 32/38 course credit requirement for the degree.

Instructor: Staff.

MUS 158 - Percussion Ensemble
Active participation in an approved musical ensemble. Regular attendance at rehearsals and all performances in addition to other requirements as deemed necessary. 0.25 credit course. No more than eight 0.25 credit courses may be counted toward the 32/38 course credit requirement for the degree.

Instructor: Staff.

MUS 159 - Pep Band
Active participation in an approved musical ensemble. Regular attendance at rehearsals and all performances in addition to other requirements as deemed necessary. 0.25 credit course. No more than eight 0.25 credit courses may be counted toward the 32/38 course credit requirement for the degree.

Instructor: Staff.

MUS 160 - Chamber Singers
This course is a performing ensemble designed to provide qualified vocalists with an opportunity to perform advanced literature from a variety of genres and styles. Attendance at all rehearsals and performances is required. Participation is by audition. 0.25 credit course. No more than eight 0.25 credit courses may be counted toward the 32/38 course credit requirement for the degree.

Prerequisite: Permission of instructor. Instructor: Staff.

MUS 161 - Early Music Ensemble
Active participation in an approved musical ensemble. Regular attendance at rehearsals and all performances in addition to other requirements as deemed necessary. 0.25 credit course. No more than eight 0.25 credit courses may be counted toward the 32/38 course credit requirement for the degree.

Instructor: Staff.

MUS 170 - Theoretical Applications for Piano
The development of basic piano skills is an important building block in the comprehensive study of music. The piano class is the foundation upon which students learn basic skills to physically and aurally integrate their study of music theory and musicology. Piano proficiency enables one to produce the vertical and horizontal structures of music on an instrument that is visual and tactile in its universality.

Prerequisite: MUS 121 or permission of instructor. Instructor: Staff.

MUS 193 - New York Jazz Experience

This course introduces students to the wide range of activities and experiences in New York's Jazz community. Through concerts, jam sessions, conversations with artists, historical film, oral histories, and selected readings, the course provides experiences equally valuable to jazz players and nonmusicians. Though emphasis is placed on the historical development, elements, and process of jazz, the primary focus of the course is experiential.

Instructor: Stockton, Torres. Offered: Interm.

MUS 195 - Helsinki, Talinn, Budapest
This is an international concert tour by Lafayette College Choirs, enhanced by cultural and historical studies. The primary text is the music literature to be performed: works for mixed, men's, women's, and chamber choir, including styles and techniques appropriate to historical and cultural contexts. Students rehearse and perform in interactive concerts with local host choirs and conductors. Guest speakers address history, politics, architecture, religion, and language, as well as specialized musical issues.

Prerequisite: MUS 150. Instructor: Gilbert.

MUS 201 - Music History and Literature: 1600-1915
This course surveys the music of the Western "cultivated" tradition from 1600-1915 (the "Baroque," "Classical," and "Romantic" periods). The repertoire is presented through lectures, discussion, readings, and sound recordings. Emphasis is on an analysis of and engagement with actual musical compositions, representative of the principal stylistic developments characteristic of each of the three major style periods. [GM2, H]

Prerequisite: MUS 121 or permission of instructor. Instructor: Cummings, Torres.

MUS 202 - Music History and Literature: 1915 to Present
This course examines music since 1915 through extensive listening. Course content includes a survey of Western art music as well as examples of blues, jazz, musical theater, rock, and non-Western music. The repertoire is presented through a study of readings, sound recordings, films, and lectures. Students encounter the communities, histories, traditions, and newer forms of expression of music since the early decades of the 20th century.

Prerequisite: MUS 121 or permission of instructor. Instructor: Cummings, Torres.

MUS 222 - Music Theory II
This course continues the study of advanced diatonic harmonic practices, with correlated sight singing, ear training, and keyboard assignments. Concepts covered include: inverted triads in four-part harmony, harmonic cadences, dominant seventh chords in four-part harmony, non-harmonic tones, jazz extended chords, improvisation, and exercises in basic form and analysis. One-hour laboratory.

Prerequisite: MUS 121 or permission of instructor. Instructor: Wilkins.

MUS 224 - Jazz Improvisation
This course is designed for students who have strong interests in jazz improvisation and performance. Students will expand their historical knowledge and listening skills, study jazz harmony in detail, analyze song forms and chord structures, enhance keyboard skills, learn to sing improvised solos, transcribe and perform solos from recordings, and perform regularly in class. Students will develop specialized musicianship skills with many assignments being individualized and project-bases.

Prerequisite: MUS 222 or permission of instructor. Instructor: Wilkins.

MUS 226 - 1859: Charles Darwin, Richard Wagner and the Uses and Abuses of 19th Century Science
One-hundred-fifty years ago, Charles Darwin published his treatise on the origin of species, and Richard Wagner composed his opera Tristan and Isolde. This course examines nineteenth-century [mis]applications of Darwinian theories, reflected in Wagner's operas, replete with subliminal references to the superiority of Germanic peoples and inferiority on non-Germanic peoples. We shall: read Darwin and texts reflecting his influence in Germany; view Wagner's operas; and consider Wagner's influence on Adolf Hitler. [H, GM2, V, W]

Instructor: Cummings.

MUS 231 - The Musical Culture of Japan
This course will introduce the principal musical traditions of Japan from ancient court music (Gagaku) to contemporary genres. Integrated readings and discussions of social institutions, religious practice, and historically rigid class hierarchies will inform the musical explorations. Through guided listening and performing exercises we will explore Shinto and Buddhist rituals, important theater traditions (Noh and Kabuki), classical instrumental forms (koto, shamisen, shakuhachi), and various folk-related genres. [H, GM2]

Prerequisite: MUS 103 or permission of instructor. Instructor: Stockton.

MUS 231-239 - Selected Studies in World Music
The goal of these courses is to explore the indigenous music of selected cultures and regions independent of Western common practice. Through guided listening performance activities and cultural analysis students experience both the aural landscape and the larger phenomenon of how music functions within culture. Possible topics include the musical culture of a region (e.g. Africa Asia Latin America) or a country (e.g. Japan China India). Descriptions are available through the department office and the Registrar's Office.

Prerequisite: MUS 103 or permission of instructor. Instructor: Staff.

MUS 233 - The Music of West Africa
This course will explore the diversity of musical expression and related cultural traditions found in selected regions of West Africa. Examination, analysis, and performance of ritual and ceremonial-based musical genres and investigations of related cultural practices will form the core of study that will also incorporate comparative readings in African history, religions, geography, the impact of colonialism, and the global spread of West African music. [H, GM2]

Prerequisite: MUS 103 or permission of instructor. Instructor: Stockton.

MUS 236 - Latin American Popular Music in the United States
This course focuses on the influence of Latin American and Caribbean popular music on the United States. Possible areas of concentration may include Salsa, Latin Rock, Bossa Nova, Latin Jazz, and Latin American music in the media. Students learn about the music through readings, recordings, and live performance. The course also introduces students to issues of musical creolization, appropriation, and music as an emblem of identity. [GM1]

Instructor: Torres.

MUS 240 - Women in Music
This course will examine outstanding musical achievements of women throughout history and in contemporary society. Women's global contribution to music will be explored through diverse styles of composition and performance, active participation in education, and patronage. Topics include music and power, gender, class, challenging the "roles," and performing identities. In an active classroom environment, students will have ample opportunity to challenge, lead, and discover their own contribution to the arts through valid argument. [H, W]

Prerequisite: A music course, or a Women's and Gender Studies course, or permission of instructor. Instructor: Kelly.

MUS 251-259 - Selected Studies in Music Theory and Analysis (MUS 101 and others as appropriate to the topic)
Courses focus on an area of music theory, analysis, or composition. Possible topics include the theoretical concepts that underlie an era of school" (e.g. the New Viennese School) a theoretical/ compositional discipline such as eighteenth-century counterpoint or a special aspect of analysis such as form and structure in music. Descriptions of current offerings are available through the department office and the Registrar's Office. Lecture/discussion/ laboratory/listening."

Instructor: Staff.

MUS 255 - Music and the Brain: Neuroscience of Music
Recent scientific evidence indicates that the benefits of music extend to the brain. Further insights into how music affects the brain may lead to new education methods and ways to treat neurological disorders. We will take a multidisciplinary approach to understanding the connection between music and neural function. By the end of this course students will have a broad understanding of research in this [field and specific knowledge about brain mechanisms mediating music perception and performance. [H]

Instructor: Gabel, Kelly.

MUS 260 - [Italian] Music and [Italian] Identity
In this course, we shall concentrate specifically on understanding Italian music during its "Golden Age" (1300-1900): the six centuries from the Middle Ages (the time of Dante) through the period of the "great tradition" of nineteenth-century Italian opera. We shall simultaneously consider the larger question of what constitutes a national music. In addition, Italians' music has been deployed at various times in their history to create a more local (regional or dynastic-familial) political and cultural identity, and the course will examine such uses of music as well. [GM2, H]

Instructor: Cummings.

MUS 261-269 - Selected Studies in Music History and Literature
Possible topics include the historical development and the repertoire of an era or school" (e.g. the Baroque Era French Music Music in the United States the History of Jazz). These courses typically investigate the master works and lives of the principal composers of the era as well as the social and musical concepts that influenced the period. Classes involve student presentations field trips and live and videotaped performances as well as sound recordings. Descriptions of current offerings are

available through the department office and the Registrar's Office. Assigned listening. Lecture/laboratory."

Prerequisite: MUS 101 or MUS 102 and other courses as appropriate to the topic. Instructor: Staff.

MUS 263 - How Jazz Began
Explores the early history of jazz, America's principal contribution to world musical-culture. Considers jazz antecedents-the blues, ragtime-and origins in early twentieth century New Orleans. Then considers the "Chicago School," early territory bands, "New Orleans revival," big band tradition of the 1940s, and small group sessions and beginnings of bebop. Although there is consideration of the historical/music-historical backgrounds, emphasis is on the music itself, through original recordings and scholarly transcriptions, which permit detailed analyses of jazz characteristics at critical moments in history. [H, GM1]

Instructor: Cummings.

MUS 272 - Experiencing Opera
Opera is a theatrical genre where the text is sung throughout, and the music contributes indispensably to the work's dramatic and emotional impact. This course considers what makes the experience of opera so compelling for so many. It surveys a handful of the greatest operatic masterpieces from the beginnings of opera to the nineteenth-century "great tradition" and considers contrasts of comic and serious opera, music that narrates vs. music that provides lyrical commentary, etc. [H]

Instructor: Cummings.

MUS 271-279 - Selected Studies in Musical Forms and Genres
Possible topics include the historical development and literature of opera, the symphony, chamber music, vocal and choral music, music for keyboard instruments, etc. These courses typically investigate the master works in a genre, the lives and contributions of composers in several areas, and the social, technological, and musical factors that have affected the development of that genre. Classes involve student presentations, field trips, and live and videotaped performances as well as sound recordings. Descriptions of current offerings are available through the department office and the Registrar's Office. Lecture/laboratory.

Prerequisite: MUS 101 or MUS 102 and other courses as appropriate to the topic. Instructor: Staff.

MUS 281-289 - Selected Studies of Great Composers
Topics include Bach, Mozart, Beethoven, Verdi, Stravinsky, to name a few. These courses investigate the master works in the important genres, the life and musical development of the individual studied, and the social factors that affected the time period in which he/she lived. Classes involve student presentations, field trips, and live and videotaped performances as well as sound recordings. Descriptions of current offerings are available through the department office and the Registrar's Office. Lecture/laboratory.

Prerequisite: MUS 101 or MUS 102 and other courses as appropriate to the topic. Instructor: Staff.

MUS 323 - Music Theory III
This course furthers the study of the "Common Practice Period" with chromatic language since the eighteenth century, with correlated sight-singing, ear training, and keyboard assignments. Concepts include diatonic 7th Chords in 4-part harmony, borrowed chords and augmented 6th chords, chromatic and enharmonic modulation, secondary sub-dominants and passing chords, jazz analysis and keyboard voicing, chromatic improvisation, and topics in form and analysis. Additional one-hour lab scheduled weekly.

Prerequisite: MUS 222 or permission of instructor. Instructor: Wilkins.

MUS 324 - Twentieth Century Harmonic Practice
This course continues the study of chromatic harmony of post-Romanticism and begins the study of 20th century idioms. Students will compose short works in 20th century styles for small ensemble settings. Students will also analyze important works by Stravinsky, Bartok, Schoenberg, Copland, and others.

Prerequisite: MUS 222 or permission of instructor. Instructor: Wilkins.

MUS 325 - Composition Seminar
This course is designed for advanced and highly motivated music theory students interested in writing music for ensembles or individual instruments and voices. Students will compose works in genres largely of their own choosing and will organize and rehearse ensembles appropriate to their compositions, with musicians chosen primarily from the College community. Additionally, students will research various composers, examining a range of publications produced by the selected composers themselves.

Prerequisite: MUS 324. Instructor: Wilkins.

MUS 340 - Orchestration
This course will study the techniques of instrumental and vocal ensembles. Basic topics, such as instrument ranges and transpositions, will be emphasized. Exercises will consist of analysis of orchestral, choral, and wind ensemble literature as well as original orchestrations of existing music.

Prerequisite: MUS 222 or permission of instructor. Instructor: O'Riordan.

MUS 351-359 - Special Topics
The detailed study of a composer, school, specific style or topic, employing more advanced analytical tools. Topics in past years have included African-American music; Mozart: The Man, the Myth, the Music; history of jazz; the music of J. S. Bach. Topics for the following year are announced at spring registration. Classroom experiences are augmented by artist visits and field trips to suitable venues, for example, a jazz club or concert for the course on jazz history.

Prerequisite: Permission of instructor. Instructor: Staff.

MUS 354 - Composition Seminar
This course is designed to be a continuation of Introduction to Composition. The seminar is open to students who wish to study advanced topics in the composition of Contemporary Concert Music, and who have had some experience composing. Topics will include repertoire, orchestration, and notation, and students will compose several pieces during the semester. Interested students should have completed MUS 323 and meet with the instructor before enrolling.

Prerequisite: MUS 323 or MUS 324 or applied composition lessons, or permission of instructor.

MUS 360 - (Italian) Music and (Italian) Identity
In this course, we concentrate specifically on understanding Italian music during its "Golden Age" (1300-1900): the six centuries from the time of Dante through the period of the "great tradition" of nineteenth-century Italian opera. We simultaneously consider the larger question of what constitutes a national music. In addition, Italians' music has been deployed to create a more local (regional or dynastic-familial) political and cultural identity, and we examine such uses of music as well. [H, GM2]

Instructor: Cummings.

MUS 362 - War and Peace: Music of the 1960's
This course examines the social and political contexts for popular music in the 1960's. Students will explore the cultural conditions that supported music in U.S. centers such as San Francisco, Los Angeles, and New York. Through an examination of primary and secondary sources, as well as in-class video viewing, class participants will gain knowledge of how music of a counter cultural generation was representative of an emerging social consciousness, as well as how it was used as a form of social protest. [W]

Prerequisite: MUS 102 or MUS 103 or MUS 201 or permission of instructor. Instructor: Torres.

MUS 363 - How Jazz Began
Explores the early history of jazz, America's principal contribution to world musical culture. Considers jazz antecedents-the blues, ragtime-and origins in early twentieth century New Orleans. Then considers the "Chicago School," early territory bands, "New-Orleans revival," big-band tradition of the 1940's, and small-group sessions and beginnings of bebop. Although there is consideration of the historical/music-historical backgrounds, emphasis is on the music itself, through original recordings and scholarly transcriptions, which permit detailed analyses of jazz characteristics at critical moments. [GM1, H]

Prerequisite: MUS 102, MUS 103, or MUS 121. Instructor: Cummings.

MUS 371 - Internship
Students majoring in music may wish to explore career opportunities by participating in an approved internship with a professional performing organization, arts management consultant, or related music industry representative. Under the supervision of a designated internship sponsor, the student develops and completes a work-related project. Additional activities include assigned readings and a final written report.

Prerequisite: Permission of department head. Instructor: Stockton.

MUS 372 - Experiencing Opera: Masterpieces of Italian Opera from the Beginnings of Opera to the Barber of Seville
We begin with the seventeenth century for various reasons. Most opera courses begin with the eighteenth century, yet subsequent operatic history cannot be understood without understanding precedent (e.g., distinctions between serious and comic opera, between aria and recitative). [H, GM2]

Instructor: Cummings.

MUS 380 - Junior/Senior Seminar
Advanced special topics studies emphasizing research in greater depth of a selected musicological problem. Open only to junior and senior music majors and minors.

Prerequisite: Permission of department head. Instructor: Staff.

MUS 391-392 - Independent Study
Individual projects in musicology, theory, or composition, with emphasis on the bibliographical and analytical tools of music research or composition. Open to students with a strong background in music.

Prerequisite: Permission of department head. Instructor: Staff.

MUS 491-492 - Senior Project
Independent study of a selected problem in musicology, theory, or composition, with emphasis on the bibliographical and analytical tools of music research, resulting in the completion of a project such as a research paper or a series of original compositions. Open only to senior music majors.

Prerequisite: Permission of department head. Instructor: Staff.

MUS 495-496 - Thesis
Thesis/Honors independent study of a selected problem in musicology, theory, or composition, with emphasis on the bibliographical and analytical tools of music research, resulting in the completion of a project such as a research paper or a series of original compositions. Open only to senior music majors. Upon completion of MUS 496, the awarding of Departmental Honors is determined by successful defense of the thesis. [One W credit only upon completion of both 495 and 496]

Prerequisite: Permission of department head. Instructor: Staff.

NEUR - NEUROSCIENCE

NEUR 201 - Introduction to Neuroscience
This course introduces students to the interdisciplinary field of neuroscience using a problem-based approach. The structure and function of the brain are explored at molecular, cellular, and systems levels. Students become familiar with approaches used by neuroscientists as well as the connections between neuroscience and other disciplinary fields.

Instructor: Staff.

NEUR 255 - Music & the Brain: Neuroscience of Music
Recent scientific evidence indicates that the benefits of music extend to the brain. Further insights into how music affects the brain may lead to new education methods and ways to treat neurological disorders. We will take a multidisciplinary approach to understanding the connection between music and neural function. By the end of this course students will have a broad understanding of research in this field and specific knowledge about brain mechanisms mediating music perception and performance. [H]

Instructor: Gabel, Kelly.

NEUR 256 - Neurobiology
This course examines the field of neuroscience from a cellular and molecular perspective, with the neuron and neural networks as the focus of discussion and experimentation. After an intensive look at neuronal cell biology and signaling, the course examines

the cellular basis of higher-order functions, such as sensation, behavior, and memory. Lecture/discussion/laboratory

Prerequisite: BIOL 101 and NEUR 201. Cross-Listed as: BIOL 256. Instructor: Reynolds.

NEUR 275 - Art, Neuroscience and Consciousness
Art and science share a long history of common ideas and practice. We hope to develop the students' sense of connected history as well as the current intersection between the fields by exploring various perspectives about visual processes, perception, self creativity and consciousness through readings, discussion and studio/lab projects. Students will benefit from the rare opportunity to intensively study the interconnection between two disciplines.

Instructor: Kerns, Reynolds.

NEUR 351 - Neurophysiology
This laboratory course builds on information covered in the prerequisites concerning the excitability of neurons. The electrophysiology of neurons and neuronal interactions are examined using electrical recording techniques. Laboratory exercises provide hands-on experience with the properties of nerve function under a variety of circumstances. [W]

Prerequisite: PSYC 323 or BIOL 256. Instructor: Staff.

NEUR 391-392 - Independent Study
An opportunity for students to pursue a topic of choice. Each student examines the topic, using primary and secondary sources, discusses the topic with their faculty mentor, and writes a paper of distinguished quality. The study may be designed for one or two semesters. [W]

Prerequisite: Permission of program chair. Instructor: Staff.

NEUR 401 - Advanced Neuroscience
This capstone course builds upon information covered in the prerequisites. Through seminar and laboratory, students explore in greater depth the development, organization, and functioning of the nervous system. Particular attention is paid to discussion of current research findings and to learning advanced laboratory techniques used by neuroscientists. Offered in spring semester. [W]

Prerequisite: BIOL 256 and PSYC 323, or permission of instructor. Instructor: Staff.

NEUR 491-492 - Advanced Research
An opportunity for students to conduct an in-depth research project in the an area of choice under the supervision of a faculty mentor. The research can be designed for one or two semesters and should culminate in a paper of distinguished quality. [W]

Prerequisite: Permission of program chair. Instructor: Staff.

NEUR 495-496 - Thesis
Open to qualified majors by permission of program chair. [One W credit only upon completion of both 495 and 496]

Instructor: Staff.

PHIL - PHILOSOPHY

PHIL 101 - Introduction to Philosophy
An introduction to the methods of philosophy including logical analysis and traditional philosophical problems such as the nature and extent of knowledge, the dilemma of freedom and determinism, the justification of the belief in god, personal identity, and the mind-body problem. [H]

Instructor: Staff. Offered: Fall and spring semesters.

PHIL 102 - Basic Social Questions
An examination of conceptual and moral questions associated with selected contemporary social issues. Topics can include: the morality of abortion, the justification of preferential treatment, the permissibility of same-sex sex and marriage, and prostitution. [H, V]

Instructor: Panichas. Offered: Each semester.

PHIL 145 - Bioethics
This course concerns the moral and social controversies arising in medicine, biomedical research, and the life sciences. Topics may include: human cloning, genetic engineering, stem-cell research, reproductive technology, surrogate motherhood, euthanasia, informed consent, etc. [H, V]

Instructor: Gildenhuys, Masto.

PHIL 155 - Environmental Ethics
This course will begin with a brief presentation of prominent ethical theories and concepts important to debates in environmental policy. We will apply these theories and concepts to a range of environmental issues, including population growth, sustainability and our responsibilities to future generations, animal rights, food ethics, and climate change. In addition to reading, discussing and writing about rigorous academic material, students will be required to engage on a practical level with some environmental cause. [H, V, W]

Instructor: Gildenhuys, Masto.

PHIL 200 - Logic
An investigation of the principles of correct reasoning through the use of formal techniques. By employing these techniques, students will learn to assess the validity of arguments and to find counterexamples to invalid arguments. Formal languages studied include propositional and predicate logic, and may also include languages of modal and deontic logic. Some metalogic may also be covered, including proofs of the soundness and completeness of some of the deductive systems studied. [Q]

Instructor: Shieber. Offered: Fall semester.

PHIL 214 - First Philosophers
A survey of the philosophical systems of Plato and Aristotle, with occasional excursions into pre-Socratic and post-Aristotelian thought. Readings drawn exclusively from classical texts. [H]

Instructor: McLeod. Offered: Fall semester.

PHIL 216 - Modern Philosophy
A critical survey of European philosophy from 1600 to 1800, a period during which enormously influential contributions were made to the philosophical study of knowledge, reality, and the nature and limits of philosophy itself. Philosophers to be studied include Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume, and Kant. [H]

Prerequisite: No prerequisites. Instructor: McLeod. Offered: Spring semester.

PHIL 218 - 19th and 20th Century Continental Philosophy
This course is intended to provide students a critical introduction to some of the core themes in Continental philosophy in the 19th and 20th centuries. Some of the canonical figures that we will discuss in this course include the Hegel, Nietzsche, Heidegger, Freud, Foucault. Upon completion of this course, students will have acquired a familiarity with a number of the core movements in the Western European philosophical traditions of the 19th and 20th centuries. [H]

Prerequisite: One course in Philosophy. Instructor: Staff.

PHIL 220 - Metaphysics
A detailed examination of substance, universals, mind-body, personal identity, freedom of the will, causality, space, and time. Contemporary and traditional solutions are presented. [H]

Prerequisite: PHIL 101 or permission of instructor. Instructor: Staff.

PHIL 225 - Philosophy of Mind
A general introduction to the philosophy of mind, addressing four key philosophical issues: the nature of psychological explanation, the mind-body problem, the possibility of artificial intelligence, and the nature of persons. [H]

Prerequisite: One course in philosophy or psychology. Instructor: Staff.

PHIL 226 - Philosophy of Literature
An examination of fundamental philosophical questions on literature as an art form: its nature, interpretation, and evaluation. Topics may include: the ontological status of works of literature; the role of intentionality in literary meaning; the nature of metaphor; the readers emotional engagement with characters; the role of literature in moral and emotional development; the relationships between the sorts of values literature may have (aesthetic, moral, cognitive, etc.). [H, V, W]

Prerequisite: One course in Philosophy or permission of instructor. Instructor: Staff.

PHIL 230 - Theories of Knowledge
A detailed examination of the concept of knowledge, nature of beliefs, justification of beliefs, relationship between knowledge and beliefs, truth, perception. [H]

Prerequisite: PHIL 101 or permission of instructor. Instructor: Staff.

PHIL 236 - Philosophy of Science
The course covers theories of scientific method, the nature of scientific explanation, and the evaluation of scientific theories. [H]

Prerequisite: PHIL 101 or permission of instructor. Instructor: Staff. Offered: Alternate years.

PHIL 240 - Philosophy of Art: Focus on Faces
An examination of the fundamental philosophical questions about the arts, including: What is art? Are there standards in the evaluation of artworks? Do the arts require or convey knowledge, and if so, what kind? What is the connection between art and emotion? What are the possible relationships between art and morality? Readings are drawn from both classical and contemporary philosophical writings. [H]

Instructor: Giovannelli.

PHIL 245 - Bioethics
This course will begin with a brief presentation of prominent ethical theories and concepts important to debates in bioethics. We will apply these theories and concepts to a range of bioethics issues, including abortion, euthanasia, surrogacy, choosing for incompetent patients, and medical research. [W]

Instructor: Gildenhuys, Masto.

PHIL 250 - Ethics
A critical investigation of some of the main theories of morally right action, with special emphasis on Mill's utilitarianism, Kant's categorical imperative, and W.D. Ross's moral pluralism. Other topics usually include the nature of justice, value, and moral worth. Readings are drawn mostly from original sources. [H, V]

Instructor: McLeod.

PHIL 260 - Political Philosophy
A critical examination of the traditional theories of liberty, equality, justice, and political obligation as found in philosophers such as Plato, Hobbes, Locke, Marx, and Rawls. [H, SS, V]

Prerequisite: PHIL 101, or PHIL 102, or PHIL 250, or permission of instructor. Instructor: Panichas. Offered: Alternate years.

PHIL 270 - Feminist Philosophy
An examination of issues in feminist philosophy including its critique of tradtional Western philosophy and its contribution to major areas of philosophy such as ethics, social and political philosophy, theories of knowledge and reality. [GM1, H, V]

Instructor: Staff.

PHIL 300 - Advanced Logic
An investigation of the properties of logical systems and the foundations of deductive logic.

Prerequisite: PHIL 200 or permission of instructor. Instructor: Staff. Offered: Alternate years.

PHIL 310 - 20th Century Analytic Philosophy
A survey of the philosophical systems of Frege and Russell, with analysis of the implications of that work for the development of analytic philosophy in the 20th century. Readings drawn exclusively from primary texts. [H]

Prerequisite: PHIL 200 or permission of instructor. Instructor: Staff.

PHIL 320 - Philosophy of Language
This course addresses some basic questions about language: What is the relationship between thought and language? What is the relationship between language and reality? Theories about these issues will be applied to ethics and philosophy of mind. [H, W]

Prerequisite: PHIL 101 or PHIL 200 or permission of instructor. Instructor: Staff. Offered: Alternate years.

PHIL 335 - Experimental Philosophy
This course concerns the implications for philosophers of experiments aimed at discovering the attitudes of non-philosophers to traditional philosophical problems. The course concerns the methodology of philosophy, in particular the role of

pre-theoretical intuition in debates over normative matters. It also concerns several traditional philosophical issues, such as of moral luck, free will, happiness and intentionally. [W]

Instructor: Gildenhuys.

PHIL 345 - Philosophy of Film
An examination of philosophical questions on the nature, interpretation, and evaluation of film. Topics may include: the distinctive nature of the moving image compared to other forms of representation; the issue of whether film is an art form; film authorship; the essence of film narrative; the role of the imagination in understanding and appreciating film; identification and emotional engagement with characters; film and morality; film and knowledge. [H, W]

Corequisite: FAMS 345. Instructor: Staff.

PHIL 350 - Metaethics
This advanced course in the philosophical study of moral properties, moral motivation, moral reasons, and moral knowledge considers questions such as: whether moral properties exist and, if so, whether they are natural or non-natural properties; whether contemporary accounts of supervenience or explanation can provide the foundations for moral realism; the relationship, if any, between moral judgment and moral motivation; whether moral requirements supply reasons for action; and whether moral knowledge is possible. [H, V]

Prerequisite: PHIL 250 and at least one other course in Philosophy, or permission of instructor. Instructor: McLeod.

PHIL 360 - Philosophy of Law
An examination of conceptual and normative issues related to law and the legal systems. Topics can include: the nature of law, legal systems and legal obligation, constitutional interpretation, liberty and the limits of law, and the justification of legal punishment. [H, V, W]

Prerequisite: PHIL 102, PHIL 250, or permission of instructor. Instructor: Panichas. Offered: Every Year.

PHIL 366 - God
A philosophical investigation into the existence of God, attributes of God, and theism's possible implications in metaphysics, ethics, and epistemology. The course should appeal to students with a serious interest in clarifying the concept of God, answering the question of whether God exists, and understanding what further philosophical commitments might be involved in an acceptance of theism or atheism. [H]

Prerequisite: At least two prior courses in Philosophy. Instructor: McLeod.

PHIL 370-379 - Advanced Topics in Philosophy
Seminar on a topic of interest to the members of the department. Topics include: history of philosophy, ethics, metaphysics, epistemology, political philosophy, philosophy of mind, and philosophy of law.

Prerequisite: Determined at time of offering. Instructor: Staff.

PHIL 390 - Independent Study
Individual projects with advice from a faculty member resulting in a paper of substantial substance and content. [W]

Prerequisite: Permission of department head. Instructor: Staff.

PHIL 495-496 - Thesis
Readings in original and translated works of philosophers and the writing of a paper of substantial substance and content. Majors not continuing to PHIL 496 from PHIL 495 may petition to change PHIL 495 to PHIL 390. [One W credit only upon completion of both 495 and 496]

Prerequisite: Permission of department head. Instructor: Staff.

PHYS - PHYSICS

PHYS 104 - Astronomy: The Solar System
An introduction to the study of the Sun and its contingent of planets, moons, comets, and asteroids. Up-to-date details of the orbits, surfaces, atmospheres, and interior structures as deduced from telescopic and spacecraft data are discussed. The elementary physics of gravity, orbits, and distance measurement leads to a limited amount of problem solving. Six biweekly laboratory sessions and at least three nighttime observing sessions with telescopes. Requires only high school algebra and trigonometry. [NS]

Instructor: Nice. Offered: Fall semester.

PHYS 106 - Physics of Music
A study of the physics of musical sound and musical instruments: wave motion and sound, sound synthesis, room acoustics, woodwinds, brasses, strings, piano, percussion, and the human voice. Open to all students but specifically intended for those who have not previously studied physics. Lecture/laboratory. [NS]

Instructor: Hoffman. Offered: Spring semester, odd years.

PHYS 108 - Astronomy: Stars, Galaxies and the Big Bang
A study of the nature and evolution of stars, galaxies, and the universe as a whole. Confrontation of theory with observational data from many telescopes and spacecraft is stressed throughout. Open to all but specifically intended for those who have not previously studied physics. Requires only high school algebra and trigonometry. One or more evening telescope observing sessions. [NS]

Instructor: Hoffman. Offered: Spring semester, even years.

PHYS 111 - General Physics-Mechanics and Thermodynamics
Classical mechanics of particles and rigid bodies; laws of thermodynamics with emphasis on microscopic foundation; oscillations and waves. Physical ideas are stressed, but considerable emphasis is placed on problem solving. [NS]

Corequisite: MATH 125 or MATH 141 or MATH 161. Instructor: Staff. Offered: Fall semester.

PHYS 112 - General Physics-Electricity, Magnetism, and Optics
Electric and magnetic fields; electromagnetic induction; electric circuits; geometrical and physical optics; Einstein's special theory of relativity; foundations of quantum mechanics; and nuclear physics. Physical ideas are stressed, but considerable emphasis is placed on problem solving. [NS]

Prerequisite: PHYS 111, MATH 125 or MATH 161. Instructor: Staff. Offered: Spring semester.

PHYS 130 - Relativity, Spacetime and Contemporary Physics

The first part of this course introduces special relativity, the modern theory of space time. Topics include Lorentz contraction, time dilation, the space time metric, and conservation laws. Concepts such as energy and momentum are introduced as needed. This is followed by a topic of contemporary physics research. The topic varies; it will be drawn from an area such as cosmology, subatomic, particles, nanophysics, or biophysics. The lab explores contemporary physics experiments. Lecture/Laboratory [NS]

Corequisite: MATH 161 or permission of instructor. Instructor: Staff.

PHYS 131 - Physics I: Mechanics
This course is a calculus-based introduction to the foundations of classical mechanics, designed primarily for students majoring in science and engineering. The course will cover kinematics and dynamics with an emphasis on identifying, understanding, and applying fundamental principles, especially conservation laws for energy, linear momentum, and angular momentum. [NS]

Prerequisite: MATH 161 or permission of instructor. Instructor: Staff. Offered: Spring Semester.

PHYS 133 - Physics II: Electricity, Magnetism, and Waves
This course is a calculus-based introduction to the foundations of electricity, magnetism, and waves, intended for students majoring in science or engineering. Our emphasis will be on identifying, understanding, and applying the fundamental principles of electric fields and potentials, basic circuits, magnetic fields, and electromagnetic waves. Not open to students with credit for PHYS 152. [NS]

Prerequisite: PHYS 131 or PHYS 151, MATH 162 or permission of instructor. Instructor: Staff. Offered: Fall Semester.

PHYS 151 - Accelerated Physics I: Mechanics and Thermodynamics
An accelerated calculus-based introduction to the foundations of classical mechanics and thermodynamics, intended for students majoring in science or engineering; a foundation on which an understanding of physics, physical chemistry, or engineering can be built. Topics include dynamics; conservation laws for linear momentum, angular momentum, and energy; mechanical oscillations and waves; and thermodynamics. A course satisfying degree requirements in all B.S. or A.B. degree programs. Not open to students with credit for PHYS 131. [NS]

Prerequisite: MATH 161 or permission of instructor. Instructor: Staff.

PHYS 152 - Accelerated Physics II: Electricity, Magnetism, and Optics
An accelerated calculus-based introduction to the study of physics for science and engineering majors; a foundation on which an understanding of physics, physical chemistry, or engineering can be built. Topics include electrostatics, electric currents, magnetostatics, induction, electromagnetic waves, ray optics, interference and diffraction. A course satisfying degree requirements in all B.S. or A.B. degree programs. Not open to students with credit for PHYS 133. [NS]

Prerequisite: PHYS 131 or PHYS 151, and MATH 162 or permission of instructor. Instructor: Staff.

PHYS 215 - Introduction to Quantum Physics
You will be introduced to quantum mechanics and will see why it is needed to explain outcomes of experiments (some of which you will perform yourself in lab); you will learn to make qualitative and quantitative analysis of situations in which quantum mechanics must be invoked; you will use modern computing tools (Mathematica) to make quantum mechanical calculations; and you will hone your skills at performing analytical calculations to predict and analyze physical phenomena. Topics will include wave-particle duality, photons, Schrodinger wave mechanics, hydrogen atom, multielectron atoms, and the quantum approach to angular momentum. Additional application areas may include molecular spectra, lasers, and quantum statistics.

Prerequisite: PHYS 133, or PHYS 152. Instructor: Staff. Offered: Fall semester.

PHYS 216 - Topics in Contemporary Physics
An application of the concepts of quantum physics introduced in PHYS 215 and the theory of relativity to several areas of contemporary physics. Topics include quantum statistics, molecular spectra, lasers, introductory solid state physics, models of nuclear structure, radioactivity, nuclear reactions, elementary particles, and grand unification of the fundamental forces.

Prerequisite: PHYS 215. Instructor: Hoffman.

PHYS 218 - Oscillatory and Wave Phenomena
A continuation of the study of oscillations and waves with emphasis on experimental work and theoretical methods in physics. Phenomena studied include vibration of mechanical systems, oscillations in electrical circuits, the general behavior of damped oscillations and resonance, normal mode analysis, standing wave phenomena, wave propagation, optics, and other such physical phenomena found in nature. Students are introduced to the theoretical techniques used to analyze these phenomena as needed. Lecture/laboratory.

Prerequisite: PHYS 133 or PHYS 152. Corequisite: MATH 264. Instructor: Staff. Offered: Spring semester.

PHYS 220 - Medical and Biological Physics
Demonstrates how the principles, tools, and strategies of physicists can be applied to problems that have biological, medical, or ecological import. Methods taught are applied to a broad range of interdisciplinary problems from biomechanics to nerve impulse propagation to the latest imaging techniques, including three dimensional ultrasonic imaging and magnetic resonance imaging. The course is aimed at students nearing a decision on a career direction who are curious about what areas of research are open to them, or to those who simply wish to broaden their biophysical or biomedical outlook. [W]

Prerequisite: PHYS 112, PHYS 133 or PHYS 152. Instructor: Antanaitis. Offered: Spring semester, odd years.

PHYS 304 - Observational Astronomy
A study of the methods used for making astronomical observations and analyzing the data these observations produce. The course examines what can be learned about stars, planets, galaxies, and the Universe through these observations. Topics include radio, infrared, optical, ultraviolet, X-ray, and gamma-ray astronomy and observations of neutrinos, cosmic rays, and gravitational waves. Students complete an independent observing

or data analysis project. The course parallels PHYS 104 but focuses on observing methods.

Prerequisite: PHYS 130, PHYS 215. Instructor: Staff. Offered: Fall semester, concurrent with PHYS 104.

PHYS 306 - Acoustics
An introduction to the acoustics of musical instruments for students with some background in physics. Spectral analysis and synthesis; waves on strings, membranes, and bars; waves in fluid media; acoustical coupling; sound radiation; acoustics of instrumental families. The course parallels PHYS 106 but is more technical in scope and may be counted toward the B.S. degree requirements.

Prerequisite: PHYS 218. Instructor: Hoffman. Offered: Spring semester alternate years, concurrent with PHYS 106.

PHYS 308 - Astrophysics
An introduction to astronomy and astrophysics for students with some background in physics. Stellar structure and evolution; galactic structure and evolution; physical processes in the early universe; radioastronomy. The course parallels PHYS 108 but is more technical in scope and may be counted toward the B.S. degree requirements.

Prerequisite: PHYS 130, PHYS 215. Instructor: Hoffman. Offered: Spring semester alternate years, concurrent with PHYS 108.

PHYS 327 - Advanced Classical Mechanics
A rigorous development of nonrelativistic mechanics: nonlinear oscillations; central-force motion, celestial mechanics, and the N-body problem; Lagrangian and Hamiltonian formulations; rotation and rigid body motion; collisions and scattering.

Prerequisite: PHYS 218; MATH 264. Offered: Spring semester.

PHYS 335 - Thermal Physics
The fundamental concepts of heat, temperature, work, internal energy, entropy, reversible and irreversible processes, thermodynamic potentials, etc., are considered from a modern microscopic as well as traditional macroscopic viewpoint. Statistical thermodynamics is used primarily to study the equilibrium properties of ideal systems and simple models. This course provides the background needed to understand materials from a microscopic point of view.

Prerequisite: PHYS 215; MATH 263. Instructor: Staff. Offered: Fall semester, alternate years.

PHYS 338 - Advanced Physics Laboratory
Design of experiments, statistical analysis of observations, report writing, fundamental experiments in atomic, nuclear, and condensed matter physics. Also experiments selected from electron spin resonance, nuclear magnetic resonance, properties of liquids at high pressures, properties of matter at low temperatures. Computer interfacing with instruments for online data collection and analysis. May involve independent investigation if appropriate. [W]

Prerequisite: PHYS 215, PHYS 218. Instructor: Staff. Offered: Spring semester, alternate years.

PHYS 342 - Electromagnetic Fields
Electric fields due to static charges, magnetic fields due to steady currents, fields in matter, Laws of Coulomb, Gauss, Biot-Savart, Ampere, Faraday; scalar and vector potentials; solutions of Laplace's and Poisson's equations. Mathematical emphasis is on the solutions to boundary value problems.

Prerequisite: MATH 264, PHYS 218. Instructor: Staff. Offered: Fall semester, alternate years.

PHYS 351 - Quantum Theory
The failure of classical physics, the basic concepts of quantum mechanics, Schrodinger's equation, one dimensional systems including barriers and the harmonic oscillator, Hermitian operators, angular momentum, the hydrogen atom, perturbation theory, and interpretations of quantum mechanics.

Prerequisite: PHYS 215, PHYS 218; MATH 264. Instructor: Staff. Offered: Fall semester.

PHYS 352 - Special Topics
Investigation of special topics under supervision of a faculty adviser. The most recent offering was Topics in Astrophysics.

Instructor: Staff.

PHYS 391 - Individual Study
Juniors and seniors may investigate a research topic in physics under the supervision of a faculty member. The project culminates in an extensive report. Departmental permission is required for enrollment. See individual faculty members about topics of interest. Recent individual study topics include: optics, biophysics, computational physics, general relativity, planetary science, and radioastronomy.

Instructor: Staff.

PHYS 424 - Solid State Physics
The fundamental aspects of solid state phenomena and the basic quantum physics needed to understand these phenomena. Topics include the basic principles of quantization and matter waves; Fermi statistics; crystal structures; diffraction phenomena in crystals; conduction electrons in metals; the concept of conduction by holes; and the basic physics of electrons and holes in both homogeneous and doped semiconductors.

Prerequisite: PHYS 335, PHYS 351. Instructor: Staff. Offered: Spring semester, alternate years.

PHYS 442 - Electromagnetic Waves
Maxwell's equations, wave equations for dielectrics and conductors. Reflection, refraction, interference, diffraction, guided waves, radiation.

Prerequisite: PHYS 342. Instructor: Hoffman. Offered: Spring semester, alternate years.

PHYS 451 - Applications of Quantum Theory
Additional topics in quantum mechanics, depending upon student interests. Possible topics include addition of angular momenta, applications of perturbation theory, scattering theory, and relativistic quantum mechanics.

Prerequisite: PHYS 351. Instructor: Staff. Offered: Spring semester, alternate years.

PHYS 495-496 - Thesis
Independent study of a topic chosen for participation in the honors program, culminating in the presentation of a complete written report. Students should see individual faculty members

whose research interests are most closely aligned to their own. [One W credit only upon completion of both 495 and 496]

Instructor: Staff.

PSTD - POLICY STUDIES

PSTD 215 - Environmental Policy
This course examines the ways policy seeks to promote environmental value in our complex and changing world. Students will be introduced to the contemporary environmental policy landscape, as well as the politics of environmental decision-making. We will examine and critique policy-making processes, policy actors and influence, dominate policy strategies for environmental change, and environmental policy analysis frameworks. We will draw upon case studies from multiple environmental and political contexts to explore class concepts.

Instructor: Staff.

PSTD 251 - Introduction to Policy Studies
This course introduces students to the governance of science and engineering. Course topics include the overall context for science and engineering policy, the public policy process and institutions involved in that process, and several current science and engineering public policy issues. The course includes a combination of role-playing exercises, debates, and field trips, as well as traditional lectures. [V]

Instructor: Staff.

PSTD 255 - Multinational Business and Corporate Social Responsibility
Strategic corporate social responsibility (CSR) is about how a company resolves the dilemmas around its core product or service, how that product is produced, and how and to whom it is marketed. In effect,multi-national corporations which have a business model that uses profit to fuel constant innovation in new products, now have to include, for example, programs to reduce emissions, carbon trading, fair trade practices and differential pricing of generic drugs in poor developing countries that demonstrate the potential for CSR; others illustrate the continuing limitations. The object of this course is to make students aware of international business situations that require moral reflection, judgement and decision, while revealing the complexities that often surround business choices and the formation of public policies. Learning through cases of irresponsible actions as well as responsible behavior, the course focuses attention on the study of International Business circumstances in which hard choices must be made under complex conditions of uncertainty and disagreement. Students who receive credit for PSTD 255 may not receive credit for ECON 352. Similarly, students who receive credit for ECON 352 may not receive credit for PSTD 255.

Prerequisite: ECON 101, ECON 218 or permission of instructor. Instructor: Ahene.

PSTD 300 - Industry, Strategy, and Policy
This course serially examines specific industries using the tools of industrial organization, macro and microeconomics, and public policy to focus on critical aspects of the industrial sector. During the semester students evaluate the current composition, organization, and status of selected industries; understand the complex issues involved within an industrial group; and analyze the American and international environment within which the selected industries operate. These goals are accomplished through team reports and presentations and guest commentators.

Instructor: Staff.

PSTD 310 - Leadership
This course considers leadership through case studies, discussions, and seminars from high-impact leaders. Topics include leadership styles, whether leadership is innate or can be learned, characteristics leaders share, and transformational leadership. Intelligence and leadership is analyzed with a particular focus on the relationship between leadership and emotional, social, and global intelligence. Finally, case studies are used to examine crisis leadership and the characteristics that enable individuals to deliver extraordinary performance under unimaginable challenges. [V, W]

Prerequisite: Junior class standing or permission of instructor. Instructor: Staff.

PSTD 339 - The Foundations of Entrepreneurship and Economic Development
This seminar explores business entrepreneurship as foundational in an economy's transformation, growth and development. Its analytical underlay is that entrepreneurship, whether redistributive or productive, converts ideas into economic opportunities, "assetizing" and commoditizing their intellectual properties and property rights into economic prices and tradable values through market exchange, which in turn drives and guides innovation and change and flexibility and dynamism in an economy. The focus will be on the institutional framework, environment, and analytical processes that enable business entrepreneurship.

Prerequisite: ECON 251. Instructor: Hutchinson.

PSTD 390 - Independent Study
Individual investigation of a particular policy-related topic under the supervision of an adviser.

Prerequisite: Permission of instructor.

PSTD 400 - Policy Internship and Seminar
The internship in Policy Studies is tailored to a student's theme of concentration and typically will take place at the sponsor's site. Following the internship, students participate in a seminar to build on the lessons of the internship experience.

Prerequisite: Senior standing or permission of instructor. Instructor: Staff.

PSTD 495-496 - Honors Thesis
Students desiring to take honors should inform the program chair by the beginning of the first semester of the senior year. Honors work involves a guided program of independent reading and research culminating in a thesis on a topic to be selected by the student in consultation with his or her adviser and approved by the program chair. All honors projects must be conducted in accordance with the established written guidelines. Honors candidates enroll in PSTD 496 only upon successfully completing PSTD 400. [One W credit only upon completion of both 495 and 496]

Prerequisite: PSTD 400 and approval of Policy Studies Program Chair. Instructor: Staff.

PSYC - PSYCHOLOGY

PSYC 110 - Introduction to Psychological Science
Psychology is the scientific study of behavior and of underlying mental and physiological processes. Students are introduced to the goals of psychological science, the nature of scientific thinking, and the scientific methods psychologists use to study, explain, and predict animal and human behavior. A variety of content areas are discussed. Students apply their knowledge in weekly laboratory activities with animals and human participants, using various scientific methods. Lecture/laboratory [NS]

Instructor: Staff. Offered: Every semester.

PSYC 120 - Quantitative Methods in Psychology
An introduction to basic research design, measurement, and the use of descriptive and inferential statistics in psychological research. Topics include correlation, regression, reliability, validity, hypothesis testing, nonparametric techniques, and inferential statistics such as t-tests and analysis of variance. The Statistical Package for the Social Sciences (SPSS) is presented and utilized in a computer component of the course.

Prerequisite: PSYC 110. Instructor: Staff. Offered: Every semester.

PSYC 203 - Design and Analysis I
Introduces students to research methods used to conduct empirical studies in psychology. Students learn how psychological research is designed and conducted, data are analyzed, and findings are reported. Students read professional journal articles of psychological research, developing skills necessary to draw critical conclusions and design research studies. Lecture/Laboratory [Q]

Prerequisite: PSYC 110 and PSYC 120. Instructor: Staff.

PSYC 210 - Second Language Acquisition
How do people learn another language? The primary goal of this course is to introduce students to a vibrant and expanding branch of language science and, more generally, to cognitive science as it relates to the study of second language acquisition. This course is designed for those interested in theories and processes of language learning or for those seeking a career in language teaching. [W]

Instructor: Luo.

PSYC 211 - Industrial-Organizational Psychology
Industrial-Organizational (I-O) Psychology is the scientific study of behavior and mental processes in organizations, especially work organizations. Course topics include the historical development of I-O psychology, relevant research methods and statistics, the impact of legal and judicial decisions, job analysis and evaluation, employee selection, performance appraisal, training and development, organizational socialization, motivation, job satisfaction and employee attitudes, organizational stress, leadership, power and politics, group processes, and organizational theory, culture, structure, and change.

Prerequisite: PSYC 110. Instructor: Vinchur.

PSYC 219 - Cross-Cultural Psychology
This course introduces students to the field of psychology that examines the influence of culture upon human behavior and cognitive processes. We will focus on such topics as cultural factors in communication (verbal, nonverbal), personality and identity, gender roles, health (mental and physical), parenting, and social values. Our exploration will be based on psychological theories, research, guest lecturers, and field experiences. [GM1, GM2]

Prerequisite: PSYC 110 or permission of instructor. Instructor: Basow.

PSYC 225 - Psychopharmacology
This course examines the neurological, physiological, and psychological effects of psychoactive drugs, such as sedatives, stimulants, opiates, antidepressants, alcohol, and hallucinogens. The use of psychoactive drugs in treating mental disorders such as schizophrenia and manic-depressive illness is also explored.

Prerequisite: PSYC 110. Instructor: Gabel, Schettino, Tomaszycki.

PSYC 226 - Human Factors and Engineering Psychology
This course provides an overview of the role of psychology in the design of the systems with which humans interact. The course examines how knowledge of the psychological capabilities, limitations, and preferences of humans can be used in design and practical applications to increase the efficiency, usability, and desirability of systems and decrease human errors, accidents, and annoyance.

Prerequisite: PSYC 110. Instructor: Nees.

PSYC 230 - Lifespan Development I
This course uses a biopsychosocial perspective to examine theories of development from the prenatal stage of development to late life. We will examine processes underlying physical, cognitive, neurological, social and personality development over the lifespan. Classic and current research is highlighted to show how evidence is generated in developmental science. Practical application is emphasized.

Prerequisite: PSYC 110. Instructor: Bookwala, Myers.

PSYC 231 - Personality
Personality refers to an individual's consistent patterns of behaviors, thoughts, and emotions. This survey course examines different theories regarding how each person becomes unique, including biological, trait, psychodynamic, humanistic, learning, and cognitive perspectives. Personality research and personality assessment also are discusses.

Prerequisite: PSYC 110 or permission of instructor. Instructor: Basow, Vinchur.

PSYC 232 - Abnormal Psychology
This course examines current practices in diagnosing and treating mental illnesses and explores theories about the causes of these disorders. Major psychological disorders such as depression, substance abuse, and schizophrenia are evaluated in light of the latest research findings.

Prerequisite: PSYC 110 or permission of instructor. Instructor: Basow, Wenze.

PSYC 235 - Social Psychology I
The psychological bases of social phenomena in individuals and groups. Topics include theory and methods, social perception,

attitudes, prejudice and discrimination, leadership, aggression, small groups, attraction and love.

Prerequisite: PSYC 110 or permission of instructor. Instructor: Childs, Shaw.

PSYC 236 - Applied Behavior Analysis
An examination of the application of the principles of learning to the control of human behavior. Principles of operant and Pavlovian conditioning including, but not limited to, the concepts of reinforcement, punishment, stimulus control, and schedules of reinforcement are discussed. Students explore how these techniques may be applied in personal, therapeutic, institutional, corporate, and social settings.

Prerequisite: PSYC 110 or permission of instructor. Instructor: Allan.

PSYC 240 - Health Psychology
The role of psychology in all aspects of health care is examined. Students study and discuss such issues as the use of psychological methods in preventive medicine and treatment; research methods for examining and improving interpersonal relationships within the health care setting; and the role of psychology in health care delivery.

Prerequisite: PSYC 110 or permission of instructor. Instructor: Bookwala, Childs.

PSYC 242 - Educational Psychology
This course introduces students to the theory and research underlying instructional practice. Topics include cognitive and behavioral approaches to learning, components of effective teaching, classroom motivation, measurement and testing issues, and consideration of individual differences.

Prerequisite: PSYC 110 or permission of instructor. Instructor: Myers.

PSYC 248 - Psychology of Gender
An examination of gender from a psychological perspective including research on gender similarities and differences and gender socialization. Emphasis is placed on the consequences of gender stereotypes and roles for the individual, relationships, and society as a whole. Change strategies and goals are also discussed. [GM1]

Prerequisite: PSYC 110 or permission of instructor. Instructor: Basow.

PSYC 256 - Cognitive Psychology I
Cognitive psychology is the study of how humans process (i.e., acquire, store, and use) information. Topics include perception, attention, memory, imagery, problem solving, expertise and other processes that allow us to function in the world. This course will provide you with a survey of the phenomena and theories of human cognition through an exploration of past and present research within the field. We will examine these issues through a combination of lectures, demonstrations, and discussion.

Prerequisite: PSYC 110. Instructor: Talarico.

PSYC 304 - Design and Analysis II
This course focuses on theory and application in the areas of measurement, research design, and statistical analysis and interpretation. Topics include coverage of selected multivariate techniques (e.g., multiple regression, discriminant analysis, factor analysis), measurement theory, and meta- analytic techniques. Emphasis is on developing the necessary skills for success as an independent researcher. Lecture/laboratory. [NS, W]

Prerequisite: PSYC 203 or permission of instructor. Instructor: Vinchur.

PSYC 321 - Learning
Principles derived from learning experiments represent one of the most powerful tools for understanding behavior. This course examines Pavlovian and operant relations involved in behavior change (in an evolutionary context) and how these factors continue to be discovered in animal and human experimental work. Lectures set the stage for a series of experiments conducted during laboratory sessions, and class discussions of additional readings and experimental work will cover research design issues, data analytic techniques, and written presentation of experimental findings. Behavioral interpretations of linguistic and cognitive approaches will also be discussed. Lecture/laboratory. [NS, W]

Prerequisite: PSYC 120. Instructor: Allan, Tomaszycki.

PSYC 322 - Perception
Perception examines human sensory and perceptual systems in detail. The course covers: 1) the historical foundations and philosophical significance of the study of perception; 2) contemporary research methods in perception; 3) the types of physical stimuli sensed by humans and the physiology of sensory systems; 4) the role of perception in psychological science, especially with respect to the organization and assimilation of information from the senses; and 5) practical applications of knowledge about human perception. [NS, W]

Prerequisite: PSYC 203 or permission of instructor. Instructor: Nees.

PSYC 323 - Physiological Psychology
The neural, hormonal, and physiological bases of animal and human behavior are examined. Physiological aspects of such topics as language, learning and memory, feeding, sexual behavior, emotions, sleep, and neurological disorders are covered. In the laboratory, students will conduct discovery-oriented research utilizing a variety of techniques employed by physiological psychologists and neuroscientists. Lecture/laboratory. [NS, W]

Prerequisite: PSYC 110, PSYC 120 or NEUR 201. Instructor: Gabel, Schettino.

PSYC 324 - Comparative Psychology: Animal Behavior
Examines how evolution has shaped the behaviors of animals to be adaptive, primarily exploring the functional significance of animal behavior. Topics include animal communication, foraging, antipredator strategies, sociality, mating systems, and parental care patterns. Laboratory involves naturalistic observations and experimental research with a variety of animal species. Lecture/laboratory. [NS, W]

Prerequisite: PSYC 120. Instructor: Buckley.

PSYC 327 - Social Psychology II
Examines how social psychologists conduct research. Students read and critique primary sources on such topics as altruism and compliance. In the laboratory component, students conduct research projects illustrating various social psychological methods. Lecture/ laboratory. [NS, W]

Prerequisite: PSYC 203 and PSYC 235 or permission of instructor. Instructor: Childs, Shaw.

PSYC 328 - Lifespan Development II
Advanced course that focuses on either development during childhood, youth and/or adulthood. This is a laboratory course that focuses on current theoretical models, recent research, and assessment and analytic methods in relation to a range of course-relevant topics. Students conduct research projects related to the topics under study in laboratory or field settings. [NS, W]

Prerequisite: PSYC 203 and PSYC 230 or permission of instructor. Instructor: Bookwala, Myers.

PSYC 330 - Cognitive Psychology II
This course will cover advanced issues in a sub discipline of cognition. We will be covering theoretical, empirical, and practical aspects of the subject. You will learn how researchers ask and experimentally answer questions using behavioral, neuropsychological, and neuroimaging approaches. The course will cover both the "classics" of cognitive research as well as modern developments in the field. We will examine these issues through a combination of lectures, demonstrations, experiments, and discussion. [NS, W]

Prerequisite: PSYC 203 and PSYC 256. Instructor: Talarico.

PSYC 334 - Mood Disorders
This course takes a bio-psychosocial approach to understanding the symptomatology, etiology, and treatment of unipolar depression and bipolar disorders. Current controversies and topics of interest in the field are emphasized. Recent studies highlighting novel, cutting-edge research and treatment paradigms are discussed. Key topics such as comorbidity, diversity and cultural considerations, and suicide are explored.

Prerequisite: PSYC 232 or permission of instructor. Instructor: Staff.

PSYC 335 - Industrial Psychology
An overview of industrial (personnel) psychology. Topics include criterion development, performance appraisal, recruitment and selection, validation research, selection bias, job analysis, training and development, compensation, and personnel psychology and the law.

Prerequisite: PSYC 120, or MATH 186, or permission of instructor. Instructor: Vinchur.

PSYC 336 - Organizational Behavior
An overview of organizational psychology. Topics include motivation, leadership, group processes, organizational stress, job satisfaction, communication processes, decision theory, power, and organizational effectiveness, development, and theory.

Prerequisite: PSYC 120 or MATH 186 or permission of instructor. Instructor: Vinchur.

PSYC 337 - Counseling Psychology
Examines some of the major theories of counseling, such as psychodynamic therapy, cognitive behavior therapy, and client-centered therapy. Students are involved with both conceptual and practical aspects of each counseling approach.

Prerequisite: PSYC 231 or PSYC 232 or permission of instructor. Instructor: Basow.

PSYC 339 - Tests and Measurement
The emphasis in this course is on the principles underlying psychological testing. These princples are applied to tests in all content areas in psychology (e.g., clinical, educational, neurological, industrial). Topics include the history of psychological tests, technical and methodological concerns such as reliability and validity, and legal, social, and ethical issues. Prominent tests in selected content areas of psychology are examined.

Prerequisite: PSYC 120 or permission of instructor. Instructor: Nees, Vinchur.

PSYC 340 - History and Systems of Psychology
Provides a historical survey of psychology, with an emphasis on the development of scientific psychology in the late 19th and early 20th centuries. Among the topics explored are the origins of psychology in philosophy and neurology, "schools" of psychology such as functionalism Gestalt psychology and behaviorism and the lives and careers of psychology pioneers. [W]

Prerequisite: PSYC 110, junior or senior standing, or permission of instructor. Instructor: Childs, Vinchur.

PSYC 342-343 - Practicum in Psychology
An experientially based course in which students apply their knowledge from academic course work to a field setting and explore research relevant to their field activities. The internship site matches the student's interest (e.g., human service agency; personnel department, etc.). Field supervision/seminar. [W]

Prerequisite: Psychology major or minor, junior or senior status, and permission of instructor. Instructor: Staff.

PSYC 351-360 - Special Topics
A seminar devoted to a subject of interest to students and faculty. Announcement of the proposed subject is made before the registration period each semester. Open to psychology majors or by permission of instructor.

Instructor: Staff.

PSYC 391-392 - Independent Study
An opportunity for students to pursue a topic of choice with the guidance of a faculty member. Each student examines the topic using primary and secondary sources, and writes a paper of distinguished quality. The study may be designed for one or two semesters. [W]

Prerequisite: PSYC 203 and permission of department head. Instructor: Staff.

PSYC 395-396 - Advanced Research
An opportunity for students to engage in an empirical study using advanced research techniques with the guidance of a faculty member. Students undertake a research project in an area of choice designed for one or two semesters. The work should culminate in a data-based paper of distinguished quality.[W]

Prerequisite: PSYC 203 and permission of department head. Instructor: Staff.

PSYC 490 - Capstone Course in Psychology
This seminar course serves as the capstone for the Psychology major. It will examine the historical and theoretical aspects of a specific topic within the discipline of psychology from a wide range of perspectives, building on the student's experiences in

prior courses. The specific topic will vary by instructor, but will pursue similar themes of discussion such as determinism or the nature of scientific research through the reading of original sources. [W]

Prerequisite: Senior Status or permission of instructor. Instructor: Staff.

PSYC 491-492 - Advanced Research
An opportunity for students to engage in an empirical study using advanced research techniques with the guidance of a faculty member. Students undertake a research project in an area of choice designed for one or two semesters. The work should culminate in a data-based paper of distinguished quality. [W]

Prerequisite: PSYC 203 and permission of department head. Instructor: Staff.

PSYC 495-496 - Thesis
Open to qualified majors by permission of department head. [One W credit only upon completion of both 495 and 496]

Instructor: Staff.

REES - RUSSIAN AND EAST EUROPEAN STUDIES

REES 241 - History, Art and Culture of Russia and Eastern Europe
This course introduces students to the major issues addressed by scholars of Russia and Eastern Europe in a number of different disciplines: history, art, literature, government, economics, religious studies, and music. Each week, we treat a different era of history, reading literature, viewing slides, listening to music, and discussing social and political developments. Students will read the Great Russian writers, examine religious culture and architecture, and learn about life in Russia and Eastern Europe today. [GM2, H, SS]

Cross-Listed as: ART 241, HIST 241. Instructor: Sanborn, Sinkevic.

REES 307 -
The course traces the development of Jewish civilization in Poland, the spiritual and demographic heart of Judaism, examining distinctive Jewish movements and institutions and the flowering of secular Jewish culture in the early twentieth century. The course also considers the controversial issue of Jewish-Polish relations before, during, and after World War II. Finally, it confronts the surprising rebirth of a Jewish community in Poland since 1989 and the readmission of Jews and Judaism into Polish collective memory. [GM1, GM2, H]

Instructor: Cohn.

REES 460 - Reading and Research in Russian/ East European Studies
This course gives advanced students the opportunity to investigate intensively an area of special interest. The student is required to meet with the instructor periodically throughout the semester and at the conclusion of the course to submit a scholarly paper as well as to be prepared to take an oral examination on his or her work. Hours arranged.

Instructor: Staff. Offered: As needed.

REES 495-496 - Thesis
Students interested in completing a thesis for Program Honors are advised to consult with the program coordinator toward the end of their junior year. Following selection of a topic and thesis director, a research design must be provided at the opening of the fall semester. The student then completes REES 495. If the thesis director and program coordinator conclude that sufficient progress has been made, the student takes REES 496 and completes a thesis for submission for honors. [One W credit only upon completion of both 495 and 496]

Instructor: Staff.

REL - RELIGIOUS STUDIES

REL 101 - Religions in World Cultures
This course introduces students to the academic study of religion through a consideration of Buddhism, Christianity, Hinduism, Islam, Judaism, and traditional African religions. Different forms of religious experience and belief are examined along with the myths, rituals, concepts, and symbols that convey them. Various methodologies and source materials are used. [GM2, H, V]

Instructor: Staff. Offered: Fall and spring semesters.

REL 102 - Contemporary Religious Issues
An exploration of how religious people and ideas shape contemporary life. The course examines religiously-influenced issues such as the separation of church and state, the role of religion in violence and terrorism, and debates between religion and science. The course also looks at positive roles of religion and spirituality in modern culture. [SS, V]

Instructor: Hendrickson.

REL 103 - Religion, Myth, and Fantasy
A study of the nature of fantasy and the fantastic and their relation to religion and religious expression, in both West and East. Students examine various texts and tales, as well as films, from a wide range of historical times and traditions, focusing on the modes through which they convey different kinds of religious experience, beliefs, and meanings. Themes include fate of the soul after death, conflict of good and evil, and boundaries between the real and the unreal. [GM1, H]

Instructor: Ziolkowski. Offered: Fall semester.

REL 104 - Saints, Mystics, Ecstatics
An introduction to the comparative and historical study of religion through an examination of three often interrelated types of religious personality: saint, mystic, ecstatic. After considering classic and recent studies of these three types from both Western and Eastern perspectives, the course analyzes autobiographical, biographical, hagiographic, iconographic, and cinematic portrayals of representative figures, focusing upon the expression of the figures' defining experiences and followers' responses to the persons' lives and experiences. [GM1, H]

Instructor: Ziolkowski.

REL 201 - The Biblical Imagination: Torah, Prophets, Writings
Introduction to the religion of ancient Israel; examination of biblical perspectives on the great questions through close reading of selected texts; interpretation of the book as "scripture" as the

Old Testament by Christian communities and as the Tanakh or written Torah by Jewish communities; methods of scholarly inquire. [H,V]

Instructor: Carr.

REL 202 - Christian Scriptures
In this class, we read and study the Christian Scriptures, also known as the New Testament. Besides looking at the various genres of literature in the New Testament, we examine the central figures of Jesus, Paul, and the early Christian Church. Of particular interest in this course are the Jewish and Roman cultural, religious, and political contexts in which the Christian Scriptures were born. [H,V]

Instructor: Staff.

REL 203 - Religion and the Literary Imagination
This course interprets the religious meanings and implications of a selection of twentieth-century novels. The focus is upon the problematic relationship of the religious protagonisst to society and God, or to some other ultimate concern. Other themes considered include the conflict of faith and doubt tensions between religious commitment and aesthetic yearnings, moral and ethical responsibility in the confrontation with evil, and religious dilemmas arising from the encounter between different cultures and religions. [H, V, W]

Instructor: Ziolkowski.

REL 204 - India's Religious Texts: Sacred Word, Sacred Sound
This course introduces the oral and written traditions of South Asian religions including Hinduism, Buddhism, Sikhism, and Islam with selections from a range of texts including the Vedas; biographies of the Buddha; Hindu, Sikh, and Islamic mystical and devotional poetry. The course examines the use of oral and written traditions in religious practice. [GM1, H, V]

Instructor: Tull.

REL 207 - The Quran
Over one billion Muslims believe that the Quran contains the literal words of God. This course attempts to orient students to the most sacred scripture of Islam. It will explore the Quran as an oral, visual, and fluid text. The Quran swiftly traverses concepts such as love and justice, estrangement and community, war, and peace, heaven and hell, good and evil. Occasionally, comparisons will be drawn to other sacred scriptures as well. [H,V]

Instructor: Patel.

REL 211 - Hinduism: Unities and Diversity
An introduction to the vast, complex religious traditions of India known as Hinduism, with readings from some classic works of early Hinduism, such as the Vedas, Upanishads, and the Bhagavad Gita, and Hinduism's extensive oral and written mythological tradition. Hindu worship and meditation are studied, as well as the religious foundations of the caste system. Issues in contemporary Hinduism are also considered. Counts toward Asia Culture Cluster and Asian Studies major and minor. [GM2, H, V]

Instructor: Tull.

REL 212 - Buddhism: From India to Asia and Beyond
An introduction to the development of Buddhism and its spread throughout Asia. The course begins with the rise of Buddhism in India and the development of Buddhist philosophy and religious practice. It then examines Buddhism in China, Japan, Tibet, southeast Asia, and the West, focusing on adaptations in Buddhist practice and belief in different environments. Counts toward Asia Culture Cluster and Asian Studies major and minor. [GM1, GM2, H, V]

Instructor: Tull.

REL 213 - Judaism: Faith, Communities, Identity
An introduction to the religion, history, and literature of the Jewish people. Among the areas covered are: the biblical heritage; the development of rabbinic Judaism; ritual and practice; medieval philosophy and practice, and the reactions of Jews to modernity, such as political emancipation, immigration to America, the Holocaust, the state of Israel, and issues of gender. [GM1, H, V]

Instructor: Carr.

REL 214 - Christianity: From Jesus to the Third Millennium
A study of the main branches of Christianity-Eastern Orthodox, Roman Catholic, and Protestant-focusing on their common biblical inheritance, historical developments, characteristic doctrines, and institutional expressions. Readings are assigned in authors representing the viewpoints studied. [GM2, H, V]

Instructor: Ziolkowski.

REL 215 - Islam: History, Faith, and Practice
An introduction to Islam, a religion that flowered into a world civilization. It covers the vast and dynamic range of Muslim religious life from Muhammad's time to the present. The broad survey spans the foundational texts of the Quran and prophetic traditions as well as later Islamic thought, including jurisprudence, theology, and mysticism. The course highlights modern debates within and about Islam. Topics include political Islam, religious pluralism, the limits of jihad, and the possibilities of Islamic feminism. [H, V]

Instructor: Patel.

REL 216 - Religions in Africa: Contemporary and Historical Expressions
This course is an introduction to the study of traditional African religious systems, thought, and experience. The course explores the way African religions are related to different forms of social organization and conflict, notions of authority, and power. It also explores the ways African religious thought and practice have been affected by and transformed through colonization, missionary activity, and the continent's integration into the global economy. [GM2, H, SS, V]

Instructor: Blunt.

REL 217 - Latina/o Religions: Not Just Catholicism
A Study of the religious traditions of Latinas and Latinos in the United States. The course looks at various forms of Catholicism, the growth of Protestantism in Hispanic communities, and a variety of Afro-Caribbean religions. Emphases are placed on the lived devotions of Latina/os, on the differences among Mexican, Caribbean, Central and South American groups, and on the role of religion in ethnic identity formation and maintenance. [GM1, H, V]

Instructor: Hendrickson.

REL 221 - Religion in Society
A historical and critical study of the way in which particular religions relate to other structures in their cultural environments. Examples are given from different religious communities at different time periods. [H]

Instructor: Staff.

REL 222 - Interreligious Cooperation and Conflict
This course explores the intersection of religion, ethics and politics through the lens of interreligious cooperation and conflict. It focuses on the connected histories of Judaism, Christianity, and Islam-the "Abrahamic faiths"-through a study of doctrine, ritual, and social life. Special attention is given to practices of representing "nonbelievers" and to historical interactions between the religious communities in order to highlight the complexity, fluidity and dynamism of religious identity. [GM1, H, V]

Prerequisite: REL 101 or permission of instructor. Instructor: Patel.

REL 223 - Religious Healing and Health
An examination of how various religious traditions understand sickness and health and how they try to restore wholeness to sick individuals and groups. The efficacy of religious healing, the interface between modern medicine and folk healing, and the importance of cultural narratives in restoring the sick to health are all considered. Academic analysis of religious healing as well as firsthand accounts of religious and folk healthcare are studied. [H, SS]

Instructor: Hendrickson.

REL 224 - Religious Ethics
A study of the bases of normative claims about behavior in various religious traditions. Materials from Christian, Jewish, Buddhist, and other religious traditions are used. Topics include freedom, responsibility, and destiny. [H, V]

Instructor: Staff.

REL 225 - Sex, Gender, and Religion
How have religions helped shape attitudes about traditional gender roles? This course explores ideas about gender and sexuality in the world's major religions. Topics include ideas about gender from texts and oral traditions, ideas regarding gender and spiritual capability, and the connection between religious notions of gender and larger social, political, and economic issues. The course also examines various feminist critiques of religion and reform movements within religious traditions. [GM1, H]

Instructor: Staff.

REL 227 - Religion and the Environment
This course examines the interactions and intersections of major world religions and environmental concerns. Students will explore how faith traditions have articulated the relationship between humanity, the divine, and nature and how these visions in turn have affected religious responses to issues such as human stewardship over the earth, ethics and the eco-system, animal rights, evolution and biodiversity, and contemporary environmental crises. [H]

Instructor: Staff.

REL 228 - Religion and Politics in Africa
This course is a critical introduction to the study of politics and the way religious forces and discourses have shaped and continue to shape general notions of the good in African societies and nations. The course will begin with classic studies of institutions of social and moral order in Africa and will move through the way African religious and political systems came into articulation with the colonial and postcolonial state. The second half of the course will examine moral quandaries, like political corruption, and moral reform movements like Pentecostalism, against the backdrop of economic structural adjustment and the decreased sovereignty of African nations. [GM1, GM2, H, SS]

Instructor: Staff.

REL 231 - Religions in American History and Culture
From the religious traditions of Native Americans to the religions brought to this continent by Europeans, Africans, and Asians, there is a rich tapestry of religious belief, practice, and culture in the U.S. This course focuses on the history of religious life in North America, the cultural aspects of religions in this region, and the diversity of religious expression. The course also considers how relates to group, regional and national identity. [GM1, H]

Instructor: Staff.

REL 232 - Religions in Latin America
This course focuses on how religious practices and beliefs have contributed to culture, ethnic identity, and public life over time in Mexico, Central and South America, and the Spanish-speaking Caribbean. The role of the Catholic Church in colonization and nation formation, and its place in popular culture is considered. Other topics include the rise and spread of Protestant Christianity in the region as well as indigenous and African-origin religions. [GM2, H]

Instructor: Hendrickson.

REL 236 - African Diasporic Religions in the Americas
This course is a study of the African religious heritage brought to the Americas by African people who held a different world view. Eventually, as a result of their experiences in the new environment, the Africans created a coherent faith that preserved and revitalized the basic aspects of African spirituality although blended with Christianity. Historical developments as well as issues of syncretism and cultural camouflage are discussed. [H]

Instructor: Staff.

REL 237 - Contemporary Catholic Issues in the United States
An exploration of Catholicism as it has developed within the particular culture of the United States and the reasons for its evolution. Elements in the Catholic tradition that have adapted to American surroundings, examination of tensions and debates which have accompanied those adjustmens, and current matters of interest to that community, including critique of the culture of the United States. [H]

Instructor: Staff.

REL 240 - Theories of Religion
What is religion? What is the nature of religious belief? What roles does religion play in society? How can we study and understand religion? There have been many attempts to answer these questions from sociology, anthropology, philosophy,

psychology, comparative religion, and the feminist critique of religion. This course examines representative theories of the nature and study of religion, paying close attention to the contexts within which these theories arise, and how effective they are in leading to an understanding of religious beliefs and practices. [H, SS, W]

Instructor: Staff. Offered: At least once every other year.

REL 250 - Anthropology of Religion
As the United States and European colonial powers expanded into places like Africa, Native North America, Melanesia, and Australia (to name a few), different national traditions of anthropology developed an ever evolving toolbox of approaches and techniques for understanding the religious lives of Euro-American Others. This course is an introduction to this "toolbox" of anthropological theories and methods of studying religion from the Victorian era to the present. The course will also attend to voices in the discipline critical of the way anthropology constructs "religion" as an object of analysis. [SS]

Prerequisite: A&S 102 or A&S 103, or REL 101. Instructor: Blunt.

REL 260 - Global Muslim Literature and Film
This course introduces students to global Muslim culture and civilization through literature and film. Geographic regions include the Middle East, South Asia, Africa, North America and Europe; historical periods span both pre-modern and modern. Topics covered include but are not limited to: constructions of race, religion, and gender; diaspora and immigration; political Islam and Islamophobia in cultural contexts. Course materials focus on fictional storytelling although characters and plots may be rooted in actual historical events. [H, GM2]

Instructor: Patel.

REL 301 - Philosophies of Religion
An examination of central problems and current issues in the philosophy of religion as treated in classic texts of the field: definitions of religion; 'proofs' of God's existence; the nature of religious experience, faith, revelation, and miracle; the problem of evil; human destiny; religious naturalism; religious language; atheism and unbelief; religious pluralism; religion and gender. We discuss these subjects from a rational, critical, objective perspective, taking account of the authors' historical-cultural context. [H, V, W]

Instructor: Ziolkowski.

REL 303 - Lived Religion in Context: Ethnographies of Africa and Asia
This seminar will explore contemporary religious experience and practice in Africa and Asia. We will critically analyze the relationship between global, social, and economic processes that fall under the rubrics of "globalization" or "modernity" and local religious phenomena like spirit possession, occult anxieties and related violence, as well as the proliferation of Pentecostalism and prosperity theologies (the belief that financial blessings are the will of god). [W]

Instructor: Blunt.

REL 304 - Spirituality and Transformation: From Sufism to Self-Help
This course explores different conceptualizations of spirituality and transformation primarily through the lens of Islamic mysticism (Sufism), but also through Jewish mysticism (Kabbalah), and the contemporary (primarily American) Self-Help industry. Sources include both primary and secondary texts, including translations when appropriate.[H,GM1]

Instructor: Patel.

REL 305 - Muhammad and Prophecy
The interdisciplinary seminar examines the life of Muhammad, who ranks among the most influential persons in world history. After probing the nature and meaning of prophecy, this course surveys Muhammad's life in detail, while drawing a portrait of early Arab social, cultural, political, and economic life. The course also explores the problem succession after Muhammad's death, which spawned the split between Sunni and Shia Muslims. [H, GM1]

Instructor: Patel.

REL 306 - Jewish Responses to the Holocaust
Investigation of a reactions to the Holocaust in a variety of genres, such as theology, philosphy, literature, history, ethics, politics, photography, memorials, and film. Contextualizes Jewish conceptions of suffering, considering the Holocaust as a "Jewish" event, and the influence of Holocaust narratives in the U.S., Israel, and Europe. [GM1, H, W]

Instructor: Carr.

REL 307 - Jews in Poland, Culture and Memory
The course traces the development of Jewish civilization in Poland, the spiritual and demographic heart of Judaism, examining distinctive Jewish movements and institutions and the flowering of secular Jewish culture in the early twentieth century. The course also considers the controversial issue of Jewish-Polish relations before, during, and after World War II. Finally, it confronts the rebirth of a Jewish community in Poland since 1989, the place of Jews and Judaism in Polish collective memory, and tensions between the two. [GM1, GM2, H, W]

Instructor: Carr.

REL 308 - Visual Culture and Religious Identity
This course introduces the concept of visual culture as a window into the study of religion. Secondary texts are juxtaposed with primary sources. These sources suggest the construction of religious communities and identities has taken place in the context of cultural exchange. We look at how various traditions have used images to construct community boundaries and ideologies. What and when have communities shared, disputed, and diverged? How has the presentation of "others" been an aspect of religious identity? [H, GM1, W]

Instructor: Carr.

REL 309 - Jews in the Americas
This course analyzes Jewish religious practice throughout the Americas. We compare Jewish life in multiple local and national contexts, evaluating how particular contexts have influenced Jews; how Jews have influenced various societies, cultures, and religious practices; and transnational Jewish networks, practices, and identities. We evaluate contexts individually as well as in exchange with each other. We consider the roles of various

languages, including Hebrew, Yiddish, Ladino, English, Spanish, and Portuguese (all readings in English translation). [GM1, H, W]

Instructor: Carr.

REL 310 - Sacrifice: Ritual and Violence
What do the Eucharist, the ritual slaughter of oxen, and military service have in common? They all share sacrificial elements; the giving up of something, often the life of some being (broadly understood), in order to constitute the sacredness or boundary of a community. This course examines the role of sacrifice in religion, ritual, gender relations and even secular social formations such as nationalism. The course thus explores both theories of sacrifice and the significance of sacrifice in different social and historical contexts. [GM1, GM2, H, SS, W]

Instructor: Blunt.

REL 350 - Religions on the Move Dynamic Approaches to the Religious History of the Americas
Typical narratives of religious history in the Americas start with the arrival of Christian Europeans on the eastern seaboards who then inevitably move westward across the hemisphere, converting or displacing all in their path. This seminar-style course presents alternatives to this colonial story by examining various histories and ethnographies of religious people that move, instead, on north/south axes, from west to east, or in multi-directional ways. Emphasis is placed on transnational flows and cultural contact. [GM2, W]

Instructor: Hendrickson.

REL 351-360 - Special Topics
These courses study subjects of current interest to students and members of the staff.

Instructor: Staff.

REL 390-391 - Independent Study
Open to junior or senior Religion majors or minors. Students select a specific area of interest for reading and investigation in consultation with the faculty adviser and subject to the approval of the department. Students confer regularly with advisers on their work and prepare an essay on an approved subject. Open to other qualified juniors or seniors with permission of the department.

Instructor: Staff.

REL 490 - Senior Capstone
Students who major in religion develop a capstone project under the direction of a faculty member in the department, following the established, written guidelines available in the department. This takes place in the first semester of the senior year. [W]

Prerequisite: Students must be Religion majors. Instructor: Staff.

REL 495-496 - Honors Thesis
Students desiring to take honors should inform their department advisers by the end of the second semester of the junior year. Honors work involves a guided program of independent reading and research culminating in a thesis on a topic to be selected by the student in consultation with his or her adviser and approved by the department. All honors projects must be conducted in accordance with the established written guidelines available in the department. Honors candidates enroll in REL 496 only upon successfully completing REL 495. [One W credit only upon completion of both 495 and 496]

Instructor: Staff.

RUSS - RUSSIAN

RUSS 101 - Elementary Russian I
Fundamentals of the spoken and written language. Development of reading, writing, speaking, and listening skills. An introduction to the culture of Russia. Class/laboratory. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department.

Instructor: Staff.

RUSS 102 - Elementary Russian II
Fundamentals of the spoken and written language. Development of reading, writing, speaking, and listening skills. An introduction to the culture of Russia. Class/laboratory. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [H]

Prerequisite: RUSS 101 or equivalent proficiency. Instructor: Staff.

RUSS 111 - Intermediate Russian I
Review and expansion of basic grammar and vocabulary. Short literary and cultural readings. Attention to developing reading, writing, and conversational skills and a deeper understanding of Russian culture. Class/laboratory. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [H]

Prerequisite: RUSS 102 or equivalent proficiency. Instructor: Staff.

RUSS 112 - Intermediate Russian II
Review and expansion of basic grammar and vocabulary. Short literary and cultural readings. Attention to developing reading, writing, and conversational skills and a deeper understanding of Russian culture. Class/laboratory. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [H, GM2]

Prerequisite: RUSS 111 or equivalent proficiency. Instructor: Staff.

RUSS 209 - Survey of Russian Literature I
A chronological study of the major literary movements and styles from the seventeenth century to the present in prose, poetry, and drama. Special attention is given to the ideological and historical background. [H]

Prerequisite: RUSS 112 or equivalent proficiency. Instructor: Staff.

RUSS 210 - Survey of Russian Literature II
A chronological study of the major literary movements and styles from the seventeenth century to the present in prose, poetry, and drama. Special attention is given to the ideological and historical background. [H]

Prerequisite: RUSS 112 or equivalent proficiency. Instructor: Staff.

RUSS 211 - Advanced Russian

A course in advanced grammar and syntax designed to develop a high degree of aural comprehension and conversational fluency. Perceptive reading and clear writing are stressed. Discussion of the major social, ideological, and artistic trends and movements of Russia. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [H]

Instructor: Staff.

RUSS 290 - Independent Study in Russian
This course emphasizes reading authentic materials and writing compositions and correspondence.

Prerequisite: RUSS 112, equivalent proficiency, or permission of the instructor. Instructor: Staff.

RUSS 291 - Independent Study in Russian
This course emphasizes reading authentic materials and writing compositions and correspondence.

Prerequisite: RUSS 112, equivalent proficiency, or permission of the instructor. Instructor: Staff.

RUSS 311 - Russian Short Story
A study of the Russian novella and short story with emphasis on nineteenth- and twentieth-century fiction. Reading and interpretation of works by writers such as Pushkin, Gogol, Turgenev, Tolstoy, Dostoevsky, Chekhov, Gorky, Babel, Olesha, Solzhenitsyn, and others. [H]

Prerequisite: RUSS 112 or equivalent proficiency. Instructor: Staff.

RUSS 316 - Soviet Russian Literature
A study of developments from 1917 to the present for their literary, social and political significance. Reading and interpretation of works by writers such as Mayakovsky, Gladkov, Fadeyev, Katayev, Simonov, Panova, Evtushenko, Trifonov, and others. [H]

Prerequisite: RUSS 112 or equivalent proficiency. Instructor: Staff.

SPAN - SPANISH

SPAN 101 - Elementary Spanish I
This sequence is for beginners, covering the fundamentals of spoken and written language through the development of reading, writing, speaking, and listening skills. Class/laboratory. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department.

Prerequisite: Novices only. Students with two or more years of high school Spanish are ineligible to take SPAN 101. Students with four or more years of high school Spanish are ineligible to take SPAN 102 and SPAN 103. Instructor: Staff.

SPAN 102 - Elementary Spanish II
This sequence is for beginners, covering the fundamentals of spoken and written language through the development of reading, writing, speaking, and listening skills. Class/laboratory. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [H]

Prerequisite: Novices only. Students with two or more years of high school Spanish are ineligible to take SPAN 101. Students with four or more years of high school Spanish are ineligible to take SPAN 102 and SPAN 103. Instructor: Staff.

SPAN 103 - Accelerated Elementary Spanish
An intensive program for high beginners. The course takes a communicative approach toward the development of reading, writing, listening and speaking skills. Ideal for students in need of review, and those with professional, family or travel interests. Class/Laboratory. Not open to students with credit for SPAN 101-SPAN 102. [H]

Prerequisite: Students with four or more years of high school Spanish are ineligible to take SPAN 102 and SPAN 103. Students with two or more years of high school Spanish should submit their AP, IB or SAT II score to the Registrar or take the placement test administered by the Department. First-year students should take the online placement test prior to registration. Continuing students should make an appointment with the Foreign Languages & Literatures Department Head to take the exam prior to registration. Instructor: Staff.

SPAN 111 - Intermediate Spanish I
Review and expansion of basic grammar and vocabulary. Short literary and cultural readings. Development of reading, writing, listening, and conversational skills as well as a deeper understanding of Hispanic cultures. Class/laboratory. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department.

Prerequisite: Students with two or more years of high school Spanish should submit their AP, IB, or SAT II score to the Registrar or take the placement test administered by the Department. First-year students should take the online placement test prior to registration. Continuing students should make an appointment with the Foreign Languages & Literatures Department Head to take the exam prior to registration. SPAN 111 [H]. Instructor: Staff.

SPAN 112 - Intermediate Spanish II
Review and expansion of basic grammar and vocabulary. Short literary and cultural readings. Development of reading, writing, listening, and conversational skills as well as a deeper understanding of Hispanic cultures. Class/laboratory. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [H, GM 2]

Prerequisite: Students with two or more years of high school Spanish should submit their AP, IB, or SAT II score to the Registrar or take the placement test administered by the Department. First-year students should take the online placement test prior to registration. Continuing students should make an appointment with the Foreign Languages & Literatures Department Head to take the exam prior to registration. SPAN 112 [GM2]. Instructor: Staff.

SPAN 211 - Advanced Spanish
Advanced Spanish is an intensive composition course that emphasizes the development of critical and analytical skills in Spanish through the study of Spanish and Latin American literature and film. Designed as a bridge between language development and upper-level civilization, literature, and culture courses, this class focuses on process writing and is generally taken after a student has completed the Intermediate sequence of language study. Language level and subsequent course placement will be determined by the Foreign Languages & Literatures Department. [H]

Prerequisite: SPAN 112, or equivalent proficiency. Students with two or more years of high school Spanish should submit their AP, IB, or SAT II score to the Registrar or take the placement test administered by the Department. First-year students should take the online placement test prior to registration. Continuing students should make an appointment with the Foreign Languages & Literatures Department Head to take the exam prior to registration. Instructor: Staff.

SPAN 215 - Spanish for Heritage Speakers
Designed to build on the existing skills of students who have grown up in Spanish-speaking environments, this course provides the opportunity to develop communicative competence in Spanish in both formal and informal settings through the expansion of speaking, reading, and writing skills. Objectives include: review of such critical language aspects as spelling conventions, written accents, and the variety of linguistic registers or communicative settings (i.e., informal, formal, academic, and etc.). Extensive reading, writing, and communicative activities. Equivalent to SPAN 211. [GM1, H]

Prerequisite: Home background experience in Spanish. Course does not assume previous formal study of the language. All participating students will take a written skills-assessment test. Instructor: Geoffrion-Vinci.

SPAN 225 - Business Spanish
This course is designed to teach advanced students how to use their language skills within the context of the Spanish-speaking professional world. Students acquire specialized vocabulary and knowledge related to topics such as banking and finance, telecommunications, import/export operations, advertising, and marketing. Course activities include composition of business letters and résumés, summaries, and translation of official documents and business correspondence, exploration and analysis of commerce-related Internet sites, and completion and presentation of a country-specific team project.
Class/laboratory. [H]

Prerequisite: SPAN 211, or equivalent proficiency. Students with two or more years of high school Spanish should submit their AP, IB, or SAT II score to the Registrar or take the placement test administered by the Department. First-year students should take the online placement test prior to registration. Continuing students should make an appointment with the Foreign Languages & Literatures Department Head to take the exam prior to registration. Instructor: Staff.

SPAN 303 - Spanish Civilization and Culture
An interdisciplinary exploration of the Iberian Peninsula's civilizations and cultures as reflected in its history, literature, peoples, politics, and arts. Topics range from Spanish Unification in 1492 through the rise and fall of Spain as an imperial power. Class/laboratory. [H]

Prerequisite: SPAN 211, equivalent proficiency, or permission of the instructor. Instructor: Donnell.

SPAN 304 - Spanish American Civilization and Culture, 1492-1900
An interdisciplinary exploration of civilizations and cultures from the colonial period through the early 20th-century as reflected in its history, literature, peoples, politics, and arts. Class/laboratory. [H]

Prerequisite: SPAN 211, equivalent proficiency, or permission of the instructor. Instructor: Staff.

SPAN 310 - Survey of Spanish Literature I
An introduction to the literature of Spain from the Middle Ages through the seventeenth century, from the story of the Cid through the myth of Don Juan. Class/laboratory. [H]

Prerequisite: SPAN 211, equivalent proficiency, or permission of the instructor. Instructor: Donnell, Stafford.

SPAN 311 - Survey of Spanish Literature II
An introduction to the literature of Spain from the eighteenth century to the present, from the Enlightenment through the post-civil war era. The course examines how authors such as Larra, Castro, Pardo Bazán, Galdós, and Machado responded to the challenges posed by the shifting realities of their times. Class/laboratory. [GM2, H]

Prerequisite: SPAN 211, equivalent proficiency, or permission of the instructor. Instructor: Geoffrion-Vinci.

SPAN 313 - Contemporary Spain
An interdisciplinary study that examines the evolution of Spanish society from the nineteenth to the twentieth century. Topics include Spain's problematic transition from feudalism to modernity, the rise of regionalism and its impact on national identity, and literary creativity and censorship in a nation vaulting between reactionary and democratic political forces. [GM2, H]

Prerequisite: SPAN 211, equivalent proficiency, or permission of the instructor. Instructor: Geoffrion-Vinci.

SPAN 314 - Contemporary Spanish America and Hispanics in the U.S.
An interdisciplinary study of current cultural and political trends in Spanish America with emphasis on national and continental identities, political responses to development, the vitality of popular culture and the arts, and the growing importance of Hispanics in the United States. Laboratory assignments. [H]

Prerequisite: SPAN 211, equivalent proficiency, or permission of the instructor. Instructor: Quirós, Staff.

SPAN 315 - Introduction to Visual Cultures of the Iberian Peninsula: Spanish Culture and Society through Film
An introduction to Iberian visual cultures from the early twentieth century to the present day. Among the issues addressed are the history of cinema in the Iberian Peninsula, visual representations of war and conflict, and visual interpretations of social issues. [H, GM2]

Prerequisite: SPAN 211. Instructor: Stafford.

SPAN 317 - Survey of Spanish American Literature I
An introduction to the literature of Spanish America, from the 16th to the early 20th century, emphasizing the literary response to the peoples and places of the New World, the transformation of Spain's literary legacy, the rise of national traditions after independence, and the modernistas' answer to regionalism. Class/laboratory. [H]

Prerequisite: SPAN 211, equivalent proficiency, or permission of the instructor. Instructor: Staff.

SPAN 318 - Survey of Spanish American Literature II
An introduction to the literature of Spanish America, from the early twentieth century to the present day. Among the issues

addressed are the literature of social protest and reform, artistic experimentation in contemporary poetry and narrative fiction, and the rise of the novel in the second half of the twentieth century. Class/laboratory. [H]

Prerequisite: SPAN 211, equivalent proficiency, or permission of the instructor. Instructor: Quirós, Staff.

SPAN 370 - Seminar on Translation
The course's aim is to introduce students to theoretical issues and the practical applications of translation. We will combine theory and practice to examine the full complexity of translation as both an art and a science. Specifically, we will work with the particular features of the translation process from English to Spanish and Spanish to English through a semester-long translation practicum. Among the issues to be considered are equivalence, decoding and recoding and untranslatability. [H, W]

Prerequisite: One 300-level course in Spanish or permission of the instructor. Instructor: Staff.

SPAN 421 - Seminar in the Literature and Culture of the New World
An in-depth study of the influence of colonial literature in both the formation of a Latin American identity and the development of contemporary writing. Texts by the explorers, missionaries, and conquistadores in the New World (including Columbus, Friar Bartolomé de las Casas, Hernán Cortés), and the subsequent generations of "American-born" writers (such as "The Inca" Garcilaso de la Vega). May be repeated for credit when topics vary. Class/laboratory. [H, W]

Prerequisite: SPAN 304 or SPAN 317, equivalent proficiency, or permission of the instructor. Instructor: Staff.

SPAN 423 - Seminar in Early Modern Spanish Literature and Culture
An in-depth study of a literary theme, author, or genre related to Spain during the Renaissance and Baroque periods. Emphasizing the cultural contexts, examples of topics include transvestite comedy, the short prose of Cervantes, the Spanish Inquisition, or Neo-Baroque themes and imagery in contemporary film and literature. May be repeated for credit when topics vary. Class/laboratory. [H, W]

Prerequisite: SPAN 303 or SPAN 310, equivalent proficiency, or permission of the instructor. Instructor: Donnell.

SPAN 425 - Don Quixote
Cervantes' masterpiece as it relates to today's reader, its impact on contemporary culture, and the stylistic innovations that make this novel a modern classic. Required of all majors in Spanish. Class/laboratory. [H]

Prerequisite: One survey course in Hispanic literature, equivalent proficiency, or permission of the instructor. Instructor: Donnell.

SPAN 427 - Seminar in Contemporary Spanish Literature and Culture
An in-depth study of a literary theme, genre, author, or cultural movement in Spain from the late nineteenth century to the present. Examples include postwar novel, film studies, and Spanish surrealism. May be repeated for credit when topics vary. Class/laboratory. [H, W]

Prerequisite: SPAN 303, SPAN 311 or SPAN 313, equivalent proficiency, or permission of the instructor. Instructor: Geoffrion-Vinci.

SPAN 428 - Seminar in Modern Spanish American Literature and Culture
An in-depth study of a literary theme, genre, author, or movement in the cultural context of Spanish America during the late nineteenth century through the present day. Topics include Short Story and the Fantastic, Fictions of History in Contemporary Novel, and From Popular Culture to Narrative Fiction. May be repeated for credit when topics vary. Class/laboratory. [H, W]

Prerequisite: SPAN 304, SPAN 314, or SPAN 318, equivalent proficiency, or permission of the instructor. Instructor: Quirós, Staff.

SPAN 435 - Research Seminar in Hispanic Literature and Civilization
Development of research skills and methodologies as applied to a specific topic in Hispanic studies: a literary theme, genre, author, or movement, and/or a cultural, historical, or political trend in Spain or Spanish America. Required of all majors in Spanish during their senior year. Only open to non-majors with permission of instructor. May be repeated for credit when topics vary. Class/multimedia research. [H, W]

Instructor: Staff.

SPAN 460 - Reading and Research in Spanish
Individual research under the guidance of a faculty mentor. Open only to qualified juniors and seniors. Hours arranged.

Prerequisite: Two 300-level literature or culture courses, and permission of the faculty mentor. Instructor: Staff.

SPAN 495-496 - Thesis in Spanish
Open only to majors in Spanish who are candidates for departmental honors. Tutorial sessions related to the student's research and essay project. Hours arranged. [One W credit only upon completion of both 495 and 496]

Prerequisite: Permission of the research instructor. Instructor: Staff.

THTR - THEATER

THTR 107 - Introduction to Theater
Through lectures, discussions, hands-on- experiences, master classes with visiting theater professionals, and performances outside of class, this course introduces students to significant texts, ideas, and crafts essential to the study of theater. Projects involve acting, directing, design, and theater criticism; writing assignments familiarize students with the analytic tools and accepted vocabulary of theater scholarship. [H]

Instructor: Lodge, O'Neill, Westfall.

THTR 108 - World Theater
A survey of plays from different eras and performance traditions in diverse cultures; introduces students to evaluating, discussing, and writing about theater from a global perspective. [GM2, H]

Instructor: Staff.

THTR 120 - Theater Performance Practicum

Available to designated cast and crew members of a faculty-directed Theater Department production. May be repeated up to four times for credit.

Prerequisite: Permission of Department Head, 0.25 credit. Instructor: Staff.

THTR 121 - Theater Production Practicum
Available to designated crew and staff of a faculty-directed Theater Department production. 0.25 credits

Prerequisite: Permission of Department Head. Instructor: Staff.

THTR 130 - Acting I: Acting and Improvisation
This workshop style course will introduce students to various fundamental techniques of acting and improvisation, with special emphasis on sensory awareness, observation, concentration, body movement and vocal development. Students will develop their imaginations and creative processes through performance situations involving improvisation, scene study and monologue work. Second semester seniors must have permission of the instructor to take the course. [H]

Instructor: Staff.

THTR 201 - Public Speaking
A survey of the fundamentals of speech with regular drill in platform speaking.

Instructor: Staff.

THTR 207 - Theater History
This course will focus on how theatrical forms have changed from time to time and culture to culture, considering historical context, periodicity, genre, conventions, style, theatrical spaces, acting styles, and technical effects. [GM 2, H]

Instructor: O'Neill, Westfall.

THTR 208 - Theater and Diversity
This course focuses on plays that address issues of gender, race, class and ethnicity through the medium of live theater. The course also will examine how cross-gender and cross-cultural casting (sometimes referred to as "color-blind" casting) affects theatrical reception and response. Workshops on Theater of the Oppressed and Undesirable Elements will provide students with opportunities to make theater based on diversity issues. [GM1, H, W]

Instructor: Westfall.

THTR 221 - Basic Stagecraft: Introduction to Technical Theater
An introduction to the history, theory, and practice of technical theater, focusing upon stage management, construction, painting, rigging, and electrical practices. Laboratory sessions in the theater shop and backstage assignments ensure hands-on exposure to topics discussed in class. [H]

Instructor: Staff.

THTR 230 - Acting II: Scene Study
This workshop extends beyond basic action and training to offer a more in-depth study of the craft of acting. Students will utilize exercises, improvisation, and detailed script analysis as they build and develop characters. Students will perform in a range of scenes from modern American realism and from Ibsen, Strindberg, and Chekhov. [H]

Prerequisite: THTR 130 or permission of the instructor.. Instructor: Staff.

THTR 235 - Musical Theater
This study of musical theater combines a survey of the history and literature of this uniquely American art form with introductory training in its practice and performance techniques. Students will investigate the structure, terminology, practitioners, organization, and conventions of the musical while they explore its repertoire through either preparing scenes and songs for performance or doing dramaturgically based research for presentation. [H]

Prerequisite: THTR 107, THTR 130 or permission of the instructor. Instructor: Staff.

THTR 270-271 - Topics in Theater
A detailed study in either a workshop or classroom setting of a particular aspect of theatrical endeavor. Usually offered in conjunction with visiting artists or theater residencies.

Prerequisite: THTR 107 or permission of the instructor.. Instructor: Staff.

THTR 312 - Plays in Performance
Through applying the methods of dramaturgy to reading and researching selected plays, students compare and examine performances of those plays in differently realized productions on stage, in film, and through adaptations in such genres as opera and dance. Special attention will be given to issues of interpretation, historicity, and conventions in various media. [GM1, H, W]

Prerequisite: THTR 107 or permission of the instructor. Instructor: Staff.

THTR 314 - Stage Direction
This course explores the director's art and responsibility in the theatrical process, including casting, rehearsal, and organizational procedures from script analysis to performance. Discussion and practice in the principles of composition, picturization, movement, and blocking, with attention to issues of style, concept, and stage spaces. Students direct scenes in laboratory and a short play for public performance.

Prerequisite: THTR 207 or permission of the instructor. Instructor: Staff.

THTR 330 - Acting III: Theatrical Styles
This workshop offers advanced study of acting, with special emphasis on exploring and enacting the theatrical styles and performance conventions from a wide range of periods, genres, and cultures. Students will perform in projects drawn from diverse pieces in a variety of contrasting styles. Emphasis on particular styles is subject to change by semester. May be repeated for credit when offered with different emphasis.

Prerequisite: THTR 230 or instructor permission. Instructor: Staff.

THTR 335 - Theater for Young Audiences
Students explore the practices of theater for young audiences and methodologies of theater in education through readings and research combined with a lab experience in which they either rehearse and perform or provide technical or design support for a play created for young audiences. Students develop educational materials for the production and lead post-performance

workshops with area school children who attend the production. Rehearsal and performances are scheduled during required laboratory hours.

Prerequisite: THTR 207 or permission of instructor. Instructor: Staff.

THTR 369 - Theater Artists in Focus
An in depth study of one or two theater artists, usually in conjunction with a College Theater production showcasing their work. The Theater artists selected vary from semester to semester, and the focus will be announced during the registration period; may be repeated when offered with a different focus. [H, W]

Prerequisite: THTR 207 or permission of the instructor. Instructor: Staff.

THTR 370-371 - Advanced Topics in Theater
Advanced study in either a workshop or classroom setting of a particular aspect of theatrical endeavor. May be repeated for credit when offered on different topics.

Prerequisite: A 200-level course in Theater or permission of the instructor. Instructor: Staff.

THTR 372-373 - Internship
Practical experience in a professional theater or theater organization. Written reports are required of the student, as is an evaluation of the student by the supervising agency. Although a student may take two theater internships, normally in the junior and senior years, only one may be counted toward the Theater major. Advance approval of the Director of Theater required.

Instructor: Staff.

THTR 390-391 - Independent Study
Tutorial study in theater practice, initiated by the student and pursued independently under the guidance of an instructor from whom the student has gained approval and acceptance. May be repeated for credit.

Prerequisite: THTR 107 or THTR 221, and permission of the instructor. Instructor: Staff.

THTR 400 - Senior Project
Under the guidance of theater faculty and normally during the senior year, the student will undertake an advanced project in one or more specialized areas of theater (e.g., acting, directing, design, criticism). The project will serve to assess the student's theater education and demonstrate the student's potential as a theater artist and/or practitioner.

Prerequisite: Advance approval of the Director of Theater. Instructor: Staff.

THTR 495-496 - Thesis
Tutorial sessions related to the student's investigation of the area chosen for his or her honors essay. Open only to candidates for honors in theater, who take THTR 495 instead of THTR 400. [One W credit only upon completionof both 495 and 496]

Prerequisite: THTR 207 and permission of the Department Head. Instructor: Staff.

WGS - WOMEN'S AND GENDER STUDIES

WGS 101 - Introduction to Women's Studies
This course introduces students to feminist theory and scholarship and to methodologies commonly employed in the interdisciplinary field of Women's and Gender Studies. Attention is focused on how gender -- together with class, race, religion, age, and sexual orientation -- shapes institutions, cultural ideologies, public policy, and the lives and experiences of individual women and men. [GM1, SS]

Instructor: Bettray.

WGS 204 - Gender and Environmentalism
This course merges key insights of environmental studies/activism, which focus on relationships between living beings and their environment, and feminism, which focuses on systemic, hierarchical power structures organized by gender difference. The course investigates questions of power and knowledge at the intersection of ideas about gender and the environment/nature. We explore forms of environmental activism(s) relative to gender and gender difference (particularly as intersecting with race, class, and sexuality), and reflect on popular attitudes toward environmental issues [GM1}

Instructor: Armstrong.

WGS 205 - Love and Sex in Biblical Texts
This course explores biblical ideas, values, and practices concerning sexuality and love. The problems of marriage and celibacy, on the one hand, and the challenges of infertility, adultery, prostitution, incest, and rape, on the other, occupy center stage. Moreover, the language of profane love regularly expresses sacred passion, while biblical law focuses on sexual organs and intercourse. Through attention to gender construction and relationships, the course exposes a central element of religious identity in the Hebrew Bible and the New Testament.

Instructor: Cohn.

WGS 230 - Women's Health Issues
This course examines scholarship on factors that affect the physical and emotional well-being of girls and women, with particular attention to the ways in which gender intersects with issues of race and class. Also central to this course is a feminist analysis of the degree to which public policies effectively address the health concerns and experiences of females.

Instructor: Staff.

WGS 235 - Gender and the Economy
Across the globe, we observe different economic outcomes across gender that are both significant and persistent. This course takes an interdisciplinary perspective to study decisions that individuals make regarding marriage, children, education and employment. As part of our examination of these choices and their consequences for economic well being, we will make comparisons of gender-related outcomes over time and across race and ethnic groups, and learn about government policies that have differential effects across gender. [GM1, SS]

Instructor: Averett.

WGS 240 - African and African American Women
This course examines from a transnational perspective the ways in which race, class, and gender have influenced black women's

lives. Discussion topics include familial roles of indigenous African women, institutional oppression (including slavery), male/female relationships, the U.S. Civil Rights movement, women's liberation struggles nationally and internationally, and coalition-building with women of non-African descent. [GM1]

Instructor: Staff.

WGS 249 - Women in the US Criminal Justice System
This course engages students in critical analysis of the criminal justice system and of significant innovations and proposals for reform of policies, programs, and practices. This seminar will introduce the student to the history of women in prison, the profile of women prisoners, operational and security challenges for prison administrators, and a review of the special needs for rehabilitation among women prisoners. The service learning component of this seminar is an opportunity for a small group of students from Lafayette College and a group of residents of the Northampton County Correctional Facility (NCP) to exchange ideas and perceptions about crime and justice, the criminal justice system, corrections, and imprisonment. [GM1]

Instructor: Winfield.

WGS 250 - Gender and STEM (Science, Tech, Engineering and Math)

This course examines how gender and gender identity-as well as race/ethnicity and sexual identity-intersect with STEM-related areas of inquiry. Using a variety of interdisciplinary perspectives, the course investigates how STEM fields both shape and are shaped by ideas about gender. Topics include feminist critiques of science, intersections of gender with technology design and use, gender and the built environment, and the relationship between gender and "doing" STEM work. [GM1]

Prerequisite: WGS 101 recommended. Instructor: Armstrong.

WGS 253 - Gender, Race and Environmental Justice
This course explores connections between environmental issues and hierarchies of social power. The course investigates how systemic social hierarchies of dis/advantage-principally gender and racial/ethnic identity-are articulated through the environment and how the environment is shaped by dynamics of gender/race inequalities. Additional analytical lenses (sexuality, socio-economic class, and global position) are used to form conceptual frameworks that improve our understanding of the important role "environmental justice" plays in the study of systemic social inequalities. [GM1]

Instructor: Armstrong.

WGS 255 - Women Make Movies/Movies Make Women
This non-production course examines the work of women filmmakers and how women have historically been constructed (and not constructed) in cinema. We will examine issues of gender, spectatorship, sexuality, race, representation and authorship as they intersect with images of women such as savior, victim, femme fatale, mother and artist. [GM1, W]

Prerequisite: FAMS 101, WGS 101, or permission of instructor. Instructor: Sikand.

WGS 260 - Girls Around the World: Literature, Culture, Activisim

This interdisciplinary course will explore the idea of girlhood in the modern world. We will read scholarship on girlhood, as well as fiction, memoirs, and case studies to understand the forces that shape girls' lives and how girls shape the world around them. We will explore what it means to be a girl, whether girlhood is a Western or global phenomenon, the value of studying girls/girlhood, and the intersectional identities that comprise girl identity, including class, race, sexuality, and religion. [GM1]

Instructor: Gallagher.

WGS 261 - Masculinities
This course critically examines pervasive notions of masculinity, focusing especially on systemic, hierarchical power structures organized around gender difference. The course investigates widely held assumptions about masculinity and femininity, considers the powerful influence of hegemonic norms of masculinities, and explores various forms of resistance to and disruption of such norms. Our approach will be intersectional, as we examine the importance of race, class, and sexuality on the construction of multiple masculinities. [GM1]

Instructor: Donnell, Gilligan.

WGS 262 - Women and Work in the Americas
What is work? Who does it and in what capacity? And how does gender influence ideas about and practices of women's and men's labor? In this course we will analyze these questions in specific contexts across the Americas from Argentina to the United States. We will study women's productive and reproductive labor from an intersectional perspective that take into account not only gender but also class, race, ethnicity, sexuality, life stage, and migration status. [H, SS, GM1, GM2]

Instructor: Pite.

WGS 270-279 - Special Topics
These interdisciplinary courses explore issues of special interest to WGS faculty and students.

Instructor: Staff.

WGS 280 - Feminist Theory
Feminist Theory explores the various interdisciplinary intellectual traditions that structure ideas about gender/gender identity and sexuality/sexual identity. This course considers how social, historical, and ideological forces, organized by the intertwined concepts of gender and sexuality, shape different feminist traditions (both intellectual and activist). Special attention will be paid to how race/ethnicity, transnational issues, and class factors determine and are determined by different formulations for feminist thought and action. [GM1, H]

Instructor: Armstrong.

WGS 320 - Black Feminisms
This seminar addresses the theoretical contributions of "Black" (Continental, Diasporan, and American African) feminists working from a variety of disciplinary perspectives. Viewing "Black" women as producers of knowledge and as transforming agents, we will outline principles and practices of "Black" Feminisms. We also will examine the interrelationship among life, theory, and praxis, as well as the various ways in which these three are imagined and realized by "Black" feminist writers. [GM1]

Prerequisite: WGS 101 or two cross-listed courses or permission of the WGS Program Chair. Instructor: Blay.

WGS 340 - Sexuality Studies
This course examines the various cultural and social regimes that create and organize ideas about sexuality, addresses the "invention" of homo/heterosexuality, and examines the social, legal, representational, and political systems that define sexual (ab)normality. Topics include contemporary issues of sexual orientation, sexuality in relation to gender, race and class, pornography, intersex issues, drag, and Queer culture. [GM1]

Prerequisite: WGS 101. Instructor: Armstrong.

WGS 353 - Single Motherhood (Community-Based Learning Course)
This course examines the cultural ideologies, institutions, and public policies that affect single women's experience of motherhood, with particular attention to the challenges faced by teenage and low-income single mothers. This is a community-based learning and research seminar; outside of class time, students will interact regularly with local teen moms, families living in transitional housing shelters, and/or non-profit agencies that support these women and their children-then engage in collaborative research or activist projects designed to support these members of the Easton community. [GM1]

Prerequisite: At least one WGS course or WGS elective, or permission of instructor. Instructor: Byrd.

WGS 370-379 - Special Topics Seminar in Women's and Gender Studies
These advanced interdisciplinary seminars explore issues of special interest to WGS faculty and students.

Instructor: Staff.

WGS 380-381 - Internship in Women's and Gender Studies
This course gives students the opportunity to apply scholarship in the field of feminist and gender studies to complex problems in the local community. Students work 8-10 hours at their placement (newspapers, hospitals, teen centers, shelters, etc.) regularly submit reflective journals to the supervising WGS faculty member, and write a final paper in which they analyze and assess the semester's work.

Prerequisite: Two WGS or cross-listed courses or permission of the WGS Program Chair. Instructor: Staff.

WGS 390-391 - Independent Study in Women's and Gender Studies
This course provides an opportunity for students to explore a topic in depth through the lens of feminist and gender theory. The student meets regularly with the supervising WGS faculty member to select and discuss relevant readings and to design an ambitious research project, generally one that culminates in a carefully researched paper.

Prerequisite: Two WGS or cross-listed courses or permission of the WGS Program Chair. Instructor: Staff.

WGS 495-496 - Thesis
Guided by faculty affiliated with Women's and Gender Studies Program, the student writes a thesis in a specialized aspect of the interdiscipline. If the student's project is deemed to be of sufficient quality at the end of the first semester (WGS 495), the student may complete honors in WGS (WGS 496) in the second semester. [One W credit only upon completion of both 495 and 496]

Prerequisite: Open to qualified students by permission of program chair. Instructor: Staff.

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(as of academic year 2017-18)

AFRICANA STUDIES

Wendy Wilson-Fall 2012
B.F.A. (Howard), M.A. (Ahmadu Bello University), Ph.D. (Howard)
Associate Professor and Chair of Africana Studies Program

ANTHROPOLOGY AND SOCIOLOGY

David H.P. Shulman 1997
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B.A. (Smith), M.A., Ph.D. (Johns Hopkins)
Associate Professor

Joaquín Gómez-Miñambres 2017
B.Sc. (Salamanca), M.Sc., Ph.D. (University Carlos III - Madrid)
Assistant Professor

Amy Y. Guisinger 2016
B.A. (Boston), M.A., Ph.D. (George Washington)
Assistant Professor

Matthew F. Larsen 2015
B.A. (California-San Diego) M.A., Ph.D. (California-Davis)
Assistant Professor

Hongxing Liu 2017
B.A. (Ocean University), M.S., Ph.D. (Ohio State)
Assistant Professor

Olena Ogrokhina 2013
B.A. (NOVI University), BA (KROK University), M.A. (University of Kyiv), Ph.D. (University of Houston)
Assistant Professor

ELECTRICAL AND COMPUTER ENGINEERING

Ismail I. Jouny 1990
B.S. (Beirut), M.S., Ph.D. (Ohio State)
Charles A. Dana Professor of Electrical and Computer Engineering

John A. Nestor 2000
B.E.E. (Georgia Institute of Technology), M.S.E.E., Ph.D. (Carnegie Mellon)
Professor

Jon W. Wallace Sem. II, 2015
B.S., Ph.D. (Brigham Young)
Associate Professor

Todd A. Wey 2004
B.S.E.E. (Rose-Hulman), M.S.E.E. (Texas-Dallas), Ph.D. (Purdue)
Associate Professor

Yih-Choung Yu 2001
B.S. (Chinese Culture University), M.S. (SUNY-Binghamton), Ph.D. (Pittsburgh)
Associate Professor, Head of the Department, and Chair of Biotechnology/Bioengineering Program

Matthew Watkins 2015
B.S. (University at Buffalo), M.S., Ph.D. (Cornell)
Assistant Professor

ENGINEERING STUDIES

Benjamin R. Cohen 2011
B.A., B.S., M.S., Ph.D. (Virginia Tech)
Associate Professor

Julia F. Nicodemus Sem. II, 2012
B.S. (Grinnell), M.S. (CUNY-Brooklyn), M.S., Ph.D. (Minnesota)
Assistant Professor

ENGLISH

Mary A. Armstrong 2009
B.A. (Holy Cross), M.A., Ph.D. (Duke)

Charles A. Dana Professor of Women's and Gender

Studies and English,

and Chair of Women's and Gender Studies Program

Paul A. Cefalu 1998
B.A. (Johns Hopkins), M.A., Ph.D. (Chicago)
Frank Lee and Edna M. Smith Professor of English

Ian D. Smith 1991
B.A. (University of the West Indies), Licence de Lettres, Maîtrise de Lettres (Paris), Ph.D. (Columbia)
Richard H., Jr. '60 and Joan K. Sell Professor of the Humanities

Lee Upton 1988
B.A. (Michigan State), M.F.A. (Massachusetts), Ph.D. (SUNY-Binghamton)
Francis A. March Professor of English and Writer-in-Residence

Alison R. Byerly 2013
B.A. (Wellesley), M.A., Ph.D. (Pennsylvania)
Professor and President of the College

Deborah L. Byrd 1981
B.A. (Duke), M.A., Ph.D. (Emory)
Professor and Associate Head of the Department

Patricia A. Donahue 1985
B.A. (Redlands), M.A., Ph.D. (California-Irvine)
Professor and Head of the Department

Steven W. Belletto 2006
B.A. (Sonoma State), M.A., Ph.D. (Wisconsin-Madison)
Associate Professor

Bianca M. Falbo 1998
B.A. (Swarthmore), M.A., Ph.D. (Pittsburgh)
Associate Professor and Director of College Writing Program

Timothy P. Laquintano 2010
B.A. (Pittsburgh), M.A. (Rutgers), Ph.D. (Wisconsin-Madison)
Associate Professor

Alix Ohlin 2004
B.A. (Harvard), M.F.A. (Texas-Austin)
Associate Professor

Christopher N. Phillips 2007
B.A. (Westmont), M.A., Ph.D. (Stanford)
Associate Professor

Carrie L. Rohman 2008
B.A. (Dayton), M.A., Ph.D. (Indiana)
Associate Professor

Megan Fernandes 2015
B.A. (Delaware), M.A. (California-Santa Barbara), M.F.A. (Boston), Ph.D. (California-Santa Barbara)
Assistant Professor

Randi Gill-Sadler 2017
B.A. (Gardner-Webb University), M.A., Ph.D. (University of Florida)
Assistant Professor

Walter Wadiak 2016
A.B. (Illinois Wesleyan), M.A., Ph.D. (California-Irvine)
Assistant Professor

ENVIRONMENTAL STUDIES

Andrea Armstrong 2015
B.S., M.S. (Cornell), Ph.D. (Utah State)
Assistant Professor

FILM AND MEDIA STUDIES

Nandini Sikand 2010
B.A. (Delhi University), M.A. (Northern Illinois), Ph.D. (CUNY)
Associate Professor

Andrew M. Smith 2001
B.A. (Hamline), M.A. Ph.D. (University of New Mexico)
Associate Professor and Chair of the Program

Katherine E. Groo 2016
B.A. (Emory), M.A., Ph.D. (Cornell)
Assistant Professor

FOREIGN LANGUAGES AND LITERATURES

Olga Anna Duhl 1992
M.A. (University of Clug-Napoca, Romania), Ph.D. (Rutgers)
Oliver Edwin Williams Professor of Languages and co-Chair of Medieval, Renaissance, and Early Modern Studies Program

Michelle C. Geoffrion-Vinci 1998
B.A. (Wellesley), M.A., Ph.D. (Stanford)
Professor and Head of the Department

Roxanne E. Lalande 1982
B.A., M.A., Ed.S., Ph.D. (Iowa)
Professor

Margarete B. Lamb-Faffelberger 1992
B.S. (Pedagogische Academie, Austria), M.A. (Illinois), Ph.D. (Rice)

Professor

George M. Rosa 1986
B.A. (California-Los Angeles), D.Phil. (Oxford)
Professor

Sidney E. Donnell 1994
B.A. (Texas-Austin), M.A., Ph.D. (Pennsylvania)
Associate Professor

Markus C. Dubischar 2008
M.A. (Universität Heidelberg), D. Phil. (Universität Greifswald)
Associate Professor, Assistant Head of the Department, and Chair of Classical Civilization Studies Program

Amauri F. Gutiérrez Coto 2017
B.A. (Universidade La Habana, Cuba), M.A. (New Mexico State), Ph.D. (University of Arizona-Tucson)
Assistant Professor

Daniel Quirós 2012
B.A. (Santa Clara), M.A., Ph.D. (California-San Diego)
Assistant Professor

Olga Rodríguez-Ulloa 2017
B.A. (Pontifical Catholic University of Peru), M.A., M.Phil., Ph.D. (Columbia)
Assistant Professor

Katherine O. Stafford 2017
B.A. (California-Davis), M.A. (Stanford), Ph.D. (California-Davis)
Assistant Professor

Li Yang 2010
B.A. (Peking University), M.A., Ph.D. (University of Texas-Austin)
Assistant Professor

GEOLOGY AND ENVIRONMENTAL GEOSCIENCES

Dru Germanoski 1987
B.S. (Pennsylvania State), M.S. (Southern Illinois), Ph.D. (Colorado State)
Dr. Ervin R. VanArtsdalen '35 Professor of Geology and Co-Chair of Environmental Science and Studies Program

Kira T. Lawrence 2006
A.B. (Dartmouth), M.S. (California-Santa Cruz), Ph.D. (Brown)
Professor and Head of the Department

Lawrence L. Malinconico, Jr. 1989
A.B., M.S., Ph.D. (Dartmouth)
Associate Professor and Director of the Technology Clinic

David F. Sunderlin 2006
B.A. (Colgate), Ph.D. (Chicago)
Associate Professor

Tamara L. Carley 2014
B.A. (Whitman College), M.S., Ph.D. (Vanderbilt)
Assistant Professor

GOVERNMENT AND LAW

John Kincaid 1994
B.A. (Temple), M.A. (Wisconsin- Milwaukee), Ph.D. (Temple)
Robert B. and Helen S. Meyner Professor of Government and Public Service; and Director of the Meyner Center for the Study of State and Local Government

Bruce A. Murphy 1998
B.A. (Massachusetts-Amherst), Ph.D. (Virginia)
Fred Morgan Kirby Professor of Civil Rights

Ilan Peleg 1974
B.A., M.A. (Tel Aviv), M.A., Ph.D. (Northwestern)
Charles A. Dana Professor of Government and Law

Katalin Fábián 2000
University Diploma (University of Economics, Budapest), M.A. (Notre Dame), Ph.D. (Syracuse University)
Professor

Joshua I. Miller 1986
B.A. (California-Santa Cruz), M.A., Ph.D. (Princeton)
Professor

Helena Silverstein 1992
B.A. (Pennsylvania), M.A., Ph.D. (University of Washington)
Professor and Head of the Department

Hannah W. Stewart-Gambino 2007
B.A. (Converse College), M.A., Ph.D. (Duke)
Professor

Seo-Hyun Park 2009
B.A., M.A. (Yonsei University), Ph.D. (Cornell)
Associate Professor

Il Hyun Cho 2013

B.A.(Chung-Ang University), M.International Studies (Yonsei University), MA, Ph.D. (Cornell)
Assistant Professor

Andrew J. Clark 2017
B.A. (Bucknell), M.A., Ph.D. (University of Virginia)
Assistant Professor

Michael S. Feola 2011
B.A. (University of Richmond), M.A., Ph.D. (California, Berkeley)
Assistant Professor

Mallory E. SoRelle 2016
B.A. (Smith), M.P.P. (Harvard), M.A. (Cornell)

Assistant Professor

Brandon P. Van Dyck 2013
B.A. (Princeton), M.Phil. (Cambridge), Ph.D. (Harvard)
Assistant Professor

HISTORY

Andrew C. Fix 1985
B.A. (Wake Forest), M.A., Ph.D. (Indiana)
Charles A. Dana Professor of History

Donald C. Jackson 1989
B.S. (Swarthmore), M.A., Ph.D. (Pennsylvania)
Cornelia F. Hugel Professor of History

Donald L. Miller 1977

B.A. (St. Vincent's), M.A. (Ohio), Ph.D. (Maryland)
John Henry MacCracken Professor of History

Deborah A. Rosen 1990
A.B. (Princeton), J.D. (Boston University School of Law), M.A. (New York University), Ph.D. (Columbia)
David M. '70 and Linda Roth Professor of History

Robert I. Weiner 1969
B.A. (Temple), M.A., Ph.D. (Rutgers)
Thomas Roy and Lura Forrest Jones Professor of History

Paul D. Barclay 1999
B.S. (University of Wisconsin-Madison), M.A., Ph.D. (University of Minnesota)
Professor and Chair of Asian Studies Program

Joshua A. Sanborn 1999
B.A. (Stanford), Ph.D. (University of Chicago)
Professor and Head of the Department

Christopher J. Lee 2016
B.A. (Bowdoin), M.A., Ph.D. (Stanford)
Associate Professor

Rebekah E. Pite 2007
B.A. (Amherst), Ph.D. (University of Michigan)
Associate Professor

Rachel E. Goshgarian 2011
B.A. (Wellesley), A.M., Ph.D. (Harvard)
Assistant Professor

Jeremy B. Zallen 2014
B.A. (Stanford), A.M., Ph.D. (Harvard)
Assistant Professor

Hafsa Kanjwal 2017
B.S. (Georgetown), Ph.D. (University of Michigan)
Instructor

MATHEMATICS

Gary P. Gordon 1986
B.S. (Florida), Ph.D. (North Carolina)
Marshall R. Metzgar Professor of Mathematics and Head of the Department

John E. Meier 1992
B.A. (Virginia), M.S., Ph.D. (Cornell)
David M. '70 and Linda Roth Professor of Mathematics

Lorenzo Traldi 1980
B.A. (Queens-New York), Ph.D. (Yale)
Marshall R. Metzgar Professor of Mathematics

Ethan J. Berkove 1999
B.S. (University of Michigan-Ann Arbor), M.A., Ph.D. (University of Wisconsin-Madison)
Professor

Justin J. Corvino 2004
B.S. (MIT), M.S., Ph.D. (Stanford)
Professor

Evan D. Fisher 1986
B.A. (Rochester), M.S. Ph.D. (Illinois)
Professor

L. Thomas Hill 1979
B.S. (North Carolina State), Ph.D. (Virginia)
Professor

Chawne M. Kimber 2000
B.S. (University of Florida), M.S. (UNC-Chapel Hill), Ph.D. (University of Florida)
Professor, Associate Head of the Department, and Director of the Center for the Integration of Teaching, Learning, and Scholarship

Elizabeth W. McMahon 1986
A.B. (Mount Holyoke), M.S. (Michigan), Ph.D. (North Carolina)
Professor

Clifford A. Reiter 1983
B.S. (Bucknell), M.S. (Rutgers), Ph.D. (Pennsylvania State)
Professor

Robert G. Root 1991
A.B. (Vassar), M.A. (Johns Hopkins), Ph.D. (Delaware)
Professor

Qin Lu 1999
B.S. (Tsinghua University, China), Ph.D. (Ohio State)
Associate Professor

Derek A. Smith 1999
B.S. (North Carolina State), M.A., Ph.D. (Princeton)
Associate Professor

Thomas R. Yuster 1983
B.S. (Stanford), M.A., Ph.D. (Wisconsin)
Associate Professor

Louis P. Zulli 1999
B.S. (SUNY-Stony Brook), M.S., Ph.D. (Cornell)
Associate Professor

Jonathan S. Bloom 2015
B.A. (Colgate), M.S. (California-San Diego), M.S. (California-Berkeley), Ph.D. (Dartmouth)
Assistant Professor

Trent Gaugler 2014
B.S. (Bucknell), Ph.D. (Penn State)
Assistant Professor

Jeffrey P. Liebner 2011
B.S. (Canisius College),M.S., Ph.D. (Carnegie Mellon)
Assistant Professor

Ying Zhou 2016
B.S. (Fudan University), M.S. (University of Miami), Ph.D. (University of Washington)
Assistant Professor

MECHANICAL ENGINEERING

Leonard A. Van Gulick 1974-77, 1981
B.S. (Newark College of Engineering), M.A., M.S., Ph.D. (Princeton)
Matthew Baird Professor of Mechanical Engineering, P.E. (Pennsylvania)

Scott R. Hummel 1998

B.S. (Hartford), M.S. (Stevens Institute of Technology), Ph.D. (Lehigh)
Professor and William A. Jeffers Director of the Engineering Division

Steven M. Nesbit 1990
B.S., M.S., Ph.D. (West Virginia)
Professor, P.E. (Pennsylvania)

Jeffrey D. Helm 2002
B.S., M.S., Ph.D. (University of South Carolina)
Associate Professor

Jennifer S. Rossmann 2005
B.S., Ph.D. (UCLA-Berkeley)

Associate Professor and Head of the Department

Daniel R. Sabatino 2009
B.S. (Pennsylvania State), M.S., Ph.D. (Lehigh)
Associate Professor

Karl A. Seeler 1989
S.B.C.E., S.M.C.E., S.M.M.E., Ph.D. (Massachusetts Institute of Technology)
Associate Professor, P.E. (Pennsylvania)

Joshua H. Smith 2007
B.S. (Bucknell), M.S., Ph.D. (University of Virginia)
Associate Professor and Chair of Engineering/International Studies Program

Alexander A. Brown 2015
B.S., M.S., Ph.D. (Pennsylvania State)
Assistant Professor

Tobias Rossmann 2012
B.S. (California, Berkeley), M.S., Ph.D. (Stanford)
Assistant Professor

Brent Utter 2015
B.S. (Lafayette), M.S., Ph.D. (Michigan-Ann Arbor)
Assistant Professor

Rachel S. Koh 2017
B.S. (University of Vermont), Ph.D. (Massachusetts-Amherst)
Instructor

MUSIC

Anthony M. Cummings 2006
B.A. (Williams), M.F.A., Ph.D. (Princeton)
Professor and Chair of Italian Studies Program

J. Larry Stockton 1977
B.S., M.M.E. (Western Carolina), D.M.A. (Temple)
Professor and Head of the Department

Jennifer W. Kelly 2006
B.A., M.M., D.M.A. (California-Los Angeles)
Associate Professor and Director of the Arts

Kirk D. O'Riordan 2009
B.S (Indiana), M.M. (Bowling Green State), M.M. (Denver), D.M.A. (Arizona State)
Associate Professor

George Torres 2004
B.F.A. (California Institute of the Arts), M.A., Ph.D. (Cornell)
Associate Professor

Walter R. Wilkins, III 2001
A.B. (College of the Holy Cross), M.M. (University of Northern Colorado)
Associate Professor

NEUROSCIENCE

Tamara M. Stawicki 2017
B.A. (Rutgers), Ph.D. (California-San Diego)
Assistant Professor

PHILOSOPHY

George E. Panichas 1980
B.A. (Rhode Island), M.A., Ph.D. (Arizona)
James Renwick Hogg Professor of Mental and Moral Philosophy, and Head of the Department

Peter A. Gildenhuys 2009
B.A. (University of Western Ontario), M.A. (Toronto), M.A. (Northwestern), Ph.D. (Pittsburgh)
Associate Professor

Alessandro Giovannelli 2006
Laurea (University of Florence), M.A. (Yale), M.A., Ph.D. (Maryland)
Associate Professor

Meghan B. Masto 2009
B.S., B.A. (Lafayette), Ph.D. (Massachusetts-Amherst)
Associate Professor

J. Owen McLeod 1998
B.A. (King's College, London), M.A. (University of Washington), Ph.D. (Massachusetts-Amherst)
Associate Professor

Joseph H. Shieber 2003
B.A. (Yale), A.M., Ph.D. (Brown)
Associate Professor

PHYSICS

G. Lyle Hoffman 1983
B.A. (Dartmouth), M.Sc., Ph.D. (Cornell)
Professor

Bradley C. Antanaitis 1984
A.B. (Northeastern), Ph.D. (Columbia)
Associate Professor

Andrew J. Dougherty 1990
B.S. (St. Joseph's), Ph.D. (Pennsylvania)
Associate Professor

David J. Nice 2010
B.S. (California Institute of Technology), M.A., Ph.D. (Princeton)
Associate Professor and Head of the Department

Zoe A. Boekelheide 2013
B.S. (Harvey Mudd), M.A., Ph.D. (California, Berkeley)
Assistant Professor

Brooks D. Thomas 2016
B.A. (Macalester), M.S., Ph.D. (University of Michigan)
Assistant Professor

PSYCHOLOGY

Susan A. Basow 1977
B.A. (Douglass), M.A., Ph.D. (Brandeis)
Charles A. Dana Professor of Psychology

Jamila Bookwala 2001
B.A. (University of Bombay), M.A. (City College of New York), M.S., Ph.D. (University of Pittsburgh)
P*rofessor and Dean of Curriculum and Research*

Andrew J. Vinchur 1989
B.A. (Rutgers), M.S., Ph.D. (Memphis State)
Professor and Acting Head of the Department

Robert W. Allan 1991
B.S. (Brigham Young), Ph.D. (New York University)
Associate Professor

Lisa A. Gabel 2007
B.S. (Allegheny College), M.A., M.S.,Ph.D. (University of Connecticut)
A*ssociate Professor*

Luis F. Schettino 2009
B.A. (Universidad Autonoma Metropolitana), M.S., Ph.D. (Rutgers)
Associate Professor and Chair of Neuroscience Program

John S. Shaw, III 1997
B.A. (Vanderbilt), J.D. (Stanford Law School), M.A., Ph.D. (California-Los Angeles)
Associate Professor and Head of the Department

Jennifer M. Talarico 2006
B.A. (Michigan), M.A., Ph.D. (Duke)
Associate Professor and Assistant Head of the Department

Angela C. Bell 2017
B.A. (California State), M.S., Ph.D. (Oklahoma State)
Assistant Professor

Lauren J. Myers 2011
B.A. (Furman), M.S., Ph.D. (Pennsylvania State)
Assistant Professor

Michael A. Nees 2011
B.A. (De Pauw), M.S., Ph.D. (Georgia Institute of Technology)
Assistant Professor

Michelle L. Tomaszycki 2015
A.B. (Michigan-Ann Arbor), M.A., Ph.D. (Emory)
Assistant Professor

Susan J. Wenze 2014
B.A. (Cornell), M.A., Ph.D. (American University)
Assistant Professor

RUSSIAN AND EAST EUROPEAN STUDIES

Lindsay Marie Ceballos 2017
B.A. (Wesleyan), M.A., Ph.D. (Princeton)
Assistant Professor

RELIGIOUS STUDIES

Eric J. Ziolkowski 1988
B.A. (Dartmouth), M.A., Ph.D. (Chicago)
Helen H.P. Manson Professor of the English Bible, Head of the Department, and co-Chair of Medieval, Renaissance, and Early Modern Studies Program

Robin C. Rinehart 1991
B.A., M.A. (University of Washington), Ph.D. (Pennsylvania)
Professor, Dean of the Faculty, and Chief Diversity Officer

Brett B. Hendrickson 2011
B.A. (Columbia), M.Div. (Austin Presbyterian Theological Seminary), Ph.D. (Arizona State, Tempe)
Associate Professor

Robert W. Blunt 2011
B.A. (Lewis and Clark), M.A. (Graduate Theological Union), M.A., Ph.D. (University of Chicago)
Assistant Professor

Jessica Carr 2014
B.A., M.A. (Florida State), Ph.D. (Indiana)
Assistant Professor

Youshaa Patel 2013
B.A. (Michigan, Ann Arbor), M.Phil, Ph.D. (Duke)
Assistant Professor

THEATER

Suzanne R. Westfall 1986
B.A. (Southeastern Massachusetts), M.A., Ph.D. (Toronto)
Professor and Head of the Department

Michael C. O'Neill 1992
A.B. (Fordham), M.A., Ph.D. (Purdue)
Associate Professor

Mary Jo M. Lodge 2006
B.M. (Catholic), M.A. (Villanova), Ph.D. (Bowling Green)
Associate Professor

WOMEN'S AND GENDER STUDIES

Mary A. Armstrong 2009
B.A. (Holy Cross), M.A., Ph.D. (Duke)
Charles A. Dana Professor of Women's and Gender Studies and English, and Chair of Women's and Gender Studies Program

LIBRARY

Kylie T. Bailin 2012
B.A. (Eckerd), M.E.M. (University of New South Wales); M.A.S. (Charles Sturt University)
Director, Outreach and Access Services

John H. Clark 2014
B.A. (Maine), M.S. (Pennsylvania State), M.L.I.S (Pittsburgh)
Data Visualization and GIS Librarian

Terese A. Heidenwolf 1992
B.A. (Notre Dame), M.I.L.S. (Michigan)

Director of Research and Instructional Services

Anne Houston 2017
B.A. (University of Virginia), M.A. (Duquesne), M.L.S. (University of Michigan)
Dean of Libraries

Benjamin G. Jahre 2014
B.A. (Lehigh), M.S.L.S. (UNC-Chapel Hill)
Research and Instruction Librarian

Ana Ramirez Luhrs 2008
B.A. (Fairleigh Dickinson), M.L.I.S. (Rutgers)
Librarian, Kirby Library

Pamela A. Murray 2014
B.A. (University of Massachusetts), M.S.I.S. (University of Albany)
Rare Books Cataloger/Metadata Librarian

Joel V. Pearce 2014
B.A. (Grove City College), M.A. (Old Dominion), M.S.L.S. (Clarion)
Head of Technical Services

Diane W. Shaw 1985
B.A., M.L.S. (Emory)
Director for Special Collections and College Archives

Elaine M. Stomber 2011
B.A. (Lafayette)
Associate College Archivist

Lijuan Xu 2003
B.A.L.S. (Wuhan University), M.L.S. (Clarion)
Associate Director for Research and Instruction Coordinator

FACULTY EMERITI

Dan F. Bauer 1972-2010
A.B. (San Jose Sate College), Ph.D. (University of Rochester)
Professor Emeritus of Anthropology and Sociology

Thomas H. Bruggink 1978- 2013
A.B. (Hope), M.A., Ph.D. (Illinois)
Professor Emeritus of Economics

Jean-Pierre Cap 1968-99
B.A., M.A. (Temple), M.A. (Pennsylvania), Ph.D. (Rutgers)
Oliver Edwin Williams Professor Emeritus of Languages

Wallace M. Catanach, Jr. 1959-92
B.S. in Ag.E. (Pennsylvania State), M.S. in M.E. (Bradley), Ph.D. (Lehigh)
Associate Professor Emeritus of Mechanical Engineering

Donald R. Chambers 1992-2017
B.S. (SUNY-Binghamton), Ph.D. (North Carolina)
Walter E. Hanson/KPMG Peat Marwick Professor Emeritus of Business and Finance

Robert S. Chase, Jr. 1958-96
A.B. (Haverford), M.A. (Arkansas), Ph.D. (Bryn Mawr)
Charles A. Dana Professor Emeritus of Biology

Alan W. Childs 1980-2017
B.A. (Maryville), Ph.D. (Tennessee)
Professor Emeritus of Psychology

Robert L. Cohn 1987-2014
B.A. (Northwestern), A.M., Ph.D. (Stanford)
Philip and Muriel Berman Chair Emeritus of Jewish Studies

William J. Collins 1990-2011
B.A., M.A. (Boston College), M.S., Ph.D. (Purdue)
Associate Professor Emeritus of Computer Science

David S. Crockett III 1959-96
A.B. (Colby), M.S., Ph.D. (New Hampshire)
Professor Emeritus of Chemistry

George E. Davidson 1965-90
A.B. (Lafayette), M.A. (Lehigh)
Instructor Emeritus of Athletics and Physical Education

Helen V. Dungan 1969-2011
B.S. (Kutztown), M.S.L.S. (Drexell)
Librarian Emerita

Patricia M. Fisher 1980-2002
B.S. (East Stroudsburg)
Instructor Emerita of Athletics and Physical Education

Bernard Fried 1963-2000
A.B. (New York University), M.S. (New Hampshire), Ph.D. (Connecticut)
Gideon R., Jr., and Alice L. Kreider Professor Emeritus of Biology

Howard F. Gallup 1958-95
B.A. (Rutgers), M.A. Ph.D. (Pennsylvania)
Professor Emeritus of Psychology

Edward N. Gamber 1992-2015
B.A. (Towson State), M.A., Ph.D. (Virginia Polytechnic)
David M. '70 and Linda Roth Professor Emeritus of Economics

Ann Gold 1982-2007
B.S. (Ursinus)
Instructor Emerita of Athletics and Physical Education

John F. Greco 1977-2014
B.E., M.E., Ph.D. (City College of New York)
Professor Emeritus of Electrical and Computer Engineering

Warren J. Guy 1964-98
B.S. (Drexel), M.A. (Temple), Sc.D. (Newark College of Engineering)
Charles A. Dana Professor Emeritus of Electrical Engineering

Jerome F. Heavey 1973-2015
B.S. (St. Joseph's), M.A., Ph.D. (Pennsylvania State)
Professor Emeritus of Economics

Wendy L. Hill 1989-2014
B.S. (Douglass), Ph.D. (University of Washington)

William C. '67 and Pamela H. Rappolt Professor Emerita in Neuroscience

Harold M. Hochman 1992-2003
B.A., M.A., Ph.D. (Yale)
William E. Simon Professor Emeritus of Economics

David L. Hogenboom 1965-2000
B.A. (Wooster), M.S., Ph.D. (Pennsylvania State)
Marshall R. Metzger Professor Emeritus of Physics

Curlee R. Holton 1991-2017
B.F.A. (Cleveland Institute of Art), M.F.A. (Kent State)
David M. '70 and Linda Roth Professor Emeritus of Art

Charles W. Holliday 1982-2012
B.S. (Marietta), Ph.D. (Oregon)
Professor Emeritus of Biology

William A. Hornfeck 1988-2015
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Equity in Athletics Disclosure Act (EADA) Statement: In response to federal law, the "Equity in Athletics Disclosure Act" (EADA), Lafayette has prepared an annual report covering the prior year which contains financial information, rates of participation, and other data related to women's and men's athletic programs. A copy of this report will be available for review after October 1st on the web at http://ope.ed.gov/athletics/ or http://www.goleopards.com/compliance/lafa-compliance.html. In accordance with the law, Lafayette is informing all students and potential students of the availability of the information contained in the report, and will provide a copy of the EADA Report to students, potential students, and the public, upon their request.

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