
The Curriculum

Degrees Offered

ST. LAWRENCE OFFERS undergraduate Bachelor of Arts and Bachelor of Science degrees.

The degree of Bachelor of Arts is given on the satisfactory completion of programs of study with concentration in the fields of anthropology, African studies (combined major), art and art history, Asian studies (combined major), business in the liberal arts (offered as a second major only), Canadian studies (combined major), economics, economics–mathematics, English, environmental studies, environmental studies (combined major), estudios Hispánicos, francophone studies, global studies, government, history, international economics–language (combined major), multi-language, music, performance and communication arts, philosophy, religious studies and sociology, or a multi-field program with concentration in two or more of these fields.

The degree of Bachelor of Science is given on the satisfactory completion of programs of study with concentration in the fields of biology, biology–physics, biochemistry, chemistry, computer science, conservation biology, economics–mathematics, environmental studies (combined), geology, geology–physics, mathematics, neuroscience, physics and psychology, statistics, or a multi-field program with concentration in two or more of these fields.

Either the Bachelor of Arts or Bachelor of Science degree may be elected upon satisfactory completion of a double major if one of the majors is appropriate to the degree. A multi-field major may elect either the degree of Bachelor of Arts or Bachelor of Science when the major consists of two fields and each is appropriate to a different degree.

Inquiries for information concerning the degree of Master of Education should be directed to the chair of the education department.

The St. Lawrence Curriculum

A St. Lawrence education prepares students to think critically and creatively, to examine and express their ideas and values, to understand those whose beliefs and circumstances may be different from their own, and to pursue an understanding of the natural world and human experience. A St. Lawrence education encourages and develops within students the virtues important for lifelong learning, such as inquisitiveness, perceptiveness, intellectual honesty and humility, fair consideration of evidence, respectful treatment of those with whom one is in dialog, and a commitment to the free exchange of ideas. These virtues promote within students a personal ethic of considered values and the capacity to fully realize their abilities as people and local, national, and global citizens. As part of a St. Lawrence education, all students should develop knowledge of the importance of cultural, natural, political, and socio-economic systems in shaping one another.

To realize this vision, a St. Lawrence education is designed to develop:

- 1) an ability to speak and write clearly, articulately, and persuasively;
- 2) an ability to acquire, evaluate, and communicate information;
- 3) an ability to analyze and resolve complex problems, both independently and collaboratively;

- 4) an ability to reason quantitatively, logically, and/or symbolically;
- 5) an ability to integrate knowledge from multiple perspectives;
- 6) an ability to critique and/or create artistic works;
- 7) a knowledge of the complexity and diversity of the human experience;
- 8) a knowledge of the complexity and diversity of the natural world; and
- 9) a depth of understanding in at least one field.

Graduation Requirements

All students must complete thirty-three and a half semester course units (33.5), including all requirements specified for their chosen major(s), and a curriculum of general education requirements specific to their year of matriculation. Also required are a 2.0 cumulative grade point average (GPA) overall and in the major and minor, based on St. Lawrence University courses only. These requirements are ordinarily earned in four academic years. The normal course load is four units per semester except for an additional half unit as required by the First-Year Program during the two semesters of the first year. Though the normal semester course load is four units a student may need to take more than four units in a semester to fulfill graduation requirements. It is the student's responsibility to ensure they satisfy the thirty-three and a half semester course units required. Each full unit is equivalent to 3.6 semester hours.

All students declare a major by the end of the sophomore year. In addition to the major, students must successfully complete a curriculum of general education requirements, the First-Year Program requirement and the writing competency requirement, whose descriptions follow.

General Education Requirements for Students Matriculating Prior to Fall 2013

Distribution Requirements

The registrar maintains a list of courses that fulfill distribution areas. The courses are identified each semester in the published list of available sections.

Students must complete the following distribution requirements. These are abbreviated descriptions of the distribution categories; the complete faculty-approved policy statement is filed in the registrar's office.

Arts/Expression. An approved course that provides active learning through creative expression.

Humanities. One course approved as involving critical interpretation of traditional and contemporary works of literature, history, political thought, philosophy, religious studies and the arts, both visual and performing.

Social Science. An approved course that provides an awareness of how economic, political and social institutions can be organized, evidence about them analyzed and social science knowledge generated.

Mathematics or Foreign Language. An approved course that either develops quantitative reasoning and analytical thought or provides knowledge of a foreign language and understanding of a foreign culture.

Natural Science/Science Studies. Two courses approved as providing a foundation in the natural sciences and the interplay between science and society. One of the two courses must include a laboratory.

Courses meeting the above distribution requirements must include courses from six different departments or programs. A course can meet only one of the above distribution requirements.

Diversity Requirements

Students must take two courses from two different departments or programs approved as engaging participants in the critical study of sameness and difference, including diverse social and cultural practices and beliefs, either within or outside the United States. Courses meeting the diversity requirement may also be counted toward other major and minor requirements, but not toward First-Year Program/First-Year Seminar requirements. Participation in an approved program of study abroad during the fall or spring semester will satisfy one diversity course requirement. Study abroad may fulfill only one diversity requirement.

General Education Requirements for Students Matriculating After Fall 2013

I. Complete the Requirements of a Major

II. General Education Requirements

A. FYP

B. FYS

C. The Human Experience and the Natural World

Students are required to complete at least one unit from each of the following perspectives:

The Arts, Social Sciences, Humanities, and Natural Sciences. Courses fulfilling this requirement need to be from different departments and only one course may be from the student's major. FYS courses can be used to fulfill this requirement; FYP courses cannot. The instructor of record designates the perspective of her/his course using the guideline that at least 75 percent of the course's content achieves the learning goals for The Arts, Social Sciences, Humanities, or Natural Sciences, as described below (Not all courses have to fulfill this requirement and be designated as ARTS, SS, HU, or NS-L):

1. **The Arts (ARTS):** *Courses have primary learning goals in which students develop:*

- a. an enhanced awareness of the process of artistic production through making works of art; and/or
- b. an understanding of the diverse ways to interpret and analyze works of art.

2. **Social Sciences (SS):** *Courses have primary learning goals in which students develop:*

- a. an enhanced awareness of the diverse ways in which economic, political, and social institutions can be organized; and/or
- b. an understanding of the various ways in which evidence about social structures and interactions is acquired and handled; and/or
- c. an understanding of how social science knowledge is gained through the formulation, testing, and reformulation of theories and hypotheses.

3. **Humanities (HU):** *Courses have primary learning goals in which students develop:*

- a. an enhanced awareness of the variety of ways humans understand, signify, and make meaning of their lives; and/or
- b. an enhanced awareness of how cultures and the interpretations of cultures change over time.

4. **Natural Science with Lab (NS-L):**

Courses have primary learning goals in which students develop:

- a. an understanding of the physical, chemical, biological, and/or behavioral phenomena of the natural world and, insofar as possible, an ability to relate them to everyday experience; and
- b. a theoretical and quantitative understanding of the processes underlying the physical, chemical, biological, and/or behavioral phenomena of the natural world; and
- c. an understanding of how scientific knowledge of the natural world is obtained and revised through hypothesis testing using experimental and/or observational methodologies.

In addition, Natural Science Lab Courses are required to include a regularly scheduled laboratory component that meets weekly for at least 90 minutes, in which students have the opportunity to examine phenomena of the natural world using experimental and/or observational methods.

D. **Human Diversity: Culture and Communication**

Students are required to complete one of the following combinations in human diversity and communication:

1. **One course approved for diversity credit (DIV13) and one course in a foreign language (LANG).**
2. **Two courses approved for diversity credit (DIV13).**
3. **One course approved for diversity credit (DIV13) and an experience on an off-campus program approved for diversity credit by the Academic Affairs committee.**

The Academic Affairs committee will approve courses for DIV13 credit. Courses that fulfill the DIV13 requirement may also fulfill other general education requirements. FYS courses may be approved for DIV13 or LANG credit; FYP courses cannot. DIV13 courses are at least one unit and include primary learning goals in which students develop:

- a. an understanding of the nature and significance of diversity within and among groups; and
- b. an understanding of the dynamics of power and justice within and/or among groups or societies; and
- c. a capacity for critical self-reflection on social location, including how social location shapes human interactions.

The Academic Affairs committee will approve courses for LANG credit. LANG courses that fulfill the LANG requirement may also fulfill other general education requirements. LANG courses are at least one unit and include primary learning goals in which students:

- a. learn the skills necessary for communication in another language: reading, listening, writing and speaking; and
- b. are introduced to the different cultures in which these languages are employed; and
- c. are exposed to global diversity and encouraged to develop a critical perspective on their own cultural practices.

E. Quantitative/Logical Reasoning (QLR)

Students are required to complete at least one unit that meets the learning goals of either quantitative reasoning or logical reasoning courses. Courses that fulfill the QLR requirement may also fulfill other general education requirements. FYS courses may be approved for QLR credit; FYP courses cannot.

The Academic Affairs Committee will approve courses for QLR credit using the following guidelines:

1. **Quantitative Reasoning Courses** have primary learning goals in which students, through multiple opportunities and classroom instruction, develop their abilities to:
 - a. address questions by examining quantitative evidence using appropriate methods of analysis and evaluation; and
 - b. explain their conclusions and the quantitative methods they used in developing their reasoning.
2. **Logical Reasoning Courses** have as the primary learning goals that students develop:
 - a. an understanding of deductive and/or inductive logic; and
 - b. an understanding of the methods of determining the reliability of these types of reasoning.

F. Environmental Literacy (EL)

Students are required to complete at least one unit that meets the learning goals of environmental literacy courses. Courses that fulfill the EL requirement may also fulfill other general education requirements. FYS courses may be approved for EL credit; FYP courses cannot.

The Academic Affairs Committee will approve courses for EL credit. EL courses are at least one unit and at least 50 percent of the course's content must achieve the learning goals for Environmental Literacy, as described below:

1. **Environmental Literacy Courses** have primary learning goals in which students, through multiple opportunities and classroom instruction, develop:
 - a. a recognition of the consequences of human activities on natural systems; and/or
 - b. an awareness of the cultural, economic, and political forces that affect environmental policies; and/or
 - c. an understanding of natural systems and/or the impacts they can have on the environment, human life, health, and welfare.

G. Integrative Learning (ILC)

Integrative learning helps students combine the benefits of the breadth and depth in their education by fostering a synthetic understanding directed toward a particular question, topic, or theme.

All students are required to complete an ILC through which they:

- a. enhance their knowledge of a particular question, topic, or theme by bringing into conversation some combination of written, visual, artistic, experiential, or laboratory based inquiry; and
- b. use two or more ways of knowing and/or theoretical approaches to cultivate a more nuanced understanding of a particular question, topic or theme.

Students may meet the ILC requirement by completing any of the following:

1. **A cluster of 4 courses of at least one unit, each organized around a particular question, topic, or theme, selected in consultation with the academic advisor.**

The 4 courses must be from at least two different departments or programs and may include courses counted toward other general education requirements. The academic advisor must approve the student's course cluster prior to graduation.

2. **A semester-long off-campus study program** that has been approved by CIIS as meeting the description of integrative learning above.

3. **A Multi-field Major or a major or minor** approved by the Academic Affairs Committee as meeting the description of integrative learning above. *Approved majors include:* African Studies–History; African Studies–Government; African Studies–Anthropology; African Studies–Economics; Asian Studies–History; Asian Studies–Government; Asian Studies–Religious Studies; Biochemistry; Biology–Physics; Business in the Liberal Arts (second major only); Canadian Studies–Anthropology; Canadian Studies–Art & Art History; Canadian Studies–Economics; Canadian Studies–English;

Canadian Studies–Government; Canadian Studies–History; Canadian Studies– Francophone Studies; Canadian Studies–Religious Studies; Canadian Studies–Sociology; Chinese Studies; Conservation Biology; Economics–Mathematics; Environmental Studies; Environmental Studies–Biology; Environmental Studies–Chemistry; Environmental Studies–Economics; Environmental Studies–English; Environmental Studies–Geology; Environmental Studies–Government; Environmental Studies–Mathematics; Environmental Studies–Philosophy; Environmental Studies–Psychology; Environmental Studies–Sociology; Geology–Physics; Global Studies; International Economics–Estudios Hispánicos; International Economics–Francophone Studies; International Economics–German Studies; International Economics–Multi-Language; and Neuroscience.

Approved minors include:

African Studies; African–American Studies; Arabic Studies; Asian Studies; Canadian Studies; Caribbean & Latin American Studies; European Studies, Film & Representation Studies; Gender & Sexuality Studies; Global Studies; Native American Studies; Outdoor Studies; and Peace Studies.

First-Year Program (FYP) / First-Year Seminar (FYS)

In addition to three other courses drawn from the general curriculum as described in the following pages, students in their first semester enroll in a combined academic and residential program that emphasizes critical thinking and active student participation in both the classroom and the residence, called the First-Year Program (FYP). The FYP consists of four parts:

1. An interdisciplinary, often team-taught course focused on both contemporary issues and enduring questions.
2. An emphasis on communications skills, in particular writing, speaking, attentive reading and research and information literacy.
3. An advising system that ensures systematic and supportive involvement of FYP faculty, Orientation Leaders, Career Services staff, Residential Coordinators, Community Assistants, Athletic staff and Academic Advising staff.
4. A residential college system wherein each first-year residence houses students enrolled in the same section of the FYP course, with the goal of developing integrated living and learning communities. All residential colleges are on the St. Lawrence campus, with the exception of a three-year pilot program in London, England, first introduced in the fall of 2012, which has some different parameters from the on-campus units.

The FYP and FYS function as an introductory writing and speaking course in the fall and a standard research-oriented first-year seminar in the spring.

In the summer before matriculation, students review descriptions of the FYP courses for that fall and indicate those they find most interesting; they are enrolled in one of the several sections of the FYP course (FRPG 10XX) based on those interests. Each section corresponds to a residential college, and each student has one of the FYP faculty members as his or her advisor. Each FYP course explores a distinct set of themes or issues, but all focus on the breadth of the liberal arts and encourage student participation, collaborative intellectual experiences, self-expression and critical thinking. The fall semester course follows an elaborate writing skills sequence that stresses writing as a process, short essays, and revision, as well as an introduction to the integration of research into the writing process. The fall course also involves formal instruction in oral communication.

The FYP faculty also work with student life staff to plan co-curricular programs related to the course themes and to encourage students to

take advantage of the full schedule of University social and intellectual activities. The residents, the residential staff and the faculty work together to design programs and encourage maximum student involvement in the life of the residential college.

In addition to encouraging students to participate in their own colleges, the First-Year Council, composed of two elected student representatives from each of the colleges, provides an opportunity for students to develop leadership skills, participate in University governance, address issues of concern to first-year students and plan social events for the entire first-year class.

In the second semester of the first year, students continue to develop their research, writing and oral communication skills in one of approximately 40 research-oriented First-Year Seminars (FYS). Students indicate which First-Year Seminars they find most interesting and are placed in their FYS prior to registering for their other spring courses. In the spring course, the writing and speaking process is extended by a more direct emphasis on research skills and more explicit instruction in research, as well as continuing to develop the writing and speaking skills from the fall.

In the spring, student life staff and faculty continue to work with the residential communities to facilitate both the continued development of these communities and the transition to upper-class residential life. The First-Year Council also continues to plan events for all first-year students.

Because of the importance of the FYP and FYS in preparing students for success at St. Lawrence and beyond, withdrawal from those courses is not permitted, nor may FYP and FYS courses be taken on a Pass/Fail basis.

Students who fail the FYP in the fall must complete alternative coursework to be determined on a case-by-case basis by the associate dean of the first year and the associate dean for academic advising programs in consultation with the director of the Munn Center for Rhetoric and Communication. Students who fail the FYS must retake the FYS in their sophomore year.

FYP courses do not count for department, program, or distribution/diversity credit. FYS courses may count for department, program, or distribution/diversity credit.

Writing Competency Requirement

To be eligible for graduation, all St. Lawrence students must demonstrate throughout their college careers the ability to write prose that their professors judge to be competent.

1. Each semester when reporting grades, faculty members will note an IWC (Inadequate Writing Competency) and submit a writing sample for students who have not shown satisfactory writing skills. The faculty member also will submit the diagnostic IWC report. Students who receive one IWC will receive an email from the Academic Advising office outlining writing support programs.
2. If students receive a second IWC notation, they must either:
 - a) pass a .5 writing workshop course within the next two semesters, or
 - b) satisfactorily fulfill a plan for writing improvement as specified by the director of the WORD Studio. The student's adviser also will be notified of the two IWC notations and of the plan for improvement. Any student who does not develop and begin working on a plan for writing improvement in the semester following receipt of the second IWC will receive a dean's hold and be unable to register. That student will have to meet with the associate dean for academic advising to agree on a plan for writing improvement to be carried out in the upcoming semester. Any student who fails to fulfill a plan for writing improvement in the second semester after receipt of a second IWC will be suspended.
3. Any student with three or more IWCs must take and pass a .5 writing workshop course. If the student has already taken the writing workshop, the student must create and execute a new plan for writing improvement with the director of the WORD Studio.

4. The notations of IWC are monitored by the registrar and the associate dean for academic advising and do not appear on a student's official transcript.

Residence Requirement

It is a basic requirement that two years (16 units), including at least one semester of the final year before graduation, be taken in residence at St. Lawrence. Programs of study at other institutions during the senior year must have prior approval from the major advisor and the committee on off-campus study and must be authorized by the dean of academic affairs. Permission to pursue such programs during the final semester and/or summer session before graduation is granted only in extraordinary circumstances.

Fee/Commencement Requirement

No students will be graduated, allowed to participate in the May graduation exercise or receive a transcript of their records if they have not discharged all financial obligations to the University, or if they are not present at or formally excused from the graduating exercises at which the degree is to be conferred.

Major Requirements

All students are expected to complete a concentrated field of study referred to as the major. All major programs have two common expectations: (1) students normally will be accepted during the second semester of their sophomore year by the department(s) and academic programs in which they will undertake concentrated work (although some departments/programs will accept major declarations earlier); and (2) students will elect no fewer than eight semester unit courses in their major. Courses in the student's major cannot be taken on a pass/fail basis after the major has been declared.

Students' programs in the junior and senior years are arranged in consultation with their advisor(s) and the chair(s) of their major department(s)/

program(s). Junior students must be accepted into a major as a condition for spring term registration. Transfer students entering at the junior level should review major requirements at the time of application, and must declare the major no later than the beginning of the second term of attendance.

Change of the major may be made only with the consent of the chair and the student's advisor for the new major. Forms for this change are available from the advising office.

Admission to a Major

1. Students will be admitted to a major if they present a 2.0 cumulative average, including a 2.0 average in the major field(s).
2. Students on probation at the beginning of the junior year should seek admission to a major in which they have a 2.0 average in the major field(s). These students also have the option of seeking a probationary admission to a major in which they have below a 2.0 average in the major field(s). A probationary admission must be approved by the department chair.
3. Students must declare a major in the spring of their sophomore year or file with the associate dean for academic advising a petition to postpone major declaration.

Continuance in a Major

1. After being accepted into a major, students must maintain a 2.0 minimum average in the major to continue as majors. If a student falls below a 2.0 average in the major, that student and the relevant department chair(s) and/or program coordinator(s) will be notified that he or she can no longer continue as a major. The student is also placed on academic probation by the Academic Standing Committee. At that time the student must find acceptance into another major in which he or she has a 2.0 average. The student also has the option of seeking probationary acceptance by the major from which he or she was dropped, or by any other major that may grant probationary admission. The department chair/program coordinator(s) must approve a probationary admission.

If a student can neither find acceptance in another major nor gain a probationary admission, he or she will be suspended from the University.

2. Students who gain probationary admission to a major have one semester in which to raise their average in the major to a 2.0 or above and to remove themselves from academic probation. If, at the end of the probationary semester, a student has not raised his or her average in the major to a 2.0, the student and the department/program(s) will be notified that he or she cannot continue as a major. Again, the student must either find acceptance in another major or seek continuance of the probationary admission. The department chair/program coordinator(s) must approve a continuance of a probationary admission. If a student can neither find acceptance in another major nor gain a continuance of a probationary admission, he or she will be suspended from the University.
3. Students who are dropped from a major and/or suspended from the University should consult with the associate dean for academic advising. Students who are suspended from the University may appeal their suspension to the Academic Standing Committee.

Comprehensive written examinations may be required at the discretion of the major and may be given prior to the final examination period of the senior year. In such cases, a student must pass the comprehensive examination in the major to complete the requirements for the major; failure may be removed by a further examination taken at the close of any subsequent term not later than two weeks prior to its close.

At the time of graduation, a student must present a 2.0 cumulative average in St. Lawrence courses taken in his or her major.

Major Programs

St. Lawrence University offers various types of majors. Some majors are housed within a single department; others involve concentrated work shared between two departments or between one department and an interdisciplinary program.

The number of semester unit courses required for majors varies considerably, but regardless of major, no student may be required to take more than 12 or permitted to take more than 14 units under a single course designation. Majors may be chosen from one of the following fields:

- African Studies–Anthropology
- African Studies–Economics
- African Studies–Government
- African Studies–History
- Anthropology
- Art and Art History
- Asian Studies–Government
- Asian Studies–History
- Asian Studies–Religious Studies
- Biochemistry
- Biology
- Biology–Physics
- Business in the Liberal Arts
(only offered as a second major)
- Canadian Studies–Anthropology
- Canadian Studies–Art and Art History
- Canadian Studies–Economics
- Canadian Studies–English
- Canadian Studies–Francophone Studies
- Canadian Studies–Government
- Canadian Studies–History
- Canadian Studies–Religious Studies
- Canadian Studies–Sociology
- Chemistry
- Computer Science
- Conservation Biology
- Economics
- Economics–Mathematics
- English
- Environmental Studies
- Environmental Studies–Biology
- Environmental Studies–Chemistry
- Environmental Studies–Economics
- Environmental Studies–English
- Environmental Studies–Geology
- Environmental Studies–Government
- Environmental Studies–Mathematics
- Environmental Studies–Philosophy
- Environmental Studies–Psychology
- Environmental Studies–Sociology
- Estudios Hispánicos
- Francophone Studies
- Geology
- Geology–Physics
- Global Studies
- Government
- History

- International Economics–Estudios Hispánicos
- International Economics–Francophone Studies
- International Economics–German Studies
- International Economics–Multi–Language
- Mathematics
- Multifield (B.A. or B.S.)
- Multi–language
- Music
- Neuroscience
- Performance and Communication Arts
- Philosophy
- Physics
- Psychology
- Religious Studies
- Sociology
- Statistics

Multi-field Major Program

The multi-field major program is designed for students who wish to study intensively in a multidisciplinary field but cannot achieve this goal through an existing major program. The multi-field program provides an opportunity for students to design their own program of study.

A student intending to pursue a multi-field major must submit a proposal for his or her individual plan of study to the Academic Advising Committee. Submission of a proposal does not guarantee acceptance into the program; the proposal must be approved by the committee. The proposed program must be an integrated plan of study for the junior and senior years that incorporates course work from a minimum of two departments or fields. The proposal must be signed by at least one faculty member in each field; one member of the faculty in that program or field will serve as the student's primary academic advisor. This advisor will have the same responsibility as a departmental advisor. After the proposal has been approved by the academic advising committee, any subsequent changes from those courses specified in the proposal must be approved by the student's advisor and submitted in writing to the associate dean for academic advising before the student begins to follow his or her new course plan.

A proposal for a multi-field major should be submitted during the student's sophomore year. The latest a student may submit a proposal is in

the third week of the second semester of his or her junior year.

A student entering the multi-field program must fulfill the distribution, unit and GPA requirements for graduation.

A student must have a 2.0 overall GPA to be admitted to the program and must maintain a 2.0 cumulative average in his or her multi-field major to continue in the program. Students should be aware that certain courses carry prerequisites and that these apply to the multi-field major as well as the departmental major.

A proposal for a multi-field major is both a description of the academic plan and a commitment to adhere to the objectives stated in the plan. A proposal must contain:

1. A **narrative section** that describes the academic purposes of the program. The description must include an explanation of the area of interest that is the focus of the proposal. Also, the narrative must demonstrate how the courses included in the proposal constitute an integrated, in-depth study of the area of interest. Proposals that display an ambiguous focus and randomly selected courses from unrelated fields of study will be rejected.
2. A **completed Form A**, available online, which lists:
 - a. a minimum of two fields of study;
 - b. a minimum of four semester units in each field;
 - c. at least one advanced semester unit (300-level or above) in each field;
 - d. at least four advanced semester units within the chosen fields of study.

Form A must include the signatures of faculty sponsors in each field listed. One of these faculty sponsors must be designated as the primary academic advisor.
3. A **current academic transcript**. Students choosing the multi-field major program are encouraged but not required to pursue an interdisciplinary, independent project (Multi-field 489 and/or 490) as part of the major. This project allows the student to pursue independent work in his or her area of interest as defined by the original proposal and should

demonstrate the interrelationships among the fields comprising the multi-field major. The project can be submitted as one of the four advanced semester units and its focus should be described briefly in the proposal. Projects are normally undertaken during the senior year.

A student may graduate with honors from the multi-field major program. Honors for the multi-field major requires a 3.5 GPA in the multi-field major, satisfactory completion of an interdisciplinary, independent project (Multi-field 490) and the presentation of its results in some academic forum. The student must also receive the recommendation of his or her advisors. (See also Distinction and Honors.)

Double Major

For a double major, a student pursues concentrated work in any two established majors (see above list) and meets the requirements for each major. If the total required units to complete a double major exceeds 22 units, only 22 units may be applied toward graduation. If the two majors lead to different degrees, the student may elect to receive either the B.A. or the B.S.

Academic Minors

Academic minors extend the curriculum's flexibility while adding another medium of connection, coherence and integration to the student's course of study. A student who has declared a single major may elect one or two minors; a student who has declared a double major may elect only one minor.

Minors normally consist of five to seven courses, as defined by departments or programs. The minor in education requires additional courses as mandated by the New York State Department of Education and the Board of Regents. (See individual program descriptions for details on specific programs.) A minor may not be declared in the student's major, although a student may major in one foreign language and minor in another. Courses taken in the minor beyond the maximum number required for the minor are not counted in the minor, but are counted in the 33.5 units required for graduation.

Students must present a 2.0 average at the time of graduation in all courses taken in their minor. Semester course units in the student's minor cannot be taken on a pass/fail basis after the minor is declared. Minors may be chosen from one of the following fields:

- African American Studies
- African Studies
- Anthropology
- Arabic Studies
- Art and Art History
- Asian Studies
- Biology
- Canadian Studies
- Caribbean & Latin American Studies
- Chemistry
- Chinese Studies
- Computer Science
- Economics
- Education Studies
- Education – Certification
- English
- Estudios Hispánicos
- European Studies
- Film & Representation Studies
- Francophone Studies
- Gender & Sexuality Studies
- Geology
- German Studies
- Global Studies
- Government
- History
- Italian Studies
- Mathematics
- Music
- Native American Studies
- Outdoor Studies
- Peace Studies
- Performance and Communication Arts
- Philosophy
- Physics
- Psychology
- Religious Studies
- Sociology
- Sports Studies and Exercise Science
- Statistics

Academic Regulations

Academic Honesty

Refer to the constitution of the Academic Honor Council at www.stlawu.edu/sites/default/files/resource/AcademicHonorPolicy.pdf

Student Records

The Family Educational Rights and Privacy Act (FERPA) of 1974, as amended, became effective on December 31, 1974. The purpose of the act as it pertains to post-secondary institutions is twofold: to assure students access to their educational records and to protect an individual's right to privacy by limiting the sharing of student records without his or her consent.

This information is made available to all students in accordance with the requirement that they be informed of the rights afforded them by the act. Specifically, students are advised of their rights as follows:

Records available to students: Matriculated students have “the right to inspect and review any and all official records, files, and data... including all material that is incorporated into each student's cumulative record folder, and intended for school use or to be available to parties outside the school....” St. Lawrence University defines “official records, files and data” and “cumulative record folder” to be the student's records as maintained by the student life, registrar's, career services, business and financial aid offices and the education department.

The law requires the University to respond to a student's request to see the official record or the cumulative record folder by establishing “appropriate procedures for the granting of a request...within a reasonable period of time, but in no case more than forty-five days after a request has been made.”

A student's file in the student life office includes the student's initial application, personal data forms, disciplinary records and records of communication with the student and his or her family from various University representatives. The registrar's office maintains the official academic record. The career services office

retains letters of recommendation for post-graduate and/or job placement.

The amended act clarifies that recommendations written before December 31, 1974, are not available to students and others unless approved by the writer. Recommendations written after that date are open to students unless the student waives this right. All students are urged to clarify this when requesting a recommendation.

Hearings to challenge a record: Students must be afforded “an opportunity to insure that the records are not inaccurate, misleading, or otherwise in violation of (their) privacy or other rights.” Further, provisions must be made “for the correction or deletion of any inaccurate, misleading, or otherwise inappropriate data” contained in the official record. Formal procedures for challenging such information are detailed in the Student Academic Grievance Procedure section of the *Student Handbook* online.

Rights of third parties to access records: The University may disclose personally identifiable information from a student’s education records only with the written consent of the student, except: (1) to school officials (i.e., persons employed by the University in an administrative, supervisory, academic, research or support staff position; a person elected to the Board of Trustees; a person or company employed by or under contract to the University to perform a special task, such as an attorney or auditor; or a student serving on an official committee or assisting another school official in performing his or her tasks) who have legitimate educational interests (e.g., the need to review education records to fulfill their University-related responsibilities); (2) to officials of another school at which the student seeks or intends to enroll (note: it is the University’s policy to forward education records to other agencies or institutions in which the student seeks or intends to enroll only with written consent from the student; the University reserves the right to forward said records upon the request of such agencies or institutions, without written consent from the student after a reasonable attempt has been made to contact the student);

(3) to authorized representatives of certain FERPA-designated federal and state agencies for the enforcement of federal and state legal requirements; (4) in connection with a student’s application for or receipt of financial aid, as necessary to determine the eligibility, amount or conditions of the financial aid, or to enforce the terms and conditions of the aid; (5) pursuant to court order or lawfully issued subpoena, but only after reasonable attempt to notify the student of the order or subpoena, unless the subpoena prohibits disclosure of the existence or contents of the subpoena or information furnished in response to the subpoena; (6) to accrediting organizations to carry out their functions; (7) to parents of a student who claim the student as a dependent for income tax purposes; (8) in connection with health and safety emergencies, as permitted by law; (9) to an alleged victim of any crime of violence or the results of any institutional disciplinary proceeding against the alleged perpetrator of that crime with respect to that crime; and (10) as otherwise permitted by FERPA and its implementing regulations as amended from time to time.

All persons desiring access to such records, except on the grounds of exceptions 1, 5 (when the subpoena orders confidentiality) or 7 above, shall be required to sign a written record access form, which shall be kept in the student’s file.

With the exception of disclosures covered by the exceptions noted above, prior to release of personally identifiable information from a student’s education records, and subject to the rules regarding “directory information,” below, written consent must be received from the student specifying the records to be disclosed, stating the purpose of the disclosure and identifying a password for each party or class of parties to whom the disclosure may be made. The authorization for release shall be kept with the student’s file.

Whenever the University discloses personally identifiable information from an education record (except as to disclosures [1] of “directory information,” [2] to the student who is the subject of the record or [3] to the parent of a dependent student) it shall inform the party

to whom it is disclosing the information that it may not be further released or disclosed without the consent of the student or the parent of a dependent student.

Records unavailable to students: Students do not have the right of access to their parents' confidential financial statements or to medical, psychiatric or "similar records that are used solely in connection with treatment and only available to recognized professionals or paraprofessionals in connection with such treatment." Students, however, could have a doctor or other qualified professional of their choice inspect their records.

Directory information: The University continues to have the right to release "directory" information, limited to name, address, telephone number, e-mail address, student photo ID, dates of attendance, enrollment status, major field(s) of study, degrees and awards received and the most recent previous educational agency or institution attended by the student, without first obtaining the consent of the student. Students or parents wishing to have the information excluded from directories should contact the dean of student life.

Copies of the act are available in the student life office, and students are encouraged to discuss any aspect of the law or their individual file with the vice president and dean of student life. Copies of any or all parts of the record are available to the student at the student's expense.

Transcript

A transcript of the academic record of each regularly enrolled student is maintained in perpetuity in the registrar's office. For information on the transcript and requesting copies see www.stlawu.edu/registrar/sites/stlawu.edu/registrar/files/transcript.request.pdf.

Credit Toward Graduation

Candidates for baccalaureate degrees may earn credits toward graduation from St. Lawrence University in one or more of the following ways:

1. By satisfactory completion of courses offered by St. Lawrence.
2. By satisfactory completion of courses taken through cross-registration from one of the other members of the Associated Colleges of the St. Lawrence Valley (State University of New York, Canton College of Technology; State University of New York, College at Potsdam; Clarkson University). Up to two such courses per year (September 1–May 30) may be taken. Since these courses are considered as taken in residence at the institution where they are taken, the general policies on transfer credit apply to them, barring possible exceptions by the academic dean for certain programs of study. The credit value of such courses, however, is calculated in the same way as that described in II.A.2, below, regarding transfer of credit from other institutions.
3. By transfer from an accredited institution of higher education of approved liberal arts course credits, with grades of at least 2.0 (C) or equivalent. This includes P (Pass) in P/F (Pass/Fail) systems from other accredited collegiate institutions. (See II.A, below). A maximum of eight units are transferable to St. Lawrence if taken by a matriculated student.
4. By Advanced Placement tests, as administered by the College Entrance Examination Board, Princeton, N.J. (See II.B, to follow.)
5. By International Baccalaureate Higher Level Examinations in which a score of 5 or higher is achieved. Credit is not awarded for Standard Level examinations. Course credit is regarded as transfer credit and is determined by the registrar in consultation with the appropriate department chair. Credit for course equivalence and distribution credit is similar to Advanced Placement credit.

[Note: College Level Examination Program (CLEP) credit is not accepted.]

Credit from Other Sources

I. The following general policies apply to credits earned or sought from sources other than courses offered by St. Lawrence and courses taken by cross-registration.

- A. **The student must be matriculated** (accepted by admissions) as a full-time student at St. Lawrence University, with the exception of an employee of St. Lawrence University or other member of the Associated Colleges who may be part-time.
- B. **At entrance, acceptability of credit is determined by the registrar**; at other times it is determined by the registrar and/or committee in consultation with the appropriate department chair(s).
- C. **Credit is given no grade value** and does not become a part of the student's cumulative or major or minor GPA. For a unit to be transferred, it must have a minimum grade of C or 2.0 on a four-point system.
- D. **Upon entrance, the equivalent of two years' work** may be counted toward graduation. Sixteen units must be completed at St. Lawrence.
- E. **Matriculated students in good academic standing** (having a minimum GPA of 2.0 and the proper number of completed units) may transfer up to eight units of credit.
- F. **Matriculated students on academic probation** may apply to pursue coursework at another institution. However, they must have a grade point average of at least 2.0 at the end of the term to transfer the credit from the other institution.
- G. **Transfer credit will not be granted** to students while they are under academic suspension. A student readmitted from academic suspension may request the registrar for transfer of credit earned elsewhere while under suspension.

II. In addition to the general policies, the following specific policies apply to particular means of obtaining credit.

- A. **Transfer credit from other institutions**
 - 1. To be assured of receiving credit toward graduation from St. Lawrence University, matriculated students must obtain prior approval of individual courses or programs of study. If they intend to study off campus during a regular fall or spring semester, such approval must be obtained from the committee on off-campus study and the appropriate department chair(s). Approval of courses to be taken during the summer of between the fall and spring semesters should be obtained from the appropriate department chair(s) through the registrar's office.
 - 2. The credit value of transferred work undertaken during an academic year by a matriculated student shall be assessed against the standard of the expected normal full load of the host institution. For example, a student who completes 15 hours of credit at an institution where the expected normal full load is 12 to 15 hours will ordinarily receive four units of credit toward graduation at St. Lawrence. *In other cases:*
 - a. A maximum of two three-semester-hour courses may be transferred to St. Lawrence as one St. Lawrence unit each.
 - b. Beyond two courses, credit value of semester-hour courses shall be assessed in accordance with a table of values maintained by the registrar.
- B. **Advanced placement and credit**
Advanced placement and credit toward graduation are granted to students who achieve a rating of 4 or 5 on the Advanced Placement Examination in the following subjects (*see next page*):

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SLU AP Exam	SLU Equivalent	Units
Art History	None	1
Calculus AB <i>(or AB subcode on calculus BC exam)</i>	Mathematics 135	1
Calculus BC	Mathematics 135 & 136	2
Chemistry	Chemistry 103	1
Chinese Language and Culture	None	1
Computer Science A	Computer Science 140	1
Computer Science AB	Computer Science 140 & 219	1
Economics Macro and Micro	Economics 100 & 101 or 10213	2
Economics Macro or Micro	Economics 100	1
English Language and Composition	None	1
English Literature and Composition	English 190	1
Environmental Studies*	ENVS 101	1
European History	History 102	1
French Language	French 103	1
German Lang/ Culture	GER 101**	1**
U.S. Government and Politics	Government 103***	1
Comparative Government and Politics	Government 105***	1
Human Geography	None	1
Italian and Culture	None	1
Japanese and Culture	None	1
Music Theory	Music 100	1
Physics B	Physics 103 and 104****	2
Physics C Part 1	Physics 151****	1
Physics C Part 2	Physics 152****	1
Psychology	Psychology 100	1
Spanish	None	1
Spanish Literature	None	1
Studio Art	None	1
Statistics	Statistics 113	1
United States History	History 103,104	1
World History	None	1

**Scores of 4 or 5 on the exam will receive 1 unit of credit equivalent to ENVS 101.*

***German scores of 4 will receive 1 unit of credit equivalent to 101. Scores of 5 will receive 2 units of credit equivalent to 101 and 102.*

****Students who become government majors will get credit for the AP exam but will need to take Government 103 or Government 108 and/or 206 to ensure they have department work at the introductory level.*

*****Laboratory Qualification: Students must demonstrate a significant lab experience to the physics department chair in order to receive any credit.*

Note: Students earning a score of 4 or 5 on the General Biology AP exam may earn 1.25 units for Biology 102 if they successfully complete Biology 101. For a complete explanation of this option, refer to the “Advanced Standing” section of the Biology section in this *Catalog*.

Courses are acceptable in lieu of departmental prerequisites and fulfill distribution requirements, as indicated. Students who score 3 may be considered for advanced placement and/or credit by individual departments. The effect of advanced credit upon the department major requirements is determined by each department chair.

Registration for Courses

Continuing students who expect to be enrolled in the following term must register in April for the fall term and November for the spring term. Registration instructions and course listings are available to all students prior to designated registration deadline dates. Students must meet with their academic advisors prior to registering for courses. Students who register late are subject to a fee of \$50.

Course Load

In the fall or spring semester, full-time students may take any four courses regardless of their unit value, or five or six courses that total no more than 4.75 units, without incurring additional tuition charges. An overload consists of five or six courses totaling more than 4.75 units or more than six courses. During Summerterm,

an overload consists of more than two units of credit. Full-time students registered for more than six courses or for five or six courses totaling more than 4.75 units and not meeting criteria for a course overload without additional charges will be charged an overload fee.

Eligibility for Course Overload

Students must have a cumulative GPA of at least 2.5 (except as noted in #2 below). Course overload registration is by petition and is done during the first seven days of the fall and spring semesters. Course overload during Summerterm must be approved by the director of Summerterm. Timely completion of the petition is required. See below for directions regarding the cost of additional courses. First-year students are not eligible for a course overload. Transfer students in their first semester at St. Lawrence are not eligible for a course overload.

Course Overload Without Additional Charges

1. Full-time students with a 3.2 overall or a 3.2 prior semester GPA and making normal progress toward their degree may register for up to 5.75 units without additional tuition charges during the fall or spring semesters. See *Guidelines for Normal Academic Progress*, below.
2. Once during their undergraduate career, all students in good academic standing may take one course as an overload, with no additional tuition charges.
3. A student who fails to convert all incomplete (E) grades to final grades by the end of the drop/add period may not take the free overload course privilege when other conditions are met.

Continuing a Foreign Language

Prior to their arrival on campus all students who studied a foreign language should read the following instructions on the Modern Languages department site in order to enroll in the language level appropriate to their high school preparation: www.stlawu.edu/modern-languages/letter-first-year-students. Once enrolled in a course

at St. Lawrence, all students are automatically required to take a placement test for French, German or Spanish administered by the department to determine if the course they have chosen is adequate for their level of preparation. Students may not enroll for credit in a beginning language course if they have studied the language for two years or more in a secondary school.

Registration Changes

A full-time student may not reduce his or her course load in any semester to fewer than four semester course units without consulting with his or her advisor, the registrar and, when appropriate, the associate dean of the first year and the financial aid office. It is expected that a student will consider withdrawing from a course only in extenuating circumstances.

Students may not take a course load of fewer than 3.5 units in any semester without their student status or athletic status being affected. They must consult with their academic advisor(s) and the course instructor and submit a properly executed add/drop or withdrawal form obtainable at the registrar's office.

Students who begin the semester on a part-time status, or who fall to part-time during the first month of the semester by dropping or withdrawing from a course (down to a total of fewer than 3.5 course units), will be certified as part-time students for New York state financial aid purposes, other private scholarships that require full-time certification, and repayment of student loans. They will lose their TAP and scholarships if they are part-time students. Foreign students, veterans and athletes who participate in an NCAA sport are also affected.

Add/Drop Policy

During the first seven business days after classes begin in any semester or the first two days after classes begin in any summer session, a student may add or drop a course without a permanent record being made of the change. Students changing their schedules within the add/drop period must have written approval of the instructor of each course being added or dropped as well as the approval of their advisor. Students

may request from the Academic Petitions Committee a late schedule change with instructor and advisor permission. Approved late changes will result in a \$50 late change fee.

Withdrawal from a Course

Twice before graduation, students are permitted to withdraw from a course after the first seven days and until the end of the 10th week of classes for fall and spring semester courses that meet over the entire semester. For courses that meet for half of a semester or during Summerterm, students may withdraw after the first three days and until the end of the third week.

The course remains on their transcript, and a “W” grade is entered by the registrar. If a withdrawal form, properly executed, is not submitted before the deadline, the student remains enrolled in the course, and is graded accordingly. Withdrawing from FYP or FYS is not permitted. Students should contact the Student Financial Services Office to determine if withdrawing from a course will jeopardize a New York State grant or scholarship.

Students may apply to the vice president and dean of student life for a medical withdrawal from a course, courses, or the entire semester during the semester for which the withdrawal is requested. Documentation from an appropriate medical, psychiatric or psychological professional must be provided at the time of application.

While on medical withdrawal, the student must absent him or herself from campus, unless the vice president and dean of student life expressly allows access. The registrar enters a “WM” grade for all enrolled courses. The medical withdrawal would continue for the remainder of the semester and for at least one additional semester.

The vice president and dean of student life may grant a medical withdrawal for the semester immediately preceding the semester for which the student is registered, provided (1) the withdrawal is for the entire semester and (2) in her/his judgment, application for the medical withdrawal could have been made and would have been granted for that semester.

If a withdrawal for medical reasons is approved, the registrar enters a “WM” grade for each

course involved. Refer to Student Financial Services to see if a financial credit may be available to a student readmitted to St. Lawrence after taking a medical withdrawal in a prior semester. A medical withdrawal from a partial course load does not allow the student to receive financial credit in a future semester.

If a student who is on a medical withdrawal from the University applies for readmission to St. Lawrence, the student’s physician or another certified medical professional must supply the student life office with a letter giving professional assurance that the student has recovered from the medical problem and that there is a reasonable assurance that the student can successfully resume his or her career at St. Lawrence.

Leave of Absence

A leave of absence may be granted by the dean of student life to any student who is in good academic and social standing. Such a student may be readmitted at the start of a term provided that: (1) readmission is within three terms of the student’s leaving, (2) the University receives a 60-day notice of the student’s intention to return and (3) there is housing and classroom space available. Only one course per semester may be transferred to St. Lawrence while a student is on a leave of absence.

Grades

The grading system in use at St. Lawrence is described below:

Grade Point Equivalent per Course Unit

4.0	Excellent	
3.75		
3.5		
3.25		
3.0	Good	
2.75		
2.5		
2.25		
2.0	Satisfactory	
1.75		
1.5		
1.25		
1.0	Lowest Passing Grade	
0.0	Failure	0.0
E	Incomplete	0.0

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P	Pass under Pass/Fail option	0.0
W	Withdrawn	0.0
WM	Withdrawn Medical	0.0
CMP	Work Completed Satisfactorily for non-credit course component	0.0
X	See below	0.0
IWC	Inadequate Writing Competency	0.0
NGS	No Grade Submitted by Instructor	0.0

X grade is assigned at the end of a semester for work in a designated course that will be completed in the following semester. Only those students specified by the mid-term of the initial semester are eligible to receive an X grade. This grade is not to be confused with the incomplete (E), which is given to a student who fails for a valid reason to complete the work of a course within the period prescribed for that course.

Incomplete (E) is assigned only when, as a result of unusual or extenuating circumstances (e.g., illness), some part of the required work for a course is left unfinished. In such a case, the instructor informs the department chair and agrees with the student on conditions, preferably in writing, for removal of the E. The student is expected to fulfill these conditions in good time, in the ensuing semester, for the instructor to evaluate his or her work and report a permanent grade to the registrar by the end of the sixth week. If no grade is reported, the E is replaced by 0.0 (Failure).

The department chair may request further delay from the registrar, but this delay may not be longer than the term. If the student is not in residence during that term, the delay may be extended for one additional semester. Further extension must be requested of the dean of academic affairs and is unusual since the passage of time often brings changes in instructor and course content.

It is the responsibility of the student to see that conditions for the removal of a grade of E are established and met.

Pass/Fail — During the four years in college, a student is permitted to elect up to four semester course units of work, to be graded Pass/Fail. The purpose of the option is to encourage students to explore new areas of study in which they are interested but have little or no background.

The Pass/Fail option is not offered to allow for the removal of deficient mid-or late-term grades incurred, or to justify reduced effort in a course. The Pass/Fail option may be chosen for semester course units taken to satisfy distribution requirements or any elective semester units outside the major or minor. The Pass/Fail option is subject to the following limitations:

1. Neither the First-Year Program nor the First Year Seminar may be taken on a Pass/Fail basis.
2. Semester course units in the student's major and minor fields cannot be taken on a Pass/Fail basis after the major and minor are declared.
3. No more than one optional Pass/Fail course can be taken in any semester.
4. The Pass/Fail option requires the written consent of the instructor within the first 25 days after classes begin in the fall and spring semesters. In summer session or courses that meet only half of the fall or spring semester, students may avail themselves of the option within the first five days of classes. A student must attain a minimum of a 1.0 grade to receive a Pass for the course.

Students should be aware that grades of 0.0 (F) are calculated in the grade point average. Although the P grade is not calculated in the grade point average, P grades may place students at a competitive disadvantage when they apply for admission to some graduate or professional schools.

Repeating Courses — When a student repeats a course, the higher grade will be computed in the cumulative average. Grades from both attempts will remain on the transcript. A repeated course does not earn additional credit toward graduation unless the first attempt received a failing grade.

1. If a student's grade is lowered below the level required by the major due to academic dishonesty, the student may retake the course, but only with the agreement of the department chair and only on a pass/fail basis, even if the major has already been declared. The original grade remains on the student's transcript.

2. If a student fails a course due to academic dishonesty and the course is not required for the major, the student may not retake the course.
3. If a student's grade is lowered due to academic dishonesty and the course is not required with a higher grade for the major, the student may not retake the course.
4. In all other cases, a student who wishes to retake a course must submit a petition to the Academic Petitions Committee. The petition must provide a more in-depth explanation of the student's reason(s) for retaking the course than merely stating "to raise my GPA." Pending the Committee's approval, the student may register to retake the course only after the class-based portion of the pre-registration process is complete.

Students should be aware that financial aid or veterans' benefits may be affected by a repeated course. Students should contact the student financial services office to determine if repeating a course would jeopardize a grant or scholarship.

Distinction and Honors

See www.stlawu.edu/registrar/content/85.

Academic Petitions Committee

Students occasionally experience extenuating circumstances that interfere with their intent to follow rules and procedures regarding various facets of University life. Students may request consideration of an exception of the Academic Petitions Committee. For further details, see www.stlawu.edu/registrar/content/41.

Academic Standing Satisfactory Academic Progress for Financial Aid and New York State-Sponsored Grants and Scholarships

Please refer to www.stlawu.edu/financialaid/satisfactory-academic-progress to view the Satisfactory Academic Progress requirements for financial aid.

Acceptable Academic Progress

Normally, academic standing is defined as (1) earning the minimum number of course units as indicated in the Guidelines for Acceptable Academic Progress (below) and (2) maintaining a cumulative GPA of 2.0 or higher.

Guidelines for Acceptable Academic Progress

<i>End of Term</i>	<i>Units Completed</i>
1	4.5
2	9.0
3	13.0
4	17.0
5	21.0
6	25.0
7	29.0
8	33.5

International Students

International students under F-and J-type visas are required to carry and complete at least 3.5 units of work each semester.

Required Summerterm

At the end of the academic year, first-year students or sophomores who have cumulative averages of less than 1.75 and juniors with GPAs less than 2.0 will be required to attend Summerterm at St. Lawrence. Academic improvement, demonstrated by earning a minimum Summerterm average of 2.25 or a higher standard of performance as stipulated by the Academic Standing Committee, is required.

Guidelines for Probation

Students will be placed on academic probation if they fail to meet satisfactory levels of performance as reflected by one of three measures: cumulative GPA, semester GPA or major GPA.

Cumulative GPA: Students are placed on academic probation if their cumulative GPA falls within the following range based on terms completed (*see next page*):

<i>Completed Term(s)</i>	<i>Minimum Cumulative GPA</i>
1—4	1.50—1.99
5—7	1.75—1.99
8—10	< 2.0

If their progress is deemed not satisfactory, they are placed on probation and receive letters that indicate that they must (1) earn a semester GPA of 2.0 or above in their first semester on probation and (2) raise their overall GPA to a 2.0 or higher in the ensuing semester, or they will be suspended. Students on probation should carry a full course load of at least four courses worth at least one unit each. Any exceptions must be approved by the associate dean for academic advising.

Students on probation are expected to work with the coordinator of academic development, the coordinator of academic support or the associate dean for academic advising and their academic advisor to plan a program to address their academic situation. For more information, consult with the associate dean for academic advising.

Semester GPA: Any student with a semester GPA below 1.75 will be placed on academic probation.

Major GPA: Students whose GPA in their major (i.e., the average of grades in courses applicable to the major) falls below 2.0 will be placed on academic probation. Students whose GPA in their declared major remains below 2.0 for two semesters, and who are unable to find a suitable probationary major, will be suspended.

Guidelines for Academic Suspension

Students who fall into one or more of the following categories will be suspended:

1. First-year students (including first-semester first-year students) or sophomores with cumulative GPAs of less than 1.5, juniors and first-semester seniors with cumulative GPAs of less than 1.75, and second-semester seniors with cumulative GPAs of less than 2.0.
2. Students on probation who do not earn a semester GPA of 2.0 or above in their first semester on probation, or do not increase their overall GPA to 2.0 at the end of the following semester.

3. Students who do not earn a minimum average of 2.25 or the higher standard of performance stipulated by the academic standing committee, during a required Summerterm.
4. Students who have less than a cumulative GPA of 2.0 in their major for two consecutive semesters and who cannot find a new or probationary major.

Students other than first-year students suspended after their first semester may apply for readmission after one semester. Suspended students are not considered St. Lawrence University students and are not eligible to receive credit for or take courses at the University.

Students who are suspended at the end of their first semester (and only at the end of their first semester) shall be offered one of the following options:

1. Take a suspension for a full calendar year, *or*
2. a. Students who matriculated in the fall semester may take a suspension of one semester (the spring following the fall in which they were suspended), after which they may apply to take up to two courses in Summerterm Session I, during which they will also be required to work in a program designed by the coordinator for academic development and the coordinator for academic support. Completion of this program to the satisfaction of the two coordinators, together with a 2.5 average in all summer course work, shall entitle the student to apply for readmission for the fall semester.
- b. Students who matriculated in the spring semester may take a suspension of one summer plus one semester (the fall following the spring in which they were suspended), after which they may apply to return for the spring semester during which they will also be required to work in a program designed by the coordinator for academic development and the coordinator for academic support.

Completion of this program to the satisfaction of the two coordinators, together with a 2.5 average in all spring term course work, shall entitle the student to apply for readmission for Summerterm and the following fall semester.

The following table shows the cumulative GPA that will lead to suspension.

<i>End of Term</i>	<i>Minimum Cumulative GPA</i>
1—4	< 1.50
5—7	< 1.75
8	< 2.0

Appeal of Academic Suspension

Suspended students who can document extenuating circumstances have the right to appeal to the academic petitions and standing committee. Appeals, which will be reviewed by the committee and the dean of academic affairs, should be directed to the registrar. For students on probation who are subject to suspension, the Academic Petitions and Standing Committee will examine whether all conditions of probation were fulfilled when considering an appeal. Questions about the appeals process should be directed to the associate dean for academic advising.

Readmission

Suspended students other than first-year students may apply to St. Lawrence University for readmission one semester after they were suspended. Applications for readmission are available from the associate dean for academic advising. In addition to the completed application, the following information must be provided:

1. Transcripts of academic work undertaken while suspended.
2. Letters from instructors of courses in which students were enrolled while suspended.
3. If applicable, letters of support from employers, counselors or therapists with whom the student has worked since suspension.

An interview with the associate dean for academic advising may be required.

A student who has been suspended, and who has returned to St. Lawrence, will be allowed up to three semesters to achieve a cumulative grade point average of at least 2.0.

Expulsion

Students will be expelled if they have been readmitted but fail to meet their academic readmission requirements as determined by the Academic Standing Committee. Expelled students who can document extenuating circumstances have the right to appeal to the committee. Appeals should be directed to the registrar. Expulsion represents a complete severance of ties to the University. Students who have been expelled from St. Lawrence University do not have the option to apply for readmission.

Academic Resources and Supports

Every student has his or her own style of learning. The office of academic advising programs serves as a resource for all students at St. Lawrence, helping them identify academic areas of strength and areas in need of improvement. We also offer guidance in developing and implementing strategies to achieve greater academic success. Please refer to the office of academic advising website for information on peer tutoring, academic counseling, skills assessment and support, academic opportunity programs, and provisions for students with disabilities at www.stlawu.edu/advising.

Disability and Accessibility Services

For details, see www.stlawu.edu/disability-and-accessibility-services.

Opportunity Programs Higher Education

Opportunity Program (HEOP)

For details, see www.stlawu.edu/heop.

Collegiate Science and Technology Entry Program

For details, see www.stlawu.edu/cstpe-and-mcnair.

Munn Center for Rhetoric and Communication

Writing Centers

Writing well is not a once-learned skill; instead, it evolves through sustained practice over the four years of a student's undergraduate experience. The Munn Center for Rhetoric and Communication's WORD (Writing, Oral Communication, Research and Design) Studio offers writing assistance to all students, from those writing FYP papers to seniors constructing honors theses. For additional information, see www.stlawu.edu/word-studio.

Quantitative Resource Center

Quantitative skills are a necessary set of tools for success in many endeavors of modern life. To support students as they grow and develop their quantitative abilities, the Quantitative Resource Center (QRC) offers mathematical, statistical and computational help in support of both course work and research. For additional information, see www.stlawu.edu/pqrc.

Libraries and Information Technology

The St. Lawrence University libraries and information technology division supports and participates in the learning, teaching, research, and creative endeavors of students, faculty, and staff. Through a variety of physical and digital resources as well as technical and scholarly services, the libraries and information technology division is a critical component of the living and learning environment at St. Lawrence. For more information about our locations across campus and our services, resources and training please see www.stlawu.edu/library and www.stlawu.edu/it.

Richard F. Brush Art Gallery and Permanent Collection

For more information, see www.stlawu.edu/gallery.

Community-Based Learning Program and Center for Civic Engagement

St. Lawrence's Community-Based Learning (CBL) programs offer opportunities to combine community engagement and service with course-based activities and assignments in ways that promote student learning and personal development. The Center for Civic Engagement's mission is to increase and enhance opportunities for students to be agents of positive social change both on and off-campus. For additional information, see www.stlawu.edu/center-civic-engagement.

Outdoor Studies Program

The outdoor studies program at St. Lawrence University encompasses four constituent entities: the outdoor studies minor, the Adirondack Semester, the Sustainability Semester, and the Outdoor Program. For additional information, see www.stlawu.edu/outdoor-studies.

The Outdoor Program

The Outdoor Program offers skills training and outdoor leadership development through group, class and individual exploration of the natural world. For additional information see www.stlawu.edu/outdoor.

Requirements for Graduate and Professional Schools

Students who decide to pursue graduate study should make their intentions known to their academic advisor(s) and the director of career services as early as possible in their undergraduate careers. For helpful information see www.stlawu.edu/career-services/graduate-school.

Pre-Professional Programs

Medical, Dental, Veterinary

Undergraduate programs of study at St. Lawrence lead to professional training in medicine, dentistry, optometry, podiatry, nursing, physical therapy and veterinary medicine. Arrangements may be made to enter an accredited health professional school upon the completion of 24 course units at St. Lawrence. In these cases, St. Lawrence University will award the bachelor's degree upon graduation from the professional school and on further condition that all distribution requirements prescribed by the University have also been fulfilled. Medical, dental and veterinary medical schools, however, are increasingly advising students to complete the four-year college courses before beginning their professional training.

The courses required by most medical and dental schools are:

- General biology (Biology 101, 102)
- General chemistry (Chemistry 103, 104 or 105)
- Organic chemistry (Chemistry 221, 222)
- English (any two courses)
- College physics (Physics 103,104 or 151, 152)
- Mathematics (two college-level courses)

These courses should be completed before the student takes the Medical College Admission Test (MCAT), the Dental Admission Test (DAT) or the Veterinary Aptitude Test (VAT).

In addition, a number of medical schools require or recommend one semester of biochemistry

(without lab) and general psychology (PSYC 101). Some veterinary medical schools require biochemistry, microbiology and physiology in addition to the requirements listed for medical and dental schools. Because of the recent changes (2015) in the MCAT, students interested in medical school should seriously consider taking genetics, developmental biology, both semesters of anatomy and physiology, microbiology and introduction to sociology.

For students interested in medical school, there are two Early Assurance Programs with the College of Medicine of the SUNY Upstate Medical University at Syracuse. Under the general program, sophomores may be eligible for guaranteed admission into medical school after completion of their senior year. In addition there is a pre-college matriculation guaranteed admissions program with Upstate Medical University for students interested in rural medicine.

For students interested in nursing, physical therapy, physician assistant programs, or pharmacy programs, St. Lawrence has articulation agreements with the NYU Nursing Program, the Clarkson University Physical Therapy and Physician Assistant Programs, and the SUNY Buffalo School of Pharmacy.

Students interested in health careers should use their time at St. Lawrence to gain as much in-depth experience as possible in the humanities and social sciences. For further advice, consult any member of the Health Careers Committee.

Law

Students who are interested in law (or law in combination with business, public service, social work, and other fields) will be well served by the academic programs and pre-law advising at St. Lawrence. The Pre-law Advising Committee provides group briefings for students during the first year and again in the junior year. More specialized individual advising is available for more advanced students as they prepare in a more intensive way for the Law School Admission Test (LSAT) and begin applications to law schools. For additional information see www.stlawu.edu/advising/pre-law.

Education

St. Lawrence University offers undergraduate courses that prepare students for teaching in public and/or private schools. The University has registered its programs with the New York State Education Department leading to initial and/or professional teaching certification for New York State. Under the current requirements of the New York State Board of Regents, students completing required undergraduate study in education are eligible for initial certification in New York and comparable initial certification in all reciprocating U.S. states and Canadian provinces. See the Education in the Courses of Study section of this *Catalog*.

St. Lawrence also has graduate programs leading to initial and/or professional teaching certification in New York State and all reciprocating U.S. states and Canadian provinces. The undergraduate and graduate-level programs in teacher education hold full national accreditation by the Teacher Education Accreditation Council (TEAC). The University also offers other graduate programs in counseling and school leadership. Because New York State's regulations for certification often change, information and advice should be obtained from the St. Lawrence University education department. For details about the University's graduate programs leading to post-baccalaureate teaching certification, the master's degree and the certificate of advanced study, see the education department's web page at www.stlawu.edu/education or from the University's *Graduate Catalog*, available from the education department.

Basic Engineering Combined Plan

Students can combine a liberal arts education with an engineering degree through St. Lawrence's combined engineering program with six engineering schools (Clarkson University, Columbia University, Dartmouth College, Rensselaer Polytechnic Institute, the University of Rochester, and the University of Southern California). In the 3+2 plan a student spends three years at St. Lawrence and two years at

the engineering school, and graduates with a bachelor's degree from each institution. The combined engineering program with Dartmouth has two options. One option is the standard 3+2 program. The other option requires the student to spend years one, two and four at St. Lawrence and years three and five at Dartmouth.

Visit the Engineering Combined web site at www.stlawu.edu/engineering-combined-programs.

4+1 Business Programs

4+1 MBA Programs

St. Lawrence University has agreements with the graduate schools at Clarkson University, Union College and Rochester Institute of Technology that allow students to plan their undergraduate program to include courses that serve as foundation courses for graduate study. Students must complete a regular undergraduate major and meet prescribed admission standards in addition to the foundation courses. Those who are admitted can expect to complete the requirements for the MBA degree in one year rather than the usual two or more. In addition, applicants with outstanding academic records will receive a prompt decision concerning admission and financial aid. Preliminary inquiries concerning these programs may be made by consulting with the pre-management coordinator.

4+1 MS Program in Finance

St. Lawrence University has an agreement with the Whitman School of Management at Syracuse University that allows students to plan their undergraduate program to include courses that serve a St. Lawrence major and meet prescribed admissions standards and foundation courses for entry into Whitman's Master of Science in Finance (MSF) program. Although completing the St. Lawrence University coursework is no guarantee of admission, those who are admitted can expect to complete the MSF degree in one year rather than the usual two or more. In addition, applicants with outstanding academic records will receive a prompt decision concerning admission and financial aid.

Preliminary inquiries concerning any of these programs may be made by consulting with the pre-management coordinator. See www.stlawu.edu/masters-business-combined-programs for additional information.

Seminary Preparation

Interested students should visit www.stlawu.edu/advising/pre-seminary.

Army and Air Force Reserve Officer Training

Interested students should visit www.stlawu.edu/rotc.

Summerterm

The University operates a diverse academic summer program that includes both undergraduate and graduate courses. For further information see www.stlawu.edu/academic-affairs/summerterm.

Auditing Courses

Area Resident Auditing is a program designed to serve the educational needs and interests of local residents at a low cost. "Auditing" means attending a class without working for or receiving formal credit. Although the program offers a top-quality educational experience, no written exams or papers are expected and no final grades are issued, but auditors may request a certificate of attendance from the professor.

The program is open to adult residents of the North Country. An elementary or high school diploma is not required. High school students, faculty and regularly enrolled students at area colleges, and St. Lawrence faculty and staff are not eligible.

Persons who are eligible may audit a course by paying a registration fee of \$35 per course. The audit fee must be paid at the time of registration and is not refundable.

Inventory of Registered Programs

Program Title	Degree	Code	HEGIS	Program Title	Degree	Code	HEGIS
Bachelor of Arts/Bachelor of Science Programs				Bachelor of Arts/Bachelor of Science Programs continued			
African Studies–Anthropology	BA	21401	2299	Multi-Language Major	BA	80026	1199
African Studies–Economics	BA	21402	2299	Music	BA	09793	1005
African Studies–Government	BA	21400	2299	Neuroscience	BS	25089	0425
African Studies–History	BA	21399	2299	Performance and Communication Arts	BA	79187	1007
Anthropology	BA	83565	2202	Philosophy	BA	09802	1509
Anthropology–Canadian Studies	BA	19102	4903	Physics	BS	09807	1902
Art and Art History	BA	09792	1001	Psychology	BS	09815	2001
Art and Art History–Canadian Studies	BA	81115	4903	Religious Studies	BA	09803	1510
Biology	BS	09784	0401	Religious Studies–Asian Studies	BA	86045	1599
Biochemistry	BS	25090	0414	Religious Studies–Canadian Studies	BA	19103	4903
Biophysics	BS	09786	0415	Sociology	BA	09820	2208
Business in the Liberal Arts	BA	36284	0517	Sociology–Canadian Studies	BA	81116	4903
Chemistry	BS	09810	1905	Statistics	BS	37398	1702
Computer Science	BS	22059	0701				
Conservation Biology	BS	31841	0499	Undergraduate Teacher Certification Programs (Initial)			
Economics	BA	09817	2204	Adolescence Education: 7-12 English	BA	25731	1501.01
Economics–Canadian Studies	BA	81114	4903	Adolescence Education: 7-12 Social Studies	BA	25732	2201.01
Economics–Mathematics	BA	83566	2299	Adolescence Education: 7-12 French	BA	25733	1102.01
Economics–Mathematics	BS	83567	2299	Adolescence Education: 7-12 Spanish	BA	25735	1105.01
English	BA	09800	1501	Adolescence Education: 7-12 Mathematics	BS	25737	1701.01
English–Canadian Studies	BA	81118	4903	Adolescence Education: 7-12 Biology <i>(Extension for 7-12 General Science with additional coursework)</i>	BS	25738	0401.01
Environmental Studies	BA	22863	0420	Adolescence Education: 7-12 Chemistry <i>(Extension for 7-12 General Science with additional coursework)</i>	BS	25739	1905.01
Environmental Studies–Biology	BS	89035	0499	Adolescence Education: 7-12 Earth Science <i>(Extension for 7-12 General Science with additional coursework)</i>	BS	25740	1917.01
Environmental Studies–Chemistry	BS	89036	0499	Adolescence Education: 7-12 Physics <i>(Extension for 7-12 General Science with additional coursework)</i>	BS	25741	1902.01
Environmental Studies–Economics	BA	89039	0499	Special Subjects: K-12 Visual Arts	BA	25742	0831
Environmental Studies–English	BA	22613	0499	Special Subjects: K-12 Visual Arts non-granting <i>(joint program with SUNY Potsdam)</i>	BS	26310	0831
Environmental Studies–Geology	BS	89037	0499				
Environmental Studies–Government	BA	89040	0499	Post-Baccalaureate Teacher Certification Programs (Initial)			
Environment Studies–Mathematics	BA	33903	0499	Post-Baccalaureate Teacher Certificate <i>for SLU graduates; all certificate titles listed above</i>	Adv. Cr.	25729	0803
Environmental Studies–Philosophy	BA	19101	0499	Post-Baccalaureate Teacher Certificate <i>for non-SLU graduates; all certificate titles listed above</i>	Adv. Cr.	25730	0803
Environmental Studies–Psychology	BS	89038	0499				
Environmental Studies–Sociology	BA	89041	0499	Master’s Level Certification Programs			
Estudios Hispánicos	BA	09798	1105	Teacher Certification <i>(Initial & Professional)</i>			
Francophone Studies	BA	09795	1102	General Studies in Education <i>all certificate titles listed above</i>	M.Ed.	25727	0803
Geology	BS	09812	1914	Teacher Certification <i>(Professional only)</i>			
Geophysics	BS	09813	1916	General Studies in Education	M.Ed.	25728	0803
Global Studies	BA	22915	0399				
Government	BA	09819	2207				
Government–Asian Studies	BA	86043	2299				
Government–Canadian Studies	BA	81113	4903				
History	BA	09818	2205				
History–Asian Studies	BA	86044	2299				
History–Canadian Studies	BA	81112	4903				
International Economics–French	BA	32963	4903				
International Economics–German	BA	32962	4903				
International Economics–Multilanguage	BA	32964	4903				
International Economics–Spanish	BA	32961	4903				
Mathematics	BS	09806	1701				
Multifield Program	BA	78014	4901				
Multifield Program	BS	78015	4901				

The programs listed in this table have been approved by the New York State Department of Education at St. Lawrence University. Not all programs continue to be offered. Enrollment in other than registered or otherwise approved programs may jeopardize a student’s eligibility for certain student aid awards.

Courses of Study

THE COURSES LISTED IN THIS *Catalog* reflect, as accurately as possible, what the University offers. Because changes in academic programs and staffing inevitably occur, no guarantee can be made that a particular course will be offered in a given semester or year. Moreover, each semester many departments offer courses that are not listed in this catalog because they are new or special. The list of available sections, published by the registrar for each semester, is a more accurate list of what is expected to be offered in that semester.

Courses are for one credit unit per semester unless otherwise noted. Each full unit is equivalent to 3.6 semester hours. Courses that satisfy distribution requirements are indicated in each semester's published list of available sections. Classes are held Monday through Friday; each full one-unit course normally meets three hours per week. Some courses having laboratories, studios or recitation sections may meet for more than three hours per week.

The normal course load consists of four units per semester. All new students matriculating at St. Lawrence are required to take 33.5 course units for graduation. Students should consult the registrar for information about possible charges for overload course registrations.

In most departments and programs of study, able students may undertake special projects or enroll in seminars. For more information, consult the chair of the department or program coordinator and the published list of available sections.

Requirements concerning majors, minors, tutorial work and comprehensive examinations in the various departments and programs are included in this *Catalog* (see each department or program description, and Major Requirements in the Curriculum chapter, www.stlawu.edu/resource/university-catalog), or can be determined by consulting the appropriate department chair or program coordinator. Graduate credit is offered only through the Education department. Information about graduate offerings is given in that department's *Catalog*, which is available in the department's office in Atwood Hall, or at www.stlawu.edu/education/resource/graduate-catalog.

The course list that follows is organized alphabetically. The Majors and Minors Offered table provides a quick reference guide. For more on these, in addition to their respective entries in the pages that follow, go to www.stlawu.edu/academics.

Majors and Minors Offered

Department Majors

African Studies–Anthropology
 African Studies–Economics
 African Studies–Government
 African Studies–History
 Anthropology
 Art and Art History
 Asian Studies–Government
 Asian Studies–History
 Asian Studies–Religious Studies
 Biochemistry
 Biology
 Biology–Physics
 Business in the Liberal Arts
*(offered only as second part
 of a double major)*
 Canadian Studies–Art and Art History
 Canadian Studies–Economics
 Canadian Studies–Estudios Hispánicos
 Canadian Studies–English
 Canadian Studies–Francophone Studies
 Canadian Studies–German Studies
 Canadian Studies–Government
 Canadian Studies–History
 Canadian Studies–Modern Languages
 and Literatures
 Canadian Studies–Religious Studies
 Canadian Studies–Sociology
 Chemistry
 Computer Science
 Conservation Biology
 Economics
 Economics–Mathematics
 English
 Environmental Studies
 Environmental Studies–Anthropology
 Environmental Studies–Biology
 Environmental Studies–Chemistry
 Environmental Studies–Economics
 Environmental Studies–English
 Environmental Studies–Geology
 Environmental Studies–Government
 Environmental Studies–Mathematics
 Environmental Studies–Philosophy
 Environmental Studies–Psychology
 Environmental Studies–Sociology
 Estudios Hispánicos
 Francophone Studies
 Geology
 Geology–Physics
 Global Studies
 Government
 History
 International Economics–
 Estudios Hispánicos
 International Economics–
 Francophone Studies
 International Economics–
 German Studies
 International Economics–
 Multi–Language
 Mathematics
 Multi–language
 Music
 Neuroscience
 Performance and
 Communication Arts
 Philosophy
 Physics
 Psychology
 Religious Studies
 Sociology
 Statistics

Multi-Field Major

Self-designed

Minors

African American Studies
 African Studies
 Anthropology
 Arabic Studies
 Art and Art History
 Asian Studies
 Biology
 Canadian Studies
 Caribbean & Latin American Studies
 Chemistry
 Chinese Studies
 Computer Science
 Economics
 Education Studies
 Education (certification)
 English
 Estudios Hispánicos
 European Studies
 Film & Representation Studies
 Francophone Studies
 Gender and Sexuality Studies
 Geology
 German Studies
 Global Studies
 Government
 History
 Italian Studies
 Mathematics
 Music
 Native American Studies
 Outdoor Studies
 Peace Studies
 Philosophy
 Physics
 Psychology
 Religious Studies
 Sociology
 Sports Studies and
 Exercise Science
 Statistics

Other Programs of Interest...

- **Business**
(see Business in the Liberal Arts; also 4+1 MBA, Curriculum section)
- **Communication Studies**
(see Performance and Communication Arts)
- **Creative Writing** *(see English)*
- **Dance, Drama**
(see Performance and Communication Arts)
- **Engineering**
(see Pre-Professional Programs, Curriculum section)
- **Exercise Science**
(see Sports Studies and Exercise Science)
- **Fine Arts** *(see Art and Art History)*
- **Foreign Languages, French, German, Spanish**
(see Modern Languages and Literatures)
- **International Studies** *(see Global Studies)*
- **Latin American Studies**
(see Caribbean and Latin American Studies)
- **Political Science** *(see Government)*
- **Journalism** *(see English)*
- **Languages** *(see Modern Languages and Literatures)*
- **Law**
(see Pre-Professional Programs, Curriculum section)
- **Medicine**
(see Pre-Professional Programs, Curriculum section)
- **Spanish** *(see Estudios Hispánicos)*
- **Speech**
(see Performance and Communication Arts)
- **Studio Art** *(see Art and Art History)*
- **Theater** *(see Performance and Communication Arts)*
- **Visual Art** *(see Art and Art History)*
- **Writing** *(see English)*

African Studies

Combined major and minor offered

Professors Barthelmess (biology), Blewett (economics), Collins (global studies), Udechukwu (art and art history); **Associate Professors** Assefa (sociology), Carotenuto (history), DeGroat (history), Haugh (anthropology and African studies), Willson (biology), Wong (global studies); **Assistant Professors** Brezault (francophone African studies), Johnson (PCA), McKie (government and African studies); **Visiting Instructor** Kitito (Swahili).

Visit the African studies webpage at www.stlawu.edu/african-studies.

The African studies program enables students to construct a comprehensive knowledge of the African continent and its peoples, including their extensive interaction with many other peoples and regions in the international community. Specialization in African studies is designed to foster knowledge about Africa through an organized plan of study; to promote understanding of the diversity of African people and societies; and to nurture the capacity for interdisciplinary problem-solving approaches to questions and for independent research. Issues addressed include the earliest biological and cultural origins of modern humanity, environmental change, economic growth with equity, development of participatory government and a strong civil society, the relationship between indigenous and non-African cultures, and African Diaspora studies. Background in African studies helps prepare students for graduate work in this interdisciplinary field or in international relations, for careers in government, international development and business, or for work in the Peace Corps and other service opportunities.

The African studies program offers a multidisciplinary curriculum leading to a minor or a number of combined majors. St. Lawrence maintains a semester study program in Kenya, and offers a Senegal travel component of as part of the program in France. Summer programs are also regularly offered in Kenya and Ethiopia and language courses in Swahili are taught by Kenyan scholars (see the International and Intercultural Studies chapter).

Minor

The African studies minor consists of six African studies courses. Students are encouraged to begin with either AFS101 or 225 and must select courses from a range of disciplines. Also, they must complete a capstone course that is either an African studies 400-level seminar or an interdisciplinary independent project approved by the African Studies Advisory Board.

Combined Major

African studies offers combined majors with anthropology, economics, government and history. Each combined major consists of five African studies courses plus requirements from cooperating departments. The typical combined major has between 12 and 14 courses in total. Students are encouraged to begin with either AFS 101 or AFS 225. They must select courses from a range of disciplines. Students must complete a capstone course that is either an African studies 400-level seminar or an interdisciplinary independent project approved by the African Studies Advisory Board.

Anthropology and African Studies

Anthropology (ANTH)

Four core courses*	4 units
One 300-level research methods course* <i>(must be taken in the anthropology department)</i>	1 unit
Electives (200-level and above) <i>(at least two should be dual-listed with AFS, and no more than two may be taken outside the department)</i>	3 units
Capstone 400-level seminar	1 unit
Five AFS courses, including a 400-level approved AFS course	<u>5 units</u>
Total	14 units

*See *Anthropology Major Requirements for the list of core and research courses and guidelines regarding study abroad.*

Economics and African Studies

Economics (ECON)

100. Introduction to Economics.*	1 unit
200. Quantitative Methods in Economics.**	1.5 units
251. Intermediate Microeconomic Theory.	1 unit
252. Intermediate Macroeconomic Theory.	1 unit

*This course may be omitted with advanced placement credit or other advanced standing.

**Students taking (1) Statistics 213 or MATH 325 or 326 OR (2) Statistics 113 and either MATH 135 or MATH 136, with at least a grade of 3.0 in each, may take another economics elective in lieu of Economics 200.

COURSES OF STUDY – AFRICAN STUDIES

Four other electives in economics	4 units
<i>At least two must be at the 300/400 level and at least two must be selected from these three:</i>	
228. African Economies.	
322. International Economics.	
336. Economic Development.	
Five AFS courses, including a 400-level approved AFS course	<u>5 units</u>
Total	13.5 units

Government and African Studies

Government (GOVT)

103. Introduction to American Politics.	1 unit
105. Introduction to Comparative Politics.	1 unit
320. African Politics.	1 unit
290. Research Seminar.	1 unit
373. Political Institutions in the Developing World.	1 unit
Two additional electives	2 units
Five AFS courses, including a 400-level approved AFS course	<u>5 units</u>
Total	12 units

History and African Studies

History (HIST)

10 courses	10 units
-1 must be a 299 Seminar on Historical Research Methods	
-4 from different regions (<i>including one on African history</i>)	
-No more than three courses at the introductory (100) level may be credited toward the major	
-1 SYE (<i>which should be the HIST-AFS SYE</i>)	
Five AFS courses	<u>5 units</u>
<i>(One of which may be counted for both History and African Studies)</i>	
Total Required	14 units

Study Abroad

Courses completed in the University's Kenya Program (KSP) count toward completion of either the minor or the combined major. Students who apply for the KSP must complete an introductory course in African studies (AFS 101 or AFS 225 is especially recommended). Interested students should discuss their academic plans with one of the coordinators of the program as well as personnel in the office of international and intercultural studies. Students who complete the KSP are encouraged to declare a combined major or minor in African studies and in most cases will only need to complete the 400-level

capstone requirements after participating on the program. Participants in the France program have a study trip to Senegal. There are also opportunities for study in Africa during the summer. For more information on the Kenya Program, France program or summer study options, visit www.stlawu.edu/ciis.

Courses

The following African studies courses are accepted for the African studies combined major and minor.

101. Introduction to African Studies: History and Development.

This course serves as a broad, interdisciplinary introduction to the study of Africa. Course materials and readings are designed to give special emphasis to African initiatives and perspectives in shaping their own history. African interactions in a global context are emphasized to highlight issues such as the Atlantic slave trade and colonization. Other topics include cultural diversity, geography and environment, religious expression and development. At the end of the course students will be able to see how Africans have participated in world historical events and explain the many forces that have shaped African societies over the past 500 years. *Also offered as History 108.*

225. Peoples and Cultures of Africa.

This course surveys contemporary peoples and cultures in sub-Saharan Africa through the lens of three major themes. We will study the enduring importance and flexibility of African systems of social organization, and their relationship to religious beliefs and practices. We will learn about patterns of production and consumption in African economies, and about power, authority and conflict in African politics. Throughout, we note the centrality of social relationships to everyday life on the continent, and the ways that mobility and migration, forced or voluntary, temporary or permanent, have shaped African identities and communities. *Also offered as Anthropology 225.*

Departmental Offerings

Anthropology

- 225. Peoples and Cultures of Africa.
- 341. Popular Culture in Africa.
- 425. Environmental Conservation in Africa.

Art and Art History

- 215. West African Arts.
- 246. Art and Politics in Nigeria.

Economics

- 228. African Economies.
- 336. Economic Development.

Global Studies

- 262. Africa and Globalization.

Government

- 220. African Politics.

History

- 108. Introduction to African Studies: History and Development.
- 252. Conflict in Africa.
- 299. Seminar on Historical Research Methods, when relevant.
- 308. European Imperialisms.
- 480. SYE: Contemporary Africa.

Modern Languages and Literatures

Arabic

- 101. Elementary Arabic.
- 102. Elementary Arabic.
- 103. Intermediate Arabic.
- 104. Intermediate Arabic.

Swahili

- 101,102. Elementary Swahili.

Students wishing to go on the Kenya program are strongly encouraged to take 101 before they leave. Swahili is a required course on the Kenya program and is offered at various levels. Swahili is also offered occasionally above the 102 level via independent study.

Music

- 210. Musics of the World.

Philosophy

- 232. Africana Philosophy.

Sociology

- 310. Slavery, Race and Culture.

Off-Campus Program Courses

France Program Courses

- 279. Culture of Francophone Africa.

Kenya Semester Courses

Swahili is required, as is AFS 337 (Culture, Ecology and Development in East Africa), which is offered only on the Kenya Program.

Other courses offered in Kenya vary according to student demand and availability of instructors.

Recent offerings have included courses which count for both African studies and the following departmental credit: Anthropology, biology, conservation biology, environmental studies, gender studies, global studies, government, history and sociology, For more on the current offerings in Kenya see <http://blogs.stlawu.edu/kenya>.

African-American Studies

Minor offered

Advisory Board: Professors Bailey (Emeritus, English), Regosin (history); **Associate Professors** Denaci (art and art history), Smith (coordinator, history); **Associate Chaplain** Whitehead.

Visit the African-American studies Web page at www.stlawu.edu/african-american-studies.

African-American studies programs were born out of struggle, resistance, and demands for social justice. In the late 1960s, students of color and their white supporters, many of whom had been involved in the civil rights and black power movements, confronted university administrators, occupied university buildings and went on strike to demand greater access to higher education, recruitment of more minority students and faculty, and curricular changes that would better reflect the ethnic diversity of the United States.

African-American studies courses embody these core values of struggle against inequality, resistance to oppression and demands for social justice. Specifically designed to engage students in critical analysis and intellectual exploration of the African-American presence in and contributions to the United States, the program considers the diversity among Black Americans and examines the complexities of and interrelations among multiple “minority” identities as we consider gender, sex and sexuality, spirituality, class, and political and cultural ideologies in various African-American and Black immigrant communities.

The United States Census Bureau predicts that by 2050 the United States will be a “majority minority” nation—whites of European descent will constitute a minority of the population. African-American studies, like other ethnic studies, places in context the often underrepresented and underappreciated historical, literary/artistic and ideological contributions of minority groups in the United States and charts the contemporary landscape of United States racial, ethnic and class relations. All college students today will have to make their way in an increasingly multi-ethnic

U.S. society. African-American studies provides a critical diversity of perspective on U.S. history, culture, and society.

Minor Requirements

The minor consists of five courses from at least two different disciplines. Students may also count 3000- and 4000-level special topics and First-Year Seminar courses on African-American studies towards completion of the minor.

Courses for the minor may be drawn from the following:

Art and Art History

211. African-American Art and Visual Culture.

Education

203. Contemporary Issues in American Education.

English

230. Introduction to African-American Literature.

Gender and Sexuality Studies

301. Studies in Masculinities.

Global Studies

102. Introduction to Global Studies II:
Race, Culture, Identity.

History

256. Slavery and Freedom in the Americas.

263. African-American History to 1865.

264. African-American History, 1865-present.

272. The New South.

273. Civil Rights Movement.

280. History of Women in America.

331. Imagining the South.

340. Race, Ethnicity and Baseball.

Performance and Communication Arts

221. Intercultural Communication.

Philosophy

232. Africana Philosophy.

Sociology

112. Inequality.

228. Race and Ethnicity.

253. Race, Class, and Environmental Justice.

310. Slavery, Race and Culture.

Minors are also encouraged to participate in St. Lawrence's off-campus program at Fisk University, a historically Black college in Nashville, Tennessee. Semester and short-term options are available at Fisk.

Anthropology

Major and minor offered; also

Anthropology–African Studies major

Associate Professor Abraham, Haugh (chair);

Assistant Professors Harr, Pitre.

Visit the anthropology department webpage at www.stlawu.edu/anthropology.

The anthropology major at St. Lawrence involves intensive study in all four fields of anthropology (minors focus on any three of these fields): cultural anthropology, linguistic anthropology, archaeology, and biological anthropology.

Anthropology links the social sciences, natural sciences, arts, and humanities. It has always incorporated insights from biology, geology, geography, literary studies, history, philosophy, political science, economics, and psychology, among other disciplines. An anthropology major or minor is therefore an excellent choice as a component of a broader liberal arts education, and complements a major or minor in many other disciplines very well.

The department offers introductory courses in each of the principal fields of the discipline: biological anthropology, archaeology, cultural anthropology, and linguistic anthropology. These courses are designed for beginning students and assume no previous knowledge of the discipline. They provide avenues to more intensive and specialized study in each of these fields. All of them, beginning from distinct sets of questions, converge on the central and fundamental issue of what it means to be human.

Some courses are cross-listed for credit toward African Studies, Asian Studies, Peace Studies, Performance and Communication Arts, Government, Conservation Biology, and Business in the Liberal Arts. Specific anthropology courses also fulfill general education requirements such as SS, DIV13, and EL. The department offers an Anthropology–African Studies major, which most students complete by spending a semester studying in Kenya. Many of our courses provide excellent preparations for students wishing to study abroad.

Our faculty members are prepared to assist students in pursuing a range of directions in their studies within the discipline. With personal field research experience in Namibia, Sudan, India, and Indonesia, among other places, they have published books and articles on a wide range of topics. The department's Anthropology Teaching and Research Laboratories house several collections of artifacts as well as human skeletal materials and ancient bone and fossil casts for hands-on study.

Outside the classroom, students are welcome to join the Anthropology Club, a student-run organization open to anyone with an interest in anthropology, whether or not they are majors or minors. Some students qualify for membership in Lambda Alpha, the national anthropology honorary society. The department also compiles information on the many anthropological field schools (e.g., ethnographic, linguistic, archaeological, and biological) and ongoing projects open to students throughout the United States and other parts of the world. St. Lawrence students have also accompanied faculty on research trips to Australia, India, Indonesia, Kenya, and Papua New Guinea.

Learning Goals

By the time they graduate, all anthropology majors should be able to:

1. Explain what each of the four sub-disciplines – biological anthropology, archaeology, cultural anthropology, and linguistic anthropology – contributes to anthropology's holistic understanding of what it means to be human;
2. Articulate the nature and significance of cultural, social, linguistic, and biological diversity within and between human populations across time and space;
3. Describe how fundamental theories and concepts in anthropology – such as evolution, function, structure, network, culture, society, and identity – have developed and are applied across different sub-disciplines;
4. Use anthropological methods – such as participant-observation, open-ended interview, lab analysis, and excavation – to conduct hands-on research in an ethical fashion;

5. Seek out, evaluate, and work with textual sources in the library and on the internet; and
6. Demonstrate critical reading, thinking, writing, and speaking skills.

Anthropology Major Requirements

The major in anthropology consists of 11 courses, distributed as follows:

1. **Core Courses (4)**
The major core consists of Anthropology 101 (Human Origins), 102 (Cultural Anthropology), 103 (Introduction to Archaeology), and 104 (Language and Human Experience). There is no particular recommended sequence, but students should take the introductory course before taking 300-level or 400-level courses in the same subfield.
2. **Electives (4)**
Majors must take four additional courses at the 200-level, 300-level, or 400-level. Electives may be taken on study abroad programs, but no more than two electives may be taken outside the department.
3. **Advanced Topics Course (1)**
All majors must complete at least one 300-level Advanced Topics course. These courses allow students to build on the anthropological knowledge, theories, and methods they have learned about in lower-level courses, to delve deeply into a particular topic, and to further develop their skills in reading, writing, speaking, research, interpretation, and/or analysis.
4. **Capstone Experience (1)**
Senior majors must take at least one 400-level capstone seminar or complete an Independent Study project (489, 490) or Honors project (498, 499). Students should consult an Anthropology faculty member well in advance about the latter two options.
5. **One additional Advanced Topics Course or Capstone Experience (1).**

Experiential Co-requisite

The experiential learning co-requisite is intended to provide students with an opportunity to gain experience which complements their Anthropology coursework. Majors must complete at least

one of the following experiential learning options:

- Study on an approved semester program abroad
- Take an approved Community-Based Learning (CBL) course
- Carry out independent anthropological research (short-term, summer, or semester)
- Attend an approved field school in archaeology, cultural anthropology, primatology, forensics, or any other field of anthropology
- Complete an internship relevant to anthropology
- Master another language (as demonstrated by study through the 200-level)

Majors should consult with their advisor about which option(s) will best contribute to their education in anthropology. To complete the co-requisite, students must give a short presentation to the department reflecting on the anthropological value of their experience. For short-term or summer research projects, anthropological field schools, and internships, financial support is available on a competitive basis, and we will advise you about how to apply for these funds.

Anthropology– African Studies Major Requirements

Anthropology offers a combined major with African studies. A total of nine courses make up the anthropology part of the major; see African studies for the required courses for that aspect of the combined major. Combined anthropology–African studies majors must take the four introductory courses that make up the core curriculum (listed above), one Advanced Topics (300) course, one (400) capstone, and three electives numbered 200 or above. At least two of the electives should be dual-listed with African studies; no more than two electives may be taken outside the department. See Anthropology Major Requirements, above, for guidelines regarding study abroad. While the experiential co-requisite is not required of combined majors, we strongly urge African studies combined majors to fulfill it, either on campus or through participation in an overseas program (e.g., the Kenya Program).

Minor Requirements

The minor in anthropology consists of seven courses that must include:

1. **At least three of the four introductory courses:** 102 (Cultural Anthropology), 103 (Introduction to Archaeology), 201 (Introduction to Human Origins) or 205 (Language and Human Experience);
2. **At least two electives numbered 200 or above;**
3. **At least one Advanced Topics course numbered 300,** taken in the department;
4. **At least one capstone course numbered 400,** also taken in the department.

Honors

Majors whose achievements in anthropology courses have been of sufficiently high quality may pursue an honors project, sponsored by an honors advisor in the department and approved by an honors committee. University guidelines specify that eligibility for honors requires a grade point average of 3.5 in all courses taken in the department.

A student should declare intent to pursue an honors project by registration during the second semester in the junior year, and agree to the departmental guidelines for honors projects. These are available from the department on request.

Majors and minors in anthropology may qualify for membership in the Iota chapter of Lambda Alpha, the national collegiate honor society for anthropology. Juniors who have completed a minimum of four courses in anthropology and have maintained a 3.5 GPA in those courses and a 3.3 cumulative GPA can apply. Additional details are available from the department.

Certification to Teach Social Studies

Students seeking initial certification as a 7-12 social studies teacher in New York can major in anthropology. In addition to completing the certification minor in education, students majoring in anthropology must also take History 103 (Development of the United States, 1607-1877)

and 104 (Development of the United States, 1877–Present); one economics course (Economics 100, Introduction to Economics, is recommended if only one course is taken); one government course (Government 103, Introduction to American Politics, is recommended if only one course is taken); and at least two courses in the major that illuminate U.S. and/or world history and geography. Students are also encouraged to take courses in other social sciences and area studies to round out their preparation for teaching social studies.

Anthropology majors intending to complete student teaching in the University's Post-Baccalaureate Teacher Certification Program after graduation must complete the educational studies minor in education (or its equivalent) as undergraduates and all of the social science requirements listed above (or their equivalents). Consult the Education section of this *Catalog* and/or speak to the coordinator of the teacher education program in the education department as early as possible.

Courses

101. Introduction to Human Origins.

This course explores the nature of humanity using a biocultural approach. Students learn about the history and basic concepts of evolutionary thought, the fossil and genetic evidence for human evolution, the origins of language and culture, and human biological diversification. We analyze the human species with the rest of the primates by formulating explanations concerning the biological and cultural development of the primate order over the last 65 million years. Restricted to first and second year students. Offered every semester.

102. Cultural Anthropology.

This course introduces students to the comparative study of human cultures and societies. We will learn important anthropological concepts, methods and theories as we explore topics like subsistence and exchange, kinship and marriage, and politics and law. Throughout the course, we will learn about differences and similarities between human populations, we will consider how cultures and societies have changed over time, and we will reflect on our own culture and society. Restricted to first- and second-year students. Offered every semester. *Also offered through Peace Studies.*

103. Introduction to Archaeology.

A general overview of the branch of anthropology that investigates ancient societies through the material remains they have left behind. Students learn that archaeologists engage in detailed, systematic detective work aimed at answering a wide range of questions about human behavior. The course introduces students to the history of archaeology, the main goals of archaeological research and the basic techniques of excavation, site survey and artifact analysis, as well as the famous discoveries and excavations that have broadened our knowledge about the human past. Restricted to first- and second-year students. Offered every semester.

3000-3999. Special Topics Courses.

These special topics courses deal with various topics in anthropology at the 100 or 200 level. Offered occasionally.

208. Ancient Civilizations.

Students learn how and why relatively simple egalitarian societies made the transition to state-level civilizations via an overview of several "primary" civilizations of the Old and New Worlds, chosen from among Mesopotamia, Egypt, China, the Indus Valley, Mesoamerica and the central Andes. In comparing and contrasting these case studies, students explore key issues from an anthropological perspective: how archaeologists investigate these early social formations, what the material remains tell us about how they functioned and flourished, the critical role of the environment and geography, and how and why the civilizations declined. Offered on rotation. *Also offered through Asian Studies.*

215. Science and Pseudoscience in Archaeology.

Lost continents, ancient astronauts, mysterious giants: In the mass media, archaeology has often been the subject of fantastic myths, frauds and endless speculation about what "really" happened. This course critically examines various popular and pseudoscientific claims about the human past, including the search for Atlantis, the shroud of Turin, Stonehenge and the Piltdown Man, and introduces students to the scientific goals, methodology and techniques of archaeology. How do archaeologists "know" things — how do they work within logistical theoretical frameworks, systematically explore the patterns and contexts of archaeological remains, and interpret the material and scientific evidence to draw educated conclusions about past human experiences? Offered on rotation.

225. Peoples and Cultures of Africa.

This course surveys contemporary peoples and cultures in sub-Saharan Africa through the lens of three major themes. We will study the enduring importance and flexibility of African systems of social organization, and their relationship to religious beliefs and practices. We will learn about patterns of production and consumption in African economies, and about power, authority and conflict in African politics. Throughout, we note the centrality of social relationships to everyday life on the continent, and the ways that mobility and migration, forced or voluntary, temporary or permanent, have shaped African identities and communities. Offered every fall. *Also offered as African Studies 225.*

241. Talking Politics.

In this course, we will think broadly about the place of rhetoric and persuasion in language, politics, and social life. What qualities make some forms of speech politically powerful? How does political powerful speech vary from one society or historical period to another? In exploring the spectrum of political speech, we will seek to understand the ways in which language and power are intertwined. No background in anthropology will be assumed, but a fundamental curiosity about culture and communication is expected. Offered on rotation.

242. Dealing With the Dead.

Ever wonder how ancient Egyptians, Mesopotamians and Mayans viewed and treated their dead? Curious about cemeteries, mummification, trophy heads and sacrifice? Through an examination of death, burial and ritual, this course will explore the treatment of the dead by ancient and living cultures around the world, and examine what types of information can be obtained from burials and human skeletal remains, including health and disease, violence, and status. Offered on rotation in the fall semester.

251. Humans and Other Animals.

This course explores relationships between humans and other animals, as well as ideas that humans have about animals. We will examine the similarities and differences between humans and our closest relatives: the great apes and other primates. We will consider both wild and domestic animals through topics such as hunting and herding, wildlife documentaries and working animals, zoos and pets. Finally, we will delve into the ways animals inspire the human imagination in folktales, magic, and beliefs about shamans and shape-shifters. We will examine cases from around the world, with a special focus on Africa. *Also offered as African Studies 251.* Students who take the course as AFS 251 must do both research projects on African topics. Offered on rotation in the spring semester.

262. Ancient India.

This course explores the rich South Asian past by examining the archaeology of India, Pakistan, Sri Lanka and Bangladesh. A major goal is to understand the history of archaeological research in the region, from its colonial origins to its current controversial role in Indian religious politics. A particular focus is the Indus Valley civilization, one of the earliest state-level societies in the world. Offered on rotation. *Also offered through Asian Studies.*

290. The Human Skeleton.

Curious about the human skeleton? Interested in how the human skeleton can be studied to understand past and present ways of life? In this course, students learn about the bones (including teeth) of the human body: how they grow and how they can be identified, reconstructed, and analyzed to answer complex anthropological questions regarding health, disease, stress, and trauma through time. Much of the course is hands-on and will involve handling real human skeletal material in a laboratory setting. Recommended for students interested in anthropology, forensics, law and health-related fields. Offered periodically in the spring semester.

318. Archaeology and Identity.

How do archaeologists define identity? How do they recognize it “on the ground”? This course considers whether identity — based on gender, “race,” ethnicity, religious affiliation or class — is passively reflected in material culture or if it is imposed on ancient peoples by modern thinkers. We also explore the issue from a contemporary perspective, by examining the intersections among archaeology, nationalist agendas and the social constructions of the past. We examine several archaeological case studies, including gender roles in early Mayan and Mesopotamian societies, caste affiliations in ancient India and the politics of archaeology in Nazi Germany. Offered on rotation. *Also offered through Gender and Sexuality Studies.*

325. Evolution, Culture and Human Diversity.

What are the evolutionary mechanisms responsible for human diversity? Throughout evolutionary history, humans have been able to occupy virtually every region on the planet. In doing so, humans have undergone a process of cultural and biological diversification. This course offers a bio-cultural perspective to study the evolution and diversification of humanity. Students learn about the relationship among biology, culture and the environment, and discuss topics such as human differences in blood type, lactose intolerance, adaptation to hot and cold environments, adaptation to ultraviolet radiation, and eugenics. Recommended for students interested in biomedical sciences and related fields. Offered occasionally.

365. Forensic Anthropology.

How can bones help forensic scientists identify long-dead people? What is the role of forensic anthropologists in mass disaster and human rights investigations? Do shows such as “Bones” and “CSI” accurately reflect the role of forensic investigators? Through hands-on experience, students will learn how forensic anthropologists use skeletal materials and biological principles to recover, identify and evaluate human skeletal remains. By the end of the course, students will have basic knowledge of the history and goals of forensic anthropology, human osteology, and an awareness of issues relating to the search, discovery and recovery of human skeletal remains. Offered occasionally in the fall semester.

4000-4999. Special Topics Seminars.

These advanced seminars deal with significant topics in anthropology at the 300 or 400 level. Recent offerings have included Myth, Magic and Ritual; and Language, Performance, and Power. Offered occasionally.

415. Great Debates in Archaeology.

When faced with wondrous yet puzzling archaeological remains that cover the globe, what were the reactions of scholars and lay people 100 or 500 or 1,000 years ago? This course traces the intriguing history of archaeological investigation, from its antiquarian, “treasure hunt” origins to its modern incarnation as a systematic, scientifically driven discipline. We examine how the practice of archaeology has been shaped by social and political climates; explore the impact of changing notions toward historical time, human progress and the “other”; and evaluate contemporary theoretical and methodological approaches to the study of the human past. Offered in some fall semesters.

420. Views of Human Nature.

What is “Human Nature”? This course explores the history of scholarly attempts to understand human social and cultural phenomena, from early European efforts to account for human diversity to the spectrum of modern anthropological thought. Each scholar has a particular view of human nature, even if it amounts to the assertion that there is no such thing. We explore the implications of these views and try to understand them in the social and political contexts in which they arose. Serves as the capstone seminar for all anthropology majors. Offered every spring. *Also offered through Peace Studies.*

425. Environmental Conservation in Africa.

This course investigates a wide variety of environmental conservation projects in Africa. We examine efforts by colonial and post-colonial states to preserve wilderness in national parks, and how local residents have responded. We study projects developed by international organizations which link environmental conservation with economic benefits for local people. Finally, we look at indigenous African efforts to conserve natural resources and to restore degraded lands. Throughout the course, we compare and contrast the perspectives and interests of conservation biologists, government officials and local residents, among others. Offered every fall. *Also offered as African Studies 425.*

430. Advances in Biological Anthropology.

What does it mean to be human? How did humans become what we are today? These two questions lie at the heart of all anthropological discourse. This course explores the bio-cultural nature of the human species through a detailed examination of the various areas of study within biological anthropology. In doing so, the course presents a critical examination of issues, methods and theory in biological anthropology, approached from the following perspectives, each in their larger social, historical and intellectual contexts: paleoanthropology and evolutionary theory; skeletal biology and osteology; primatology; human biology; and population genetics. Offered in some fall semesters.

440. Writing Culture.

How can we uncover the fragile meanings that motivate human behavior? How can we convey something of these meanings to a wider audience? Can these meanings form the basis for a scientific (i.e. generalizable, empirical, and falsifiable) study of humanity? This course addresses core methodological questions by engaging students in a practical workshop on ethnographic research and writing. During the course, students will collaborate on group research projects as well as designing and carrying out an individual ethnographic project. In both group and individual projects, students will gain experience in making structured observations, writing and revising field notes, conducting ethnographic interviews, and analyzing interlocutors' narratives. As we explore these methodological issues, we will also engage the product of ethnographic research: ethnographic writing. In sampling a range of historical and contemporary ethnographies, we will explore where anthropology has been and ask where it may be going.

489,490. SYE: Senior Projects.

Open to qualified students who wish to pursue more specialized or advanced anthropological study and research on a specific topic under the direction of a faculty sponsor. Prerequisite: at least two anthropology courses and permission of the instructor.

498,499. SYE: Honors in Anthropology.

Open to anthropology majors with a grade point average of at least 3.5 in all courses taken within the department. Requires completion of a long-term project beginning late in the junior year under the guidance of a faculty advisor. Details are available from the department. Prerequisite: permission of the instructor.

Art and Art History

Major and minor offered

Professors Limouze, Udechukwu; **Associate Professors** Basu, Dane, Denaci, Hauber, Schulenberg (chair); **Assistant Professor** Knobel; **Visiting Assistant Professor** Yang.

Visit the art and art history department webpage at www.stlawu.edu/academics/programs/art-and-art-history or by linking directly to it from the Majors and Programs page at www.stlawu.edu/academics.

St. Lawrence University's Department of Art and Art History offers courses that lead to the B.A. degree with concentrations in studio art, art history, or a combined concentration. Studio art courses provide students with grounding in the technical, aesthetic and critical aspects of artistic production and exhibition; study in art history provides students with the methodological and critical tools for the analysis of visual culture and its role in history. The study of art and art history is central to a liberal arts education, especially in a world increasingly shaped by images and seemingly endless visual information.

Creative process, technique and content are taught concurrently throughout all of the studio classes. Courses include digital and traditional artistic media. Art history courses range from the ancient Mediterranean, Asia and Africa through the western world, from the Middle Ages to postmodernism. Both studio and art history courses bring to students an awareness of the philosophical, psychological and cultural bases from which works of art take shape.

As a complement to the art and art history program, the Richard F. Brush Art Gallery sponsors a program of thematic and contemporary exhibitions, including faculty and alumni exhibitions and annual student shows. Students are often employed in the gallery program, so that they may develop a working knowledge of aspects of gallery management, including registration, installation, conservation, and writing informational materials for exhibitions.

Major Requirements

A major in art and art history includes class work in studio art and in the history of art. In addition to the general graduation requirements, a minimum of 11 units* is necessary for the major; the maximum number of units allowable is 14. This includes both transfer units and courses taken abroad. Transfer students are required to take at least 6 units of credit in the department. All art and art history majors are expected to obtain a minimum grade point average of 2.0 in department courses, although a better-than-average grade level is recommended.

**Students may take more than the minimum of 11 courses in Art and Art History. However, the registrar may not give credit toward graduation for more than 14 courses in a single academic department.*

Art History Concentration

8 Art History and 3 Studio 11 units

Art History

116. Survey of Art History I **or**

117. Survey of Art History II.

(7)* other art history courses:

(1) must be a 300-level course

(1) must be a 400-level course

(1) must be a non-western art history course

**One semester of foreign language may replace one 200-level or above may replace one 200-level course.*

Studio

131. Drawing I.
 (2) studio art electives
(Two different media must be represented: 3 studio art courses total, in at least two media, one of which must be Drawing I)

Students interested in attending graduate school in art history are strongly encouraged to study at least one foreign language appropriate to their areas of interest.

Studio Art Concentration

7 Studio and 4 Art History 11 units

Studio

131. Drawing I.
(This prerequisite for upper-level studio art courses should be taken as soon as possible.)

- (1) course that emphasizes digital media:
 269. Digital Media and Culture.
 270. Collaboration Across the Arts.
 260. Photo II.
 FILM 222. Documentary Filmmaking.
 FILM/MUSIC 281. Music Video.
- (4) studio electives:
 Two different media must be represented
 Two semesters of study in at least one particular media/area is required.
460. Senior Seminar in Visual Arts.
(offered each spring semester)

Art History

116. Survey of Art History I **or**
 117. Survey of Art History II.
 (1) non-western art history:
 212. Icons of Islamic Architecture.
 215. West African Arts.
 217. Buddhist Art and Ritual.
 218. Arts of South Asia.
 246. Art and Politics in Nigeria.
 319. Gender Issues in Asian Art.
- (1) contemporary or modern art history:
 211. African American Art & Visual Culture.
 246. Art & Politics in Nigeria.
 252. History of Modern European Art.
 254. Contemporary Art.
 355. Art Today.
- (1) 200-level or above art history elective

Combined Concentration

Art History/Studio Art 11 units

131. Drawing I.
 116. Survey of Art History I **or**
 117. Survey of Art History II.

- (9) upper-level courses:
 at least (4) courses must be in one area and
 (5) in the other
 (1) course must be in non-western art history
 at least (2) of the (9) courses must be at the
 300 or 400 level

Minor

6 units

131. Drawing I. *(introduction to studio art)*
 116. Survey of Art History I **or**
 117. Survey of Art History II.
 (4)* other courses with diversity of selection
**Students participating in the New York City Semester Program will receive (1) credit for the Arts Management course (NC248G). This credit will replace one of the electives in their concentration.*

For students who study abroad, (1) art history course and (1) studio art course will count towards the major or minor.

Certification to Teach Art

Students seeking initial certification as K-12 art teachers in New York must major in Art and Art History, with a Studio Art or Combined concentration, and also complete the certification minor in education. These majors will be exempt from the studio SYE seminar course that would coincide with their professional teaching semester. Art and Art History majors intending to complete student teaching after graduation in the University's Post-Baccalaureate Teacher Certification Program must complete the same requirements for the Art and Art History major and the educational studies minor in education (or its equivalent) as undergraduates. Consult the Education section of this *Catalog* and/or speak to the coordinator of the teacher education program in the education department as early as possible.

Distribution-Credit Courses

The department offers courses to a large number of undergraduates each term; these are intended to satisfy the needs of both majors and non-majors. Below are the courses that fulfill specific distributions:

Arts and Expression

116. Survey of Art History I.
 117. Survey of Art History II.
 All studio art courses.

Humanities

- 212. Icons of Islamic Architecture.
- 215. West African Arts.
- 217. Buddhist Art and Ritual.
- 218. Arts of South Asia.
- 256. Art and Nature.

Diversity

- 211. African-American Art and Visual Culture.
- 212. Icons of Islamic Architecture.
- 215. West African Arts.
- 217. Buddhist Art and Ritual.
- 218. Arts of South Asia.
- 235. Abstract Drawing: Uli and Other Forms.
- 246. Art and Politics in Nigeria.
- 319. Gender Issues in Asian Art.

Honorary Society

The art and art history honorary society offers membership to students who maintain a 3.0 overall average and have taken four art and art history courses with a 3.5 average, or a 3.0 overall average and have taken six art and art history courses with a 3.25 average. Applications are solicited twice during the academic year and an induction ceremony takes place in the spring semester.

Honors

Departmental honors are awarded according to University and departmental policy, as outlined in the *Student Handbook*. Departmental honors is different than the Honorary Society, and is achieved only after successful completion of an honors project. A minimum GPA of 3.5 in all courses in the major is required. Students interested in pursuing an honors project should consult with their advisor and with the chair of the department early in their junior year to begin to formulate their honors projects. Honors Projects are year-long projects that emphasize independent work. Proposals are due spring semester of the junior year, one week prior to registration.

Student Art Union

The Student Art Union (SAU) is an interdepartmental organization that was developed to bring about greater communication among students working in art and art history. Members include art and art history majors and other students who have an interest in art at St. Lawrence University.

Art History Courses

116. Survey of Art History, Part I.

A survey of the historical development of art forms from Paleolithic times to the late Middle Ages. Emphasis is placed upon the relationship between the formal aspects of art and the political and social history of a culture.

117. Survey of Art History, Part II.

A survey of the historical development of art forms from the Renaissance to the present. Emphasis is placed upon the relationship between the formal aspects of art and the political and social history of a culture. *Also offered through European Studies.*

202. Art of the Italian Renaissance.

An exploration of painting, sculpture and architecture in Italy from the late Gothic period through the High Renaissance and Mannerism. The course surveys the changing forms, themes and imagery of Renaissance art, within the larger cultural and political worlds of Florence, Siena, Rome, Urbino, Mantua and Venice. The course also introduces various ways of interpreting Renaissance imagery, through the study of religious iconography, humanism and academically based artistic theory; and through approaches ranging from the social history of art to gender-based interpretations. Prerequisite: AAH 116 or 117 or permission of the instructor. Offered on rotation. *Also offered through European Studies.*

203. Art of the Northern Renaissance.

A study of painting and sculpture in northern and central Europe from the late 13th to the late 16th centuries. This course focuses on such artists as Jan van Eyck and Albrecht Dürer, as well as such themes as the evolving representation of nature, witchcraft and other gendered imagery in art, and the early history of printmaking. Prerequisite: AAH 116 or 117 or permission of the instructor. Offered on rotation. *Also offered through European Studies.*

204. Baroque and Rococo Art.

A study of painting, sculpture and architecture in Europe during the 17th and 18th centuries. This course explores such artists as Velázquez, Bernini, Artemisia Gentileschi and Rembrandt, evocative images of nature and mystical experience, and major architectural and decorative programs. Prerequisite: AAH 116 or 117 or permission of the instructor. Offered on rotation. *Also offered through European Studies.*

206. Art of the Middle Ages.

A study of European art history from the collapse of the Roman Empire to the 14th century. Individual sessions explore the history of symbols, saints' cults, pilgrimages and popular piety, monasticism, medieval music, and the work of medieval stone masons, manuscript illuminators, metalworkers and sculptors. Prerequisite: AAH 116 or 117 or permission of the instructor. Offered on rotation. *Also offered through European Studies.*

207. Nineteenth Century European Art.

This course deals with art in the context of the tumultuous political and social history of 19th century Europe. Beginning with the French Revolution in the late 18th century, we will examine the ways in which art participated in the revolutionary, colonial, technological, economic, and gendered discourses of the era, covering well-known and often controversial works by such artists as David, Blake, Goya, Courbet, Manet, Cassatt, Degas, Rodin, Van Gogh, and Munch. Prerequisite: AAH 116 or 117.

210. American Art.

A survey of American art from the 17th century to the eve of World War I. The emphasis is on painting, although other media are included. Prerequisite: AAH 117 or permission of the instructor. Offered on rotation.

211. African-American Art and Visual Culture.

This course will examine the history of artworks produced by and about African Americans, while at the same time analyzing issues of the construction and contestation of racial and cultural identities through visual discourse. How do images create (or help to create) identities, and to what extent can they be used to combat as well as reinforce stereotypes? We will cover a wide variety of works by such artists as Edmonia Lewis, Henry Ossawa Tanner, Aaron Douglas, Archibald Motley, Jr., Palmer Hayden, Jacob Lawrence, Horace Pippin, Norman Lewis, Romare Bearden, Betye Saar, Adrian Piper, Kara Walker, Lorna Simpson, Glenn Ligon, and Carrie Mae Weems. Prerequisite: AAH 116 or 117. Fulfills the diversity requirement. Offered on rotation. *Also offered through African-American Studies.*

212. Icons of Islamic Architecture.

This course critically examines the past and contemporary reception of an icon of Islamic architecture – the Taj Mahal – in art, politics, and society. Since its construction as a tomb of an influential empress, the Taj has become an object of fantasy for European travelers, a model for British colonial architecture, and a source of inspiration for visual artists, art collectors, the advertisement industry, film makers and musicians all over the world. Its site is contested by religious and political groups with competing interests, archeologists, and conservationists. Students study the synthesis of styles and techniques in this exceptional monument and use the Taj to discuss the political role of monuments in general and to think about gender roles in Islam, the place of Islam in contemporary India, effects of tourism and pollution, and issues of cultural heritage and identity. No prerequisite. Offered every spring. *Also offered through Asian Studies.*

215. West African Arts.

This course deals for the most part with the traditional arts of West Africa. It explores the wide range of West African art forms, materials and functions, as well as questions of production, ownership, utility, evaluation and change. *Also offered through African Studies.*

217. Buddhist Art and Ritual.

This course explores the historical and contemporary practices of Buddhist art and ritual in multiple geographical, social and cultural contexts. Examples of monuments, sculptures, paintings and ritual objects made for use by practicing Buddhists across Asia are studied to address questions of patronage and identity in various time periods. A large part of the course focuses on analyzing the contemporary reception and reshaping of traditional Buddhist ideas and art forms by diverse audiences around the world. The course also considers the changing context for Buddhist art and practice in Asia in an era of globalization. *Also offered through Asian Studies and Peace Studies.*

218. Arts of South Asia.

By examining sculpture, architecture, painting and film from South Asia, this course introduces students to the multiple cultural strands that contribute to the histories of countries such as Afghanistan, India, and Pakistan. We also study art made by and for communities of South Asian origin in North America today. Issues of cross-cultural contacts, ethnicity and gender are emphasized and we look critically at current debates surrounding methods of studying, collecting and displaying South Asian art. *Also offered through Asian Studies.*

246. Art and Politics in Nigeria.

This course examines the relationship between art and sociopolitical conditions and events in Nigeria since 1960, as reflected in the works of selected major cultural producers. Key figures in literature, music and fine arts are studied and, through their works and personal histories, the role of the artist in society is examined. *Also offered through African Studies.*

252. History of Modern European Art.

A critical historical investigation of art production in Europe from 1900 to 1945. Special emphasis is given to the strategy and tactics of the avant-garde, the revolutionary potential of art, the public reception of modernist art, the politics of the art market, the problem of abstraction and issues of gender. Movements covered include Fauvism, Cubism, Expressionism, Constructivism, Dada, and Surrealism. Prerequisite: AAH 116 or 117. *Also offered through European Studies.*

254. A History of Contemporary Art.

The aim of this course is to provide a historical basis for an understanding of the most important developments in post-WWII art of the U.S. and Europe. Beginning with the emergence of an avant-garde in New York in the 1940s, the course investigates how artists and their publics attempted to redefine the role of art in the West. Movements studied include Abstract Expressionism, Pop Art, Minimalism, Earth Art, Conceptual Art, Feminist Art, and Postmodernism. Prerequisite: AAH 117.

256. Art and Nature.

An overview of nature as a subject of artistic representation, in ancient Mediterranean and Mesopotamian cultures, and in the West from the Renaissance to the present. This course explores the ways in which depictions of nature have both reflected and shaped constructs of the natural world, by reference to religions, philosophies and moral values. Works of art to be examined include obvious examples of nature in art, such as landscape painting, and less obvious ones, such as villas and portraits, as well as earthworks and other environmental art created by contemporary artists. This course requires no previous experience of art history. *Also offered through Outdoor Studies.*

319. Gender Issues in Asian Art.

This seminar-style course explores the following themes: the representation of gender relations in art, architecture, and film; the influence of gender constructs on the making and viewing of art; changing roles of women in society; and the relationship of gender, art and religion. A central learning tool is in-class student discussion and debate about art historical literature that takes a feminist approach to the interpretation of historical and contemporary examples of Asian art or makes gender roles their central research question. No prerequisite. Fulfills a diversity distribution. *Also offered through Asian Studies.*

355. Art Today.

Organized thematically rather than chronologically, this course engages with global contemporary art of the past two decades from a wide array of critical perspectives. Issues addressed include the interrelationships of contemporary art practices with developing technologies or “new media,” globalization and postcolonialism, identity politics and the body, and debates about “postmodernism” and consumer culture. Prerequisite: AAH 116 or 117.

389, 390. Special Projects in Art History, I and II.

Individual study for fine arts majors or especially qualified students. Prerequisite: consent of the supervising professor and department chair. Hours to be arranged.

4000-4999. Special Topics in Art.

Topics relate to the history, practice or theory of art. Open to all students, but depending on the topic prerequisites may be required. The content of each course or section of these 300-level or 400-level special topics courses varies and will be announced each semester.

430. SYE: Critical Theory and the Visual Arts

Designed for senior Art and Art History majors who are interested in graduate school or careers in the arts, this seminar explores the ways in which contemporary critical and theoretical discourses have challenged and in some cases transformed the practice of art history and criticism. Students will practice incorporating (or challenging) within their written work theoretical perspectives including those of structuralism and semiotics, post-structuralism and deconstruction, and feminist, queer, and postcolonial theory. Restricted to senior Art and Art History majors only.

489, 490. SYE: Independent Study.

An independent study for senior majors that builds upon the student's prior work in art history and is directed toward developing superior skills in research and writing. A public presentation of one's research project is required. Written proposals are required and are due one week prior to course registration. Prerequisites: permission of the instructor and department chair (must be obtained the semester preceding the course).

495, 496. Senior Project: Honors in Art and Art History. Details of the program are available from the department chair. An honors project involves yearlong independent research, culminating in a public presentation of the student's thesis. Prerequisite: a minimum GPA of 3.5 in all courses in the major. Proposals must be submitted spring semester of the junior year, one week prior to registration. Permission of the department is needed.

Studio Courses

All studio courses are one-unit courses and meet five hours per week. Students interested in an Art and Art History major should plan to take AAH131 Drawing I, the pre-requisite for upper-level studio art courses, as soon as possible.

131. Drawing I.

This course is the prerequisite for all upper level studio art courses. Potential majors and minors should take Drawing I as early as possible in their academic careers. The emphasis is on the development of perceptual, compositional, and critical drawing skills. Direct observation of still-life and figurative subjects lead to more abstract modes of expression. Various media are used. Offered every semester. Registration limited.

232. Drawing II.

This course continues to emphasize developing observational skills but focuses more on conceptual issues and ideas of expression. Various media are used. Prerequisite: AAH 131. Registration limited.

228. Color.

This course explores the interaction of color through the classic exercises of Josef Albers. Using color aid paper and paint, students will work through versions of Albers projects that explore the highly relative nature

of color. A wide range of the unpredictable and elusive properties of color will be examined and manipulated. Students will develop a keen understanding of the function of color in art and design and sharpen their ability to perceive color relationships. The course will also examine ideas about color through artists' writings and by studying color-related exhibitions. Students will look at contemporary approaches to using color alongside of Albers' established ideas. Prerequisites: AAH 131. Registration limited.

229. Painting I.

The emphasis is on developing an understanding of pictorial space in painting and use of basic elements such as color, value, form, composition and surface. Through structured projects, students learn fundamental painting techniques, make the transition from drawing into painting, and understand the process of visual perception. Presentations of historical and contemporary artists complement the studio practice. Students are expected to invest significant work time outside of class, attend exhibitions, actively participate in discussions and critiques, and devise and execute their own final project. Prerequisite: AAH 131. Registration limited.

230. Painting II.

Students continue to develop their understanding of the elements of painting while engaging a more complex set of problems and concepts. Studio practice is contextualized through discussions on issues in aesthetics, art historical antecedents and contemporary approaches to art. Requirements include a presentation on an artist, reading scholarly essays and artists' writings, response papers, exhibitions reviews, participation in discussions and critiques, and a visual journal. Students are expected to invest significant work outside the class. Prerequisites: AAH 131, 229. Registration limited.

235. Abstract Drawing: Uli and Other Forms.

The principal objective of this course is to expose students to some abstract drawing traditions of the world and, through studio practices structured around these traditions, enable students to explore the potential of abstract drawing as a viable and independent means of expression. Using the Uli drawing/painting tradition of Nigeria as a point of departure, the course covers European calligraphy; Chinese, Japanese and Arabic calligraphy and painting; and the graphic works of modern artists like Paul Klee, Joan Miro, Ben Shahn, Ibrahim el Salahi and Uche Okeke. Prerequisite: AAH 131. *Also offered through African Studies and Global Studies.*

239. Sculpture and Extended Media I.

This is a course for expressing one's ideas in three dimensions and through a variety of media. Students receive an introduction to the basic techniques, materials and terminology of 3D design, sculpture and contemporary art in general. Assignments in modeling, mixed media, installation and collaboration are included. Materials include clay, plaster, wood and metal as well as found, mixed and experimental media. In order to give students a broader perspective on contemporary cultural production and thought, the course includes investigation of historical and theoretical aspects of contemporary art. Brainstorming and critique are common, and will follow the Harkness Method of student-centered discussion and inquiry to help students learn to think critically, listen analytically, and interact respectfully. Prerequisite: AAH 131. Registration limited.

240. Sculpture and Extended Media II.

A continuation of AAH 239. Students are expected to expand their ideas into more fully resolved and conceptually challenging works. Collaboration, casting, fabrication/building techniques using wood and metal, investigation of tactical media approaches and other materials as determined by the student's interest and conceptual direction. Brainstorming and critique are common, and will follow the Harkness Method of student-centered discussion and inquiry to help students learn to think critically, listen analytically, and interact respectfully. Depending upon student interest and experience, this course may be offered in conjunction with AAH 239 by permission only. Prerequisites: AAH 131, 239. Registration limited.

241. Printmaking I.

An introduction to relief and intaglio processes, this course involves drawing, processing, proofing, and editioning prints. Students are also exposed to historical and contemporary ideas and images related to making prints. Prerequisite: AAH 131. Registration limited.

249. Ceramics I.

A course for expressing one's ideas through the most basic and malleable material — clay. Students learn a wide range of contemporary practices used by ceramic artists and designers working today, how to find their own creative voices, and how to analyze ceramic works of art from their own positionalities. Processes covered include traditional hand-building techniques such as pinch, slab, coil, solid and hollow modeling; as well as wheel throwing; and creating multiples through mold-making and slip and press-casting. While a wide range of processes is introduced, the emphasis of this course will remain on the ideas communicated through the forms that students create. The course also investigates the historical and theoretical aspects of contemporary ceramic vessels, sculpture and decorative works as well as the shifting concepts of "fine art" vs. "craft." Brainstorming and critique are common, and will follow the Harkness Method of student-centered discussion and inquiry to help students learn to think critically, listen analytically, and interact respectfully. Depending upon student interest and experience, this course may be taken as AAH 250 by instructor permission only. Prerequisite: AAH 131. Registration limited.

250. Ceramics II.

A continuation of Ceramics I. Students are expected to expand their ideas into more fully resolved and conceptually challenging works. Fabrication/building techniques such as press molding, slip casting, installation work and mixing media are discussed. More advanced surfacing techniques such as ceramic decals, printing on clay, experimental finishes and glaze chemistry are explored. Brainstorming and critique are common, and will follow the Harkness Method of student-centered discussion and inquiry to help students learn to think critically, listen analytically, and interact respectfully. Depending upon student interest and experience, this course may be offered in conjunction with AAH 249 by instructor permission only. Prerequisites: AAH 131, 249. Registration limited.

259. Photography I.

Photo I is an introduction to the theory, techniques and process of black and white film photography. This course will emphasize photography's potential for creative problem solving and self-expression in an art context. This class will consist of slide lectures, presentations, and screenings featuring contemporary artists, camera and lighting demonstrations, in-class exercises, discussions and most importantly, critiques of your work. Students are expected to provide their own SLR camera. Prerequisite: AAH 131. Registration limited.

260. Photography II.

Photo II delves into the theory, techniques and processes of digital photography. This class will consist of readings, presentations, and screenings featuring contemporary artists, technical demonstrations, in-class exercises, discussions and most importantly, critiques of your work. Students are expected to provide their own Digital SLR camera. Prerequisites: AAH 131, 259. Registration limited.

269. Digital Media and Culture I.

A combination studio/seminar that explores the major theoretical issues surrounding the continually evolving culture of digital technology and the effects on various aspects of contemporary life including: aesthetics and perception, creative production, morality, contemporary art discourse, visual culture, entertainment, identity and other forms of social effects/affects. Studio projects will investigate the creative potentials of social media software, digital painting, photography, and video. Projects will respond conceptually to theoretical issues that are being discussed in class. An emphasis on individual voice, creativity, and methods of idea development will be encouraged throughout the term. Brainstorming and critique are common, and will follow the Harkness Method of student-centered discussion and inquiry to help students learn to think critically, listen analytically, and interact respectfully. Depending upon student interest and experience, this course may be taken as AAH 369 by instructor permission only. Prerequisites: AAH 131. *Also offered as Film and Representation Studies 269.* Registration limited.

270. Collaboration Across the Arts.

The direction of this course is determined largely by the unique combination of students who participate. Students form groups of two or three to work on a collaborative project of their own design reflecting their collective interests. For example, a pair of students may create a multimedia work that draws connections between image and sound. Students critique works in progress, study exemplary works, discuss relevant aesthetic issues, trace connections across media and consider strategies for collaborative work. Offered every year. Prerequisite: AAH 131 and permission of the instructor. *Also offered as Music 270 and Performance and Communication Arts 270.*

329. Painting III/IV.

The primary aim is to examine painting in the 21st century through both theory and practice. The course investigates painting's historical antecedents as well as contemporary trends and currents. Students develop a coherent body of paintings that explores an individual direction and demonstrates knowledge of contemporary influences and historical precedents. Lectures, discussions, critiques and occasional visits to museums/galleries complement studio production. Students are required to do weekly readings and exhibition reviews, maintain a research journal and give an artist lecture at the end of the term. Prerequisites: AAH 131, 229, 230. Registration limited.

341. Printmaking II.

A continuation of Printmaking I, with the introduction of lithography, screenprinting, and other processes. Further emphasis is given to thematic development in one's work. Study of contemporary printmakers and more specialized print techniques are pursued. Prerequisite: AAH 131, 241. Registration limited.

360. Photography III.

Prerequisites: AAH 131, 259, 260. Registration limited.

369. Digital Media and Culture II.

A continuation of Digital Media and Culture I. New and more complex software will be introduced. Students will be expected to spend time developing innovative and complex ideas and forms and advancing their vision(s) via digital media processes. This is a combination studio/seminar course and includes videos, readings and reflections, and written analyses. New visions of authorship will be encouraged as will continual encouragement to consider how one's work could function in a socially transformative way. Brainstorming and critique are common, and will follow the Harkness Method of student-centered discussion and inquiry to help students learn to think critically, listen analytically, and interact respectfully. Depending upon student interest and experience, this course may be offered in conjunction with AAH 269 by instructor permission only. Prerequisites: AAH 131, 269.

389, 390. Special Projects in Art I and II.

Individual study for studio majors or especially qualified students. Prerequisite: consent of the supervising professor and department chair. Written proposals are required the semester before intended project. Hours to be arranged.

460. SYE: Senior Seminar in Visual Arts.

This course is required of all Art and Art History majors pursuing a concentration in studio art. This course is designed to provide a basis for continuing one's creativity in a professional and effective manner following graduation. Additionally, it is intended to give students a greater understanding of exhibition/gallery practices and to enlighten the student in the areas of independent art production: specifically the professional and personal challenges/rewards that lie therein. This course is comprised of readings, written assignments, studio work, and an exhibition. Offered every spring semester.

489, 490. SYE: Independent Study.

An independent study for senior studio majors that builds upon the student's prior work in studio art and is directed toward developing superior skills in research and studio work. A public presentation of the semester's work is required. Prerequisites: permission of the overseeing instructor and the department. Written proposals are required and are due the semester before intended project, one week prior to registration.

495, 496. Senior Project: Honors in Art and Art History.

Details of the program are available from the department chair. Honors Projects are yearlong projects that emphasize independent work and superior achievement. Students interested in pursuing an honors project should consult with their advisor and with the chair of the department early in their junior year to begin to formulate a proposal. A public exhibition of the year's work, as well as a defense of the work before departmental faculty, is required. Prerequisite: a minimum GPA of 3.5 in all courses in the major. Proposals must be submitted spring semester of the junior year, one week prior to registration. Permission of the department is needed.

Asian Studies

Combined major and minor offered

Professors MacWilliams (religious studies), McCarthy (philosophy), Sondergard (English); **Associate Professors** Abraham (anthropology), Basu (coordinator; art and art history), Csete (history), Henderson (music), Huang (government), Pai (biology), Zhang (modern languages and literatures); **Assistant Professor** Jayman (global studies).

Visit the Asian studies webpage at www.stlawu.edu/asian-studies.

The Asian studies program offers students the opportunity to develop a broad understanding of Asia by using multiple disciplinary lenses and cross-cultural comparisons. Students are encouraged to think critically about historical and contemporary interactions among diverse groups both within the continent and globally. To this end, they can select courses from, and propose independent research projects in, 11 departments on campus.

Students may declare combined majors in Asian studies and history, government or religious studies; they may also minor in Asian studies. An undergraduate degree in Asian studies provides a foundation for advanced graduate work with particular disciplinary or regional emphases and prepares students for careers in business, education, government, international relations, journalism and the arts.

Combined Major

Combined majors are offered in Asian studies with history, government and religious studies. These departments have agreed that their courses listed for Asian studies credit may also count for the departmental major.

In addition to fulfilling requirements for the disciplinary major, students must complete seven Asian studies courses:

1. **At least one multi-regional course** from the list below.
2. **One semester-long course in an Asian language.**

3. **Five electives**, including at least one course at the 300 or 400 level. No more than three of these courses can be selected from a single department or focus on a single region (East Asia/South Asia/Southeast Asia).

Asian Studies–Government

Government majors pursuing a combined major in Asian studies must fulfill the regular government major requirements, though they must take a minimum of seven government courses distributed as follows:

1. **Core Courses** (3 units): Government majors must complete Introduction to American Politics (103) and Introduction to Comparative Politics (105). Additionally, students must take either Introduction to International Politics (108) or Introduction to Political Theory (206). One of these three introductory courses must be designated writing-intensive and should be completed before the end of the sophomore year. These three introductory courses must be taken in residence on the St. Lawrence campus.
2. **Research Seminar** (1 unit): During the sophomore or junior year, ideally after completion of the writing-intensive course, students must take one of the government Research Seminars (290, 291, 292, 293). Students may take only one research seminar.
3. **Asian Politics Course** (1 unit): Majors will take either Chinese Politics (322) or a special topics course on Asia within the government department.
4. **Elective Courses** (2 units): The remaining two units may be earned through a selection of upper division elective courses. Students may count up to one unit of internship coursework or one unit of independent study toward the elective requirements. No more than one of the elective courses may be taken off campus. Two of the five required Asian Studies electives must be outside the government department. One of the electives must include a research component.

Asian Studies–History

History majors who wish to do a combined major with Asian studies must fulfill the regular history major requirements, though they must

take a minimum of nine history courses rather than the standard 10. The nine required history courses must include a research seminar and at least one course each in European history, North American history and Asian history.

Two of the five required Asian Studies electives must be outside the history department. One of the electives must include a research component.

Asian Studies–Religious Studies

Religious studies majors who wish to do a combined major with Asian studies must fulfill the regular religious studies major requirements, though they must take a minimum of nine courses rather than the standard 10.

Two of the five required electives must be outside the religious studies department. One of the electives must include a research component.

Minor

For the minor, students must take six Asian studies courses:

1. **At least one multi-regional course** from the list below.
2. **Onesemester-long course in an Asian language.**
3. **Four electives**, including at least one course at the 300 or 400 level. These courses must be selected from more than one department and must focus on more than one region (East Asia/South Asia/Southeast Asia).

Courses should be selected in consultation with the minor advisor. Electives must be courses taken at St. Lawrence University and/or full-credit courses offered in China, India, Japan or Thailand. Students must maintain a minimum GPA of 2.0 in courses submitted for the minor.

Off-Campus Study

Students interested in declaring a major or minor in Asian studies are strongly encouraged to plan to study in Asia for a semester or more. They should consult early with the coordinators of the programs and with advisors at the Center for International and Intercultural Studies in Carnegie Hall. Courses taken as part of the following programs have been approved by St. Lawrence University: the CIEE program in Shanghai, China; the New York State Independent Col-

lege Consortium for Study, India; Kansai Gaidai University in Hirikata, Japan; and the Institute of South East Asian Affairs at Chiang Mai University in Chiang Mai, Thailand. All programs offer language study and a variety of electives.

Multi-regional Courses

Departmental Offerings

Anthropology

208. Ancient Civilizations.

Art and Art History

217. Buddhist Art and Ritual.

History

125. Early Asian Civilizations. *(also offered as Hist 105)*

106. Modern Asia. *(also offered as Hist 106)*

Global Studies

225. Asian Political Economy in the Global Age.

Philosophy

103. Philosophy East and West: An Introduction.

223. Asian Philosophy.

Religious Studies

222. Buddhist Religious Traditions.

224. Islamic Religious Traditions.

Elective Courses

Departmental Offerings

Anthropology

208. Ancient Civilizations. *(multi-regional)*

262. Ancient India. *(South Asia)*

Art and Art History

212. Icons of Islamic Architecture. *(South Asia)*

217. Buddhist Art and Ritual. *(East/South Asia)*

218. Arts of South Asia. *(South Asia)*

319. Gender Issues in Asian Art. *(South Asia)*

Biology

258. Ethnobotany. *(South/Southeast Asia)*

380. Tropical Ecology.** *(South/Southeast Asia)*

Film and Representation Studies

271. Introduction to World Cinema.** *(South Asia)*

Global Studies

225. Asian Political Economy in the Global Age. *(multi-regional)*

Government

105. Comparative Politics.** *(East Asia)*

291. Research Seminar: China's Rise. *(East Asia)*

322. Chinese Politics. *(East Asia)*

History

126. Modern Asia. *(multi-regional)*

Also offered as HIST 106.

282. Modern Japan. *(East Asia)*

292. Revolutionary China. *(East Asia)*

377. Colloquium in Asian History *(topics vary)*

475-476. SYE: Seminar in Asian History. *(East Asia)*

Modern Languages and Literatures

Chinese 101,102. Elementary Chinese.

Chinese 103, 104. Intermediate Chinese.

Chinese 201, 202. Advanced Chinese.

232. Cultures of China.* *(East Asia)*

Also offered as LTRN 232 and Film 232.

234. Chinese Literature and Film.* *(East Asia)*

Also offered as LTRN 234 and Film 234.

489, 490. SYE: Independent Study. *(East Asia)*

**Literature in Translation courses*

Music

210. Musics of the World.**

244. Musics of South Asia. *(South Asia)*

Philosophy

103. Philosophy East and West: An Introduction. *(multi-regional)*

223. Asian Philosophy. *(multi-regional)*

Religious Studies

221. Religious Life of India. *(South Asia)*

222. Buddhist Religious Traditions. *(multi-regional)*

224. Islamic Religious Traditions. *(multi-regional)*

226. The Religious Life of Japan. *(East Asia)*

227. The Religious Life of China. *(East Asia)*

331. Pilgrimage as a Spiritual Journey.

334. The Ways of the Gods: Shinto in Modern Japan. *(East Asia)*

450, 451. Directed Studies in Religion.**

***These courses receive Asian studies credit at the discretion of the instructor and the Asian studies program.*

Special Topics courses with Asian content may be counted toward the minor and combined majors at the program coordinator's discretion.

Elective Courses in China (East Asia)

Students may study in Shanghai in either the spring or fall semester through the Council on International Educational Exchange (CIEE).

Four courses are required, including language study and three courses taught in English by Chinese professors. The program offers various area studies courses in international affairs, economics and modern Chinese history.

The following is a sample of courses normally available. For a complete list, see the China Program coordinator.

Mandarin Chinese

Beginning, intermediate, advanced as appropriate.

Economics

China's Economic Reforms.

Government

322. Political Development in China.

323. Issues: Globalization in China.

364. China's International Relations.

History

292. Modern China.

Elective Courses in India (South Asia)

Courses taken in India are designed by the faculty director of the India Program, and are equivalent to courses at St. Lawrence. While in India, students take four courses: Hindi language, Indian history and culture, contemporary issues, and an independent field research project.

Elective Courses in Japan (East Asia)

Kansai Gaidai University, Hirakata, Osaka, Japan

Students are enrolled in Kansai Gaidai's Asian Studies Program, where they can take introductory courses in Japanese language as well as select from a variety of courses in humanities, the arts, and business. For a complete list, visit the Center for International and Intercultural Studies (CIIS) on campus or see the Japan Program coordinator for Kansai Gaidai.

Elective Courses in Thailand

(Southeast Asia)

At Chiang Mai University, students take three required courses: Thai Language (3 credits), Service-Learning™: Institutions of Thai Society (3 credits), online Reflection and Service Practicum (3 credits), and two electives (3 credit hours each) of their choice. Elective courses are offered on the visual arts, socially engaged Buddhism, conflict resolution, human rights, politics, gender and sexuality studies, business and social entrepreneurship in Southeast Asia, and refugee rights. Students engage in substantive volunteer service in a wide range of community development agencies and NGOs. An optional track allows students to combine study in Thailand and Cambodia. For more information, visit the Center for International and Intercultural Studies (CIIS) on campus or go to www.stlawu.edu/ciis/

thailand.

Biochemistry

Major offered

Coordinators: Associate Professors Temkin (biology), Marano (chemistry).

More information on this interdisciplinary major can be found at www.stlawu.edu/biochemistry.

The biology and chemistry departments offer an interdisciplinary major in biochemistry. The interface between chemistry and biology is an area of very active research and is the main driving force behind the biotechnology revolution. In this major, students see how the tools and concepts of biochemistry are used to address fundamental questions related to the molecular basis of life processes. Students who major in biochemistry may study topics such as the mechanisms of drug action, structure and function of biological macromolecules, mechanisms of enzyme catalysis, hormonal regulation of physiological processes, gene expression and molecular methods (including DNA fingerprinting, PCR and immunoblotting). All biochemistry majors conduct an independent research project for at least one semester under the supervision of a faculty mentor.

Biochemistry students make extensive use of an impressive array of laboratory equipment, instrumentation and computer-based technologies housed in both departments. The biology and chemistry departments are located in Johnson Hall of Science (JHS), which contains a biochemistry and molecular biology suite of teaching and research laboratories. JHS is also home of the Microscopy and Imaging Center, a significant resource for biochemistry majors. The center houses a confocal microscope, a transmission electron microscope, a scanning electron microscope with an energy dispersive X-ray analysis system, and fluorescence and differential interference microscopes. The chemistry department maintains an impressive shared instrumentation laboratory that includes a modern, high-field multinuclear NMR spectrometer, a capillary gas chromatograph-mass spectrometer and a FT-IR microscope with MCT-A detector. For more thorough and detailed descriptions of facilities and equipment, please

refer to the Biology and Chemistry sections of this *Catalog*.

Note that students majoring in biochemistry may not also major and/or minor in biology, neuroscience or chemistry.

Planning for the Major

To address interdisciplinary topics productively, one must first become well-grounded in the interacting disciplines. This requires a fast start in which key prerequisite courses are completed, beginning in the first semester of study. A student interested in majoring in biochemistry will be best served by selecting a second advisor from either the biology or chemistry faculty during the first-year orientation period.

Contact either of the department chairs for information regarding how to establish a formal or informal secondary advisor relationship. Developing a strong advising relationship is essential in shaping your curriculum in a way that provides a background commensurate with your needs. Your program of study should be tailored to fit your future plans.

Advanced Placement Exams

Students scoring a 4 or 5 on the AP biology exam should enroll in the first semester of General Biology (101) for which they receive 1.25 units of credit toward the major and graduation. Students who do well in 101 may be permitted to bypass the second semester of General Biology (102), receiving the 1.25 units of credit for this course as well as standing to take courses that require 102. Approval of this option to bypass the 102 courses is determined by the General Biology course instructors. Although AP scores of 4 or 5 automatically nominate students for this bypass option, students may voluntarily choose to stay in the General Biology course sequence and enroll in Biology 102.

Students who have taken AP chemistry in high school and received a grade of 4 or 5 on the advanced test are eligible to receive one unit of college credit for Chemistry 103. These students are eligible to enroll in Chemistry 104 in the spring but may choose to enroll in Chemistry

103 in the fall if they prefer.

Major Requirements

Biochemistry majors must complete the following courses:

Biology

101. and 102. General Biology.
245. *or* 246. Genetics.
250. Introduction to Cell Biology.

Chemistry

103. and 104. General Chemistry.
221. and 222. Organic Chemistry.
342. Biophysical Chemistry.

Biochemistry

309. Biochemistry.
394. Research Methods in Biochemistry.
395. Research Methods in Molecular Biology.
415. Advanced Biochemistry.
A senior project following either chemistry *or* biology department guidelines.

Physics

103,104. College Physics. *or*
151,152. University Physics.

Mathematics

135. Calculus I. *and*
136. Calculus II.

The introductory biology and chemistry courses should be completed during the first year of study. Additional math and chemistry may be important for fulfilling admissions requirements to certain graduate programs in biochemistry. Planning forms are available on the biochemistry Web page.

Senior Research and Honors Project

Under the direction of a faculty mentor, students conduct their senior research or honors research project following either chemistry or biology department guidelines. To graduate with honors in biochemistry, students must have a biochemistry GPA (combined chemistry, biology and biochemistry required courses) of 3.5. Students working toward graduating with honors normally take Biochemistry 489 in the fall semester and Biochemistry 499 in the spring semester.

Courses

309. Biochemistry.

The course is organized around several themes: the relationship of structure to function in biomolecules, production of energy, regulation and control of metabolism. Topics covered to illustrate these themes include enzyme action and regulation, hemoglobin and the transport of oxygen and carbon dioxide, metabolism of carbohydrates for energy production, structure and function of biological membranes, and structure and function of molecules involved in transmission and expression of genetic information. Prerequisite: Chemistry 222 with a grade of 2.0 or higher or permission of instructor. Counts toward the neuroscience major (cellular track). *Also offered as Biology 309 and Chemistry 309.*

394. Research Methods in Biochemistry. (0.5 unit)

This course focuses on introducing basic laboratory techniques and skills that are common in fields related to biochemistry. Attention is paid to both theory and application. Students keep a detailed laboratory notebook and write up an extended project in the style of a journal article. Prerequisites: Chemistry 222 and any one of Biology 231, 245, 246, 250, 391 or Chemistry 309 (which can be taken as a co-requisite). Required for the biochemistry major and also carries credit toward the biology major/minor and the chemistry major/minor. Offered only in the spring semester for the first seven weeks. *Also offered as Biology 394 and Chemistry 394.*

395. Research Methods in Molecular Biology.

Molecular techniques have revolutionized how biologists address problems in genetics, medicine, ecology, systematics, conservation and many other fields. Students obtain hands-on experience using basic and advanced molecular techniques, such as western blotting, nucleic acid (DNA and RNA) isolation and purification, DNA sequencing, gel electrophoresis and polymerase chain reaction (PCR), to study gene expression and genetic variability. The molecular techniques studied are the same used in laboratories worldwide. In addition to gaining practical experience in the laboratory, students learn about the theories behind each molecular protocol and study how biologists apply molecular techniques to answer fundamental biological questions. Prerequisites: Biology 245, 246, 250 or 394. *Also offered as Biology 395.*

415. Advanced Biochemistry.

A variety of topics are covered in depth, depending on student interest. The course begins with an overview of metabolism and its hormonal regulation. Other topics may include protein synthesis and targeting, molecular immunology, sensory systems and neurotransmission, hormone action, membrane transport, and photosynthesis. Through both written and oral presentation, students develop their abilities to use the scientific literature and communicate in science. Prerequisite: Chemistry 309 or permission of instructor. Counts toward neuroscience major (cellular track). *Also offered as Chemistry 415.*

468,469. SYE: Tutorial Research. (.5 or 1 unit)

Mentored study and research that is not experimental in design yet requires the analysis of primary literature-based data and the integration of this with current knowledge of the subject matter. A thorough understanding of the methodologies used in acquiring the published data is critical for this integration. This research will be presented according to either the biology or chemistry department guidelines. Prerequisite: sponsorship by a faculty member.

489, 490. SYE: Experimental Research. (.5 or 1 unit)

Research projects for students desiring to pursue directed, experimental

research in biochemistry. Students integrate acquired research skills and subject knowledge to collect original experimental data and to analyze the results in reference to the existing scientific primary literature. Under the direction of a faculty mentor, students conduct their SYE research project following either chemistry or biology department guidelines. Prerequisite: sponsorship by a faculty member.

499. Honors Projects. (.5 or 1 unit)

Graduation with honors in biochemistry requires exceptional academic accomplishment as demonstrated by a biochemistry (combined biology, chemistry and biochemistry) GPA of 3.5 or above and the completion of a second semester of SYE honors research. Under the direction of a faculty mentor, students conduct their SYE honors research project following either chemistry or biology department guidelines. Prerequisite: sponsorship by a faculty member.

Biology

Majors and minor offered; see *also* Biochemistry (administered jointly with chemistry), Biology-Physics (administered jointly with physics), Conservation Biology, and Neuroscience (administered jointly with psychology)

Professors Baldwin, Erlichman, Barthelmeß (co-chair), Hornung, McKnight; **Associate Professors** Dixon (joint appointment with chemistry), Estevez (joint appointment with psychology), Heckman, Olendzenski, Pai, Schreiber, Temkin (co-chair), Willson; **Visiting Assistant Professors** Auker, Fateye, Kring; **General Biology Specialists** Burkum, Harloe, Reardon, Visser; **Microscopy Specialist** Pflugheber.

Visit the biology department Web page at www.stlawu.edu/biology.

The department is interested in offering biology courses to both majors and non-majors, and in preparing students who will conclude their formal education with the baccalaureate degree as well as those who will continue in graduate or professional study. Interdisciplinary majors are offered in biochemistry, conservation biology, neuroscience and biology-physicis. A combined major is offered with environmental studies. For more information, see the appropriate *Catalog* sections or Web pages.

The nature of the biology department reflects both the diversity of modern approaches to dealing with living organisms and the commitment of the University to a liberal education. Our

course offerings are rich and varied and offer a great opportunity for the construction of unique yet broad-based programs of study. Many courses focus on fieldwork in the varied habitats near the University, in the Adirondacks, and in other parts of the U.S., as well as international locations including Kenya.

As a department, our curricular objectives are to provide a fundamental understanding of the rules and relationships governing living systems and to develop the skills necessary to conduct, analyze, and present research.

Graduate work is necessary for those wishing to pursue many careers in the biological sciences, although some majors do obtain positions without further formal training. Biology majors continue studies in graduate school in such diverse areas as ecology, evolution, molecular biology, entomology, marine biology, physiology, microbiology, and genetics. Other majors use their biological training in industry, environmental science, education, and health care professions. Many biology majors go on to professional schools in veterinary medicine, medicine, dentistry or physical therapy. St. Lawrence has agreements with the SUNY Buffalo School of Pharmacy, the Nursing Program at NYU, the Physician's Assistant Program at Clarkson, and the Physical Therapy Program at Clarkson. Students interested in these agreements or a health career should consult a member of the Health Careers Committee early in their college career.

The department's facilities, located in Johnson Hall of Science, include 30 teaching and research laboratories with appropriate preparation rooms and equipment, a greenhouse and collections of invertebrates, vertebrates and plants. Students have access to a range of high- and low-tech equipment for research, including insect nets, plant presses, live-traps, binoculars, GPS units, radio tracking collars, an underwater camera, thermocyclers, spectrophotometers, gel electrophoresis units, physiographs, a scanning electron microscope, a confocal microscope, GIS labs, plant growth chambers and tissue culture facilities. All laboratories are equipped with computers for data analysis and Internet database queries.

Opportunities exist for student employment as

laboratory assistants, teaching assistants or field assistants, or in some combination of these roles. Completion of particular courses is often a prerequisite to specific employment.

Courses for the Non-major

Biology 101, 102 and 121 are open to all students and fulfill the natural science with lab distribution. Biology 101 and 102 also serve as the year of general biology required by many professional schools.

Advanced Placement Exams

Students scoring a 4 or 5 on the AP biology exam or a 6 or 7 on the IB exam should enroll in the first semester of General Biology (BIOL 101) for 1.25 units of credit toward the major and graduation. Students who do well in 101 may be permitted to bypass the second semester of General Biology course (BIOL 102), receiving the 1.25 units of credit for this course as well as the right to take courses that require BIOL 102. Approval of this option to bypass the BIOL 102 course is determined by the General Biology course instructors. Although AP or IB scores noted above automatically nominate students for this bypass option, students may voluntarily choose to stay in the General Biology course-sequence and enroll in BIOL 102.

Major Requirements

Students entering St. Lawrence with an interest in biology should enroll in General Biology (101 and 102) during their first year. They should also seek early advisement by a biology faculty member.

The minimum requirements for the biology major are two semesters of General Biology (BIOL 101 and BIOL 102, 1.25 units each for a total of 2.5 units), six additional units of biology course work above the 100 level (half unit courses count toward the 6 unit total unless otherwise specified), two units of General Chemistry (CHEM 103 and CHEM 104, 1.25 units each for a total of 2.5 units), and either one unit of Statistics (MATH 113) or two units of Calculus (MATH 135 and MATH 136).

The six additional units of biology course work must include two units at the 300 or 400 level and one of the following: 1) four units of course work with a laboratory component; 2) three units of course work with a laboratory component and a one unit of a lab or field based SYE; **or** 3) two units of course work with a laboratory component and one unit of a research methods course with lecture and laboratory.

Biology comprises many sub-disciplines directed toward the study of particular groups of organisms or processes. In addition, the biological sciences interface with many other fields to yield interdisciplinary areas such as biochemistry, environmental sciences, ethnobiology and paleontology.

Because of this diversity, biology majors are not required to take a set list of required courses (specialized majors such as biochemistry, neuroscience and conservation biology do have required courses), but are strongly encouraged to select courses that provide both breadth and depth in the field. Just as students obtain a liberal education, biology majors are also advised to obtain a broad preparation in biology. Below are courses grouped according to their primary level of biological organization. Although majors may wish to concentrate in one area, students are expected to take courses from each of the following areas and from as many departmental faculty members as possible. (See the appropriate *Catalog* sections for Biochemistry, Conservation Biology, Neuroscience, Biology–Environmental Studies and Biology–Physics.)

Cell/Molecular Biology

- 231. Microbiology. *(with lab)*
- 245. Genetics.
- 250. Introduction to Cell Biology.
- 252. Research Methods in Cell Biology. *(with lab)*
- 270. Endocrinology.
- 288. Introduction to Neuroscience. *(with lab)*
- 309. Biochemistry.
- 333. Immunology. *(with lab)*
- 387. Cellular Mechanisms of Memory.
- 388. Drugs and the Brain. *(with lab)*
- 389. Advanced Neuroscience.
- 390. Research Methods in Electron Microscopy. *(with lab)*
- 391. Research Methods in Scanning Electron Microscopy. *(with lab)*

- 392. Research Methods in Fluorescence and Confocal Microscopy. *(with lab)*
- 394. Research Methods in Biochemistry. *(with lab)*
- 395. Research Methods in Molecular Biology. *(with lab)*
- 415. Advanced Biochemistry.

Ecology and Evolutionary Biology

- 215. Fundamentals of Animal Biodiversity. *(with lab)*
- 218. Ornithology.
- 221. General Ecology. *(with lab)*
- 227. Mammalogy. *(with lab)*
- 258. Ethnobotany. *(with lab)*
- 319. Plant Systematics. *(with lab)*
- 330. Ecology of Lakes and Rivers. *(with lab)*
- 335. Winter Ecology. *(with lab)*
- 343. Evolution. *(with lab)*
- 360. Marine Ecology.
- 380. Tropical Ecology.
- 440. Conservation Biology. *(with lab)*

Organismal Biology

- 209. Vertebrate Natural History.
- 215. Fundamentals of Animal Biodiversity. *(with lab)*
- 218. Ornithology.
- 224. Biology of Vascular Plants. *(with lab)*
- 227. Mammalogy. *(with lab)*
- 231. Microbiology.
- 232. Laboratory Animals. *(with lab)*
- 258. Ethnobotany. *(with lab)*
- 325. Mycology. *(with lab)*
- 335. Winter Ecology. *(with lab)*
- 341. Anatomy and Physiology I. *(with lab)*
- 351. Anatomy and Physiology II. *(with lab)*
- 353. Human Embryology.
- 360. Marine Ecology.

Independent Research and the Senior Year Experience

Biology 468 and 469 (SYE: Tutorial Research) and Biology 489 and 490 (SYE: Experimental Research) are open to any senior student who majors or minors in biology or its related majors. Before deciding on a particular topic, students are encouraged to discuss possible projects with members of the biology faculty and to have received appropriate lab training in the chosen area of research by the end of the junior year.

This may be accomplished through customized research methods courses (Biology 381 and 382), or specific research methods courses (Biology

390-395), or by volunteering in a faculty-related research program. The faculty member who agrees to sponsor the research will become the project advisor and will direct all aspects of the independent research; he or she will also be responsible for evaluating student performance. Students are encouraged to seek input from other departmental faculty as appropriate to the research topic.

Projects may be one semester in length (earning 1 unit of credit) or they may span the entire year. Depending on the scope, year-long projects may earn .5 or 1 unit per semester (1 to 2 units for a year-long project). Only one such unit may count toward the minimum major requirements and toward the two units at the 300 or 400 level. However, these units cannot count toward the minimum requirements for the biology minor.

The biology department has formally adopted a Research Integrity Policy model based on the federal Public Health Service policy of the Office of Research Integrity (see www.ori.dhhs.gov). All faculty and students are expected to adhere to this policy while engaged in their research. Any concerns or questions should be brought to a biology department co-chairs.

Honors in Biology

To graduate with honors in biology normally requires 1 unit of independent research and 1 unit of honors research in different semesters, a 3.5 major GPA, submitting a signed honors nomination form, a thesis, a public presentation, and approval of the honors project committee. A student wishing to be considered for honors in biology should enroll in SYE research (BIOL 468, 469, 489, or 490) during the first semester of research (usually, but not limited to, the fall semester of the senior year) for 1 unit of credit. The student, in consultation with the project advisor, should choose an honors project committee comprised of the project advisor and two other faculty members appropriate to the topic (one of these two may be from another department). This honors committee should be formed as soon as possible in the first semester of research.

At the end of the first semester, the honors project advisor, in consultation with the other members of the honors committee, evaluates a

formal research proposal and progress toward the completion of the project. If the project is deemed worthy of honors in biology, the student is nominated as a candidate for honors and submits the honors nomination form to one of the department co-chairs. The student can then enroll in Biology 499 (SYE: Honors Research) for the second (usually spring) semester for 1 unit of credit. However, only one unit can count toward the minimum requirements of the major.

Honors in the Environmental Studies–Biology Combined Major

To graduate with honors in the environmental studies–biology combined major, students must maintain a GPA of 3.5 or higher in all biology and environmental studies courses and complete an honors research project having an environmental component or emphasis. The timetable and guidelines are the same as for honors in biology, except that the project must be guided by a project committee comprised of at least one faculty member from *both* environmental studies and biology. Also, the student is nominated for honors by both the environmental studies and biology faculty.

Research Support

Most student research is supported by the department. To receive departmental support, students must submit a proposal in which they describe their research and include a budget of estimated costs. Students may also try to obtain a University fellowship that provides support for a summer research experience of eight to 10 weeks. Guidelines for fellowship applications are available on the University's Student Research Opportunities webpage: www.stlawu.edu/student-research-opportunities. In addition, the Crowell Summer Award in Field Biology is given for summer study at a biological field station, normally to junior majors who show promise in natural history. Other opportunities for student research are posted on the department's web page.

Minor Requirements

The minimum course requirements for a minor

in biology are the two semesters of General Biology (BIOL 101 and BIOL 102) plus three additional units of biology courses above the 100 level. At least one of the additional units must be at the 300 level and two of the additional units must have a laboratory component. Independent research courses (BIOL 368, 369, 381, 382, 489, and 490) cannot be used for the biology minor. The department does not require specific courses, but does strongly recommend that minors select courses that provide breadth. Advanced placement for the minor is the same as for the major.

Suggested Courses Outside the Department

Because biology is interdisciplinary in nature, support courses selected outside the department should include a year of organic chemistry in addition to the required year of general chemistry, introductory physics and mathematics (in addition to the required statistics), and may include other courses chosen to strengthen individual objectives. To gain a greater appreciation of material in advanced biology courses, to meet requirements of graduate and professional schools and to use the junior and senior years most effectively, students should take electives outside the department as early as possible. The biology department encourages and gives major credit for off-campus study, especially in St. Lawrence's Kenya, Australia, New Zealand, and Denmark programs. However, only two units of biology credit from abroad programs or transfer credit after matriculation can be used to fulfill the minimum requirements for the biology major and one unit for the biology minor.

Certification to Teach Biology

Students seeking initial certification as a 7-12 biology teacher in New York must major in biology and also complete the certification minor in education. Biology majors intending to complete student teaching after graduation in the University's Post-Baccalaureate Teacher Certification Program must complete the biology major and the educational studies minor in education (or its equivalent) as undergraduates. Consult the Education section of this *Catalog* and/or speak to the

coordinator of the teacher education program in the education department as early as possible.

Awards

The biology department annually makes the following awards:

The Beta Beta Beta Outstanding Senior Award is given to a graduating biology major who has shown outstanding achievement in academics, research and departmental service. Along with the recognition, the award provides a one-year membership in the American Association for the Advancement of Science.

The Edward N. Warner Award is given to a junior major to help defray the cost of applying to health professional schools during his or her senior year. This award is based on superior academic achievement and all recipients must show some financial need.

Courses

101. General Biology. (*with lab*) (1.25 units)

An introduction to ecology, evolution, conservation of biological diversity, and comparative adaptation using an investigative and problem-based approach. Structured, skill-based lab exercises allow students to develop, perform and present an in-depth independent research project. One three-hour lab, a one-hour peer study session and three lectures each week. Required for biology, biochemistry, conservation biology and neuroscience majors. Acceptance into 102 requires a grade of 2.0 or higher in 101. Offered every year in the fall semester. Also required for biochemistry, conservation biology, and neuroscience (cellular and behavioral) majors.

102. General Biology. (*with lab*) (1.25 units)

An introduction to cell biology, genetics and physiology, using an investigative and problem-based approach. Structured, skill-based lab exercises allow students to develop, perform and present an in-depth independent research project. One three-hour lab, a one-hour peer study session and three lectures each week. Offered in the spring semester. Required for biology, biochemistry, conservation biology and neuroscience majors. Acceptance into other biology courses, including 101 if 102 is taken first, requires a grade of 2.0 or higher in 102. Offered each spring semester. Also required for biochemistry, conservation biology, and neuroscience (cellular and behavioral) majors.

121. The Natural World. (*with lab*)

A biology-ecology course with laboratory for non-majors focusing on ecological processes and challenges facing individual organisms, populations, communities and ecosystems. Students visit a variety of local habitats to study ecosystems and to learn the natural history and identification of Northeast trees and animals. Students will observe birds, follow animal tracks, take nature photos, conduct a foraging experiment and discuss climate change. This lecture and outdoor lab course does not count toward the biology major but does count toward the outdoor studies minor. Offered each spring semester. *Also cross-listed with Outdoor Studies.*

209. Vertebrate Natural History. (with lab)

A field-oriented course that explores the biology of vertebrate animals, with emphasis on understanding the diversity, life history, evolution and unique adaptations of vertebrates. The laboratory focus is on developing scientifically sound skills in observation and on learning to identify local vertebrates. Some extra class meetings are required for regional field excursions and for observing and identifying local vertebrates at the times of day when they are active. Offered alternate fall semesters. Prerequisite: Biology 101, 102. *Also offered as Environmental Studies 209 and through Outdoor Studies.* Also counts as a biodiversity course for the conservation biology major.

215. Fundamentals of Animal Diversity. (with lab)

Many of our conservation and biomedical efforts focus on managing animal populations. To be effective in either endeavor, scientists need to understand how animals feed, reproduce, and interact with the other species and their environment. This course will cover these and other biological traits of a variety of animal phyla (mainly invertebrates), which are especially important to the natural function of coral reefs, rainforests, and other ecosystems, and which influence human agriculture, fisheries, and medical issues. This course is ideal for sophomores and juniors who are looking to (a) broaden their understanding of biodiversity, (b) establish good foundations for upper level courses, and (c) discover animals in the field. Lectures and one laboratory per week. Prerequisites: Biology 101, 102 or equivalent. *Also offered through Outdoor Studies.* Also counts as a biodiversity course for the conservation biology major.

218. Ornithology. (with lab)

This course provides students with a basic understanding of avian biology. We learn about the diversity of birds through an exploration of avian evolution, physiology, taxonomy and ecology. Students are expected to become proficient in field identification of Northern New York birds by sight and sound, as well as their natural history. Lectures and lab. Labs are generally outdoors, and some Tuesday morning classes after Spring Break will meet early (approximately 6:30 a.m.) for field trips. One mandatory full-day weekend field trip at the end of the semester. Recommended course: Biology 221. Also counts as a biodiversity course for the conservation biology major.

221. General Ecology. (with lab)

A study of the factors influencing the abundance and distribution of species, including interactions between individuals and their physical/chemical environment, population dynamics and the structure/function of communities and ecosystems and their responses to disturbance. Labs are field-oriented and emphasize characteristics of local communities or specific techniques such as estimation of population density. Lectures and one lab per week. Prerequisites: Biology 101, 102 or equivalent, or permission of instructor. Offered each semester. *Also offered as Environmental Studies 221 and through Outdoor Studies.*

224. Biology of Vascular Plants. (with lab)

A study of the evolution, morphology, physiology and life histories of mosses, ferns, conifers, flowering plants and their relatives, in an ecological context. Indoor labs survey the morphology and reproductive characters of the major groups of plants as well as the structure and function of plant organs and tissues. Outdoor labs emphasize ecology, identification and economic uses of local plants. Lectures and one laboratory per week. Prerequisites: Biology 101, 102 or equivalent or permission of instructor. Also counts as a biodiversity course for the conservation biology major.

227. Mammalogy. (with lab)

The objectives of the course are to become familiar with the diversity of mammalian species as well as their distribution, morphology, taxonomy and ecology. A special emphasis is placed on learning to identify mammals of New York State in the field and from specimens. Lab focuses on learning modern methods for studying mammals in the field. This course includes a unit on Marine Mammals through a camping trip on Cape Cod which requires students to miss their oncampus classes, sports practices or games for four days early in the semester. Offered alternate fall semesters. Prerequisites: Biology 101, 102 or equivalent. *Also offered through Outdoor Studies.* Also counts as a biodiversity course for the conservation biology major.

230. Food from the Sea.

Throughout history human populations and cultures have been shaped by their use of finfish and shellfish from the marine biome. What species have been exploited, in what ways, how has this changed over time, and can these marine resources be used in a sustainable way to feed the growing global population of humans? This course will explore these larger questions as it uncovers (a) the biodiversity and ecology of marine fishery organisms (whales, fish, squid, clams, etc.), (b) the impacts of human predation on these organisms, (c) efforts to aquaculture and conserve certain seafood species, and (d) human health issues related to seafoods. This course will be based largely on discussions of class readings (there is a moderate to high reading load) and projects that explore sustainable uses of marine and even freshwater species. This class is ideal for sophomore and junior Biology, Biology–Environmental Studies, and Conservation Biology majors. Prerequisites include Biol 101 and 102. Offered each spring. Also counts as a conservation science course for the conservation biology major.

231. Microbiology. (with lab)

An introduction to the structure, physiology, ecology, genetics and evolution of microscopic organisms including bacteria, archaea and protists. Students examine the metabolic activities and adaptations of these organisms and their interactions with the environment. The ecological, medical and industrial importance of microbes and microbial communities is explored. The laboratory involves microbial cultivation, isolation and identification as well as analysis of microbial presence and activity. Laboratory skills acquired in this course are applicable to a variety of fields including genetics, environmental studies, health and industry. Lectures and one laboratory per week. Prerequisites: Biology 101, 102; pre- or co-requisite: Chemistry 101 or 103 or permission of instructor. Also counts as a biodiversity course for the conservation biology major.

232. Laboratory Animals: Ethics, Care and Techniques. (with lab) (.5 unit)

An introduction to the techniques, use and care of laboratory animals. Students gain knowledge and hands-on experience in anesthetics/analgesics, surgical techniques, and proper animal handling and husbandry. The ethical use of animals in research, appropriate and humane care, and the functions of regulatory agencies are covered. Concurrently, students explore the relationships between humans and animals used in teaching and research. Prerequisite: Psychology 100 or 101 or Biology 101 or permission of instructor.

245. Genetics.

An introduction to the principles of the transmission of inherited characteristics and the underlying molecular mechanisms of the regulation of expression of genetic information. Genetic engineering and an introduction to population genetics are included. Three lectures per week. Prerequisite: Biology 101, 102 or equivalent; prior co-requisite:

Chemistry 101 or 103 or permission of instructor. Also required for the biochemistry major, fulfills the genetics/evolution requirement of the conservation biology major, and counts as an elective for the neuroscience (cellular track) majors. Offered each semester.

250. Introduction to Cell Biology.

An understanding of the concepts and processes of cell biology is fundamental to all other disciplines in biology. This course introduces the anatomy of the cell and physiology of its components, particularly in relation to the physiology of the entire organism. Cellular processes of information storage/transfer (i.e., replication, transcription and translation of genetic material), metabolism, intracellular protein trafficking, and signaling transduction are also explored. Prerequisites: Biology 101,102. Recommended: Chemistry 103,104. Also required for biochemistry major and counts as an elective for the neuroscience (cellular tracks) major. Offered each semester.

252. Research Methods in Cell Biology. (*with lab*)

In this course, students will obtain hands-on experience using basic and advanced techniques in cell biology, such as solution preparation, cell culture, transfection, protein extraction and concentration measurement, polyacrylamide gel electrophoresis (PAGE), western blotting, basic staining and imaging of cells and confocal microscopy. The techniques studied in this course are the same techniques that are used in laboratories across the country and around the world. In addition to gaining practical experience in the laboratory, students will learn about the theories behind each technique and study how biologists apply these techniques to answer fundamental biological questions in cell biology. Required BIOL 101 and BIOL 102. Counts as a 1 unit research methods course for the biology major and fulfills the methods course requirement for the neuroscience major (cellular track).

258. Ethnobotany. (*with lab*)

Ethnobotany is an interdisciplinary field drawing on concepts from both natural and social sciences to investigate human-plant interactions. This course illustrates the importance of plants in our everyday lives and the influence of human activities on plant populations. Independent projects center around surveys and experiments on socioeconomically important plants. Field trips and labs explore Native American reservations, botanical gardens, greenhouses, nature reserves and plant population survey techniques. Three hours of lecture and one three-hour laboratory per week. *Also offered through Asian Studies and as Environmental Studies 258.* Also counts as a biodiversity course for the conservation biology major.

261. Bioethics.

This seminar broadly explores ethical, legal and social implications of recent advances in the biological sciences. Topics such as the human genome project, reproductive technologies, cloning and animal experimentation are explored. Incorporates both lecture and discussion; student projects are emphasized and regular student participation and presentations are required. Prerequisites: Biology 101,102.

270. Endocrinology.

Endocrine glands and the messengers they produce can have profound effects on how organisms respond and adapt to their environment. This course examines the production and function of hormones in different organisms. Topics include the types and functions of endocrine glands (e.g., hypothalamus, pituitary, thyroid and adrenal) and the ways hormones act as chemical messengers with various target cells. Three hours of lecture. Prerequisites: Biology 101,102. Also counts as an

elective for the neuroscience (cellular and behavioral tracks) major.

288. Introduction to Neuroscience.

This course provides basic understanding of the architecture and processing of information in the brain. Particular emphasis is placed on the cellular properties of cells in the nervous system and how these biophysical properties affect information processing. To this end, students learn neuroanatomy and use computer models to gain insight into the computational power of the brain. Other topics include development of the nervous system, neurophysiology of sensation and homeostatic control mechanisms. Three hours of lecture and three hours of laboratory per week. Offered each fall semester. Prerequisites: Biology 101,102. Recommended: Biology 245, or 250. *Also offered as Neuroscience 288.* Also required for the neuroscience major.

309. Biochemistry.

The course is organized around several themes: the relationship of structure to function in biomolecules, production of energy, regulation and control of metabolism. Topics covered to illustrate these themes include enzyme action and regulation, hemoglobin and the transport of oxygen and carbon dioxide, metabolism of carbohydrates for energy production, structure and function of biological membranes, and structure and function of molecules involved in transmission and expression of genetic information. Prerequisite: Chemistry 222 or permission of instructor. Required for the Biochemistry major and also counts as an elective for the neuroscience (cellular) major. *Also offered as Biochemistry 309 and Chemistry 309.* Offered each semester.

315. Human Nutrition.

Food is a basic requirement of human life, impacting biological events at the level of the organism down to the level of the cell. In this course, we will focus on the major energy yielding macromolecules of carbohydrates, lipids, and proteins and how their intake must be balanced to maintain healthy body weight. Other micronutrients including vitamins and minerals will be studied from the perspective of their role in specific body systems. Throughout the course, we will apply this science-based knowledge to assessments of popular diet plans, supplement use, and health claims made about so-called "super foods." Students will also perform both self-analysis of 3-day food records and analysis of patient laboratory results with 24 hour food recall information. Prerequisites: Biology 101,102. Offered every spring semester.

319. Plant Systematics.

Classical and modern approaches to the taxonomy of higher plants with emphasis on evolutionary trends, principles of classification and geographic distribution. The distinguishing field characteristics of the principle families of ferns, conifers and flowering plants are studied. Also included is the identification of local flora. Prerequisites: Biology 101,102. Offered in alternate years. Also counts as a biodiversity course for the conservation biology major.

325. Mycology. (*with lab*)

A survey of the kingdom fungi. An examination of the morphology, ecology, life histories and systematics of the fungi of the North Country. Groups to be emphasized are mushrooms, rusts, smuts, mildews, cup fungi, bread molds, water molds and slime molds. The importance of fungi in human affairs is also examined. Lectures and laboratory. Frequent field trips. Prerequisite: Biology 102 or equivalent. *Also offered through Outdoor Studies.* Also counts as a biodiversity course for the conservation biology major.

330. Ecology of Lakes and Rivers.

The biology of freshwater organisms from a community and ecosystem

perspective. Topics include food web dynamics, fisheries science, primary production, seasonal succession and nutrient cycling. Emphasis is on interactions among fish, invertebrate and plant communities, as well as the influence of their physical, chemical and geological settings. Class projects investigate local and regional lakes and rivers; thus there is a substantial amount of field/lab work. There is also emphasis on the characterization of watersheds using GIS. This course will include discussions of class readings (there is moderate to high reading load). This class is ideal for junior and senior Biology, Biology–ENVS, and Conservation Biology majors. Prerequisite is Biol 221. Offered each fall semester. Also fulfills the advanced ecology requirement of the conservation biology major.

333. Immunology. (*with lab*)

The immune system boasts powerful mechanisms that protect the body from invading pathogens. We explore the development and function of a diverse repertoire of T and B lymphocytes, the range of powerful antibody-mediated responses, and the pre-programmed responses of phagocytic cells and natural killer cells. These basic concepts are then integrated to analyze the immune system's function in disease states including cancer, organ transplant, autoimmunity, infectious disease and immunodeficiency. Laboratory activities highlight immune-based techniques fundamental to research in immunology as well as other biological fields. Prerequisites: Biology 101, 102 or equivalent. Also counts as an elective for the neuroscience (cellular tracks) major.

335. Winter Ecology. *with lab*.

This field-intensive course examines animals, plants and fungi in winter. Topics include physiological, behavioral and morphological adaptations that permit survival during our coldest season. Students practice identification of common trees, mosses and lichens and track common mammals in order to study winter nests, burrows and behavior. Animal energetics and the coniferous tree advantage are discussed. Students review local and regional climate data and measure several microclimates under snow, ice and soil as well as microhabitat abiotic nutrient profiles relevant to winter adaptations. Students must have sufficient winter clothes for extended study in the cold and snow. Prerequisites: Biology 101, 102 and 221. Lunch will be eaten in the field. Also fulfills the advanced ecology requirement of the conservation biology major.

341. Anatomy and Physiology I. (*with lab*)

An introduction to the principles and science of anatomy and physiology. In lectures, students learn the essential concepts that underlie human physiology. The lab is dedicated to the study of human anatomy and the relationship between anatomical form and function. The course is intended to increase the appreciation of the vast complexity of vertebrate anatomy and one's own biology. Prerequisites: Biology 101, 102 or equivalent. Offered each fall semester. Also counts as an elective for the neuroscience (cellular track) majors.

343. Evolution.

In this course we examine life on earth from a historical perspective and evaluate the fundamental evolutionary processes that have produced the diversity of life that we see today. Study topics include the origin of life on earth, mutation as the creator of genetic variation, natural selection, adaptation, population genetics, speciation and extinction. Laboratory projects are designed to develop technical skills in molecular biology and phylogenetic analysis. Three hours of lecture and three hours of laboratory per week. Prerequisites: Biology 101, 102. Recommended: Biology 245. Also fulfills the genetics/evolution requirement for the

conservation biology major.

350. Cancer Biology.

Cancer remains one of the most fascinating and yet devastating diseases afflicting humankind. In this course, we will explore the unique molecular and cellular abnormalities that transform healthy cells into dysregulated, rapidly proliferating cancer cells. Genetic and environmental causes of cancer will be identified from an epidemiological perspective and further described at the molecular level. Students will read relevant primary research articles throughout the course and will work in pairs to present a current study to the class. Pre-requisites: Biology 101 *and* 102 *and* one of these: Biology 245 or 250. Offered every spring semester.

351. Anatomy and Physiology II. (*with lab*)

This course is devoted to the general principles and concepts of anatomy and physiology. Lecture topics include functioning of the nervous, hepatic, reproductive, excretory and endocrine systems. The lab is dedicated to the study of human anatomy and physiology and the relationship between anatomical form and function. Lab activities include dissection, an introduction to microscopic anatomy/histology, physiology experiments and disease focused problem solving sessions. The course is intended to increase the appreciation of the vast complexity of vertebrate anatomy and physiology and one's own biology. Prerequisites: Biology 101, 102 or equivalent. Prerequisites: Biology 101, 102 or equivalent. Offered each spring semester; two lab sections (can always expand). Also counts as an elective for the neuroscience (cellular track) majors.

353. Human Embryology.

In this course, we examine the fundamental processes and principles that govern the development of humans from fertilization to birth. Developmental processes are considered at the molecular, cellular and anatomical levels. An emphasis is placed on understanding how the human body is constructed, including the development of organs and organ systems. We will also examine abnormal development and human birth defects. Required Biology 101, 102. Also counts as an elective for the neuroscience (cellular tracks) major.

360. Marine Ecology.

The marine environment is the largest portion of the earth's biosphere and holds an amazing diversity of microbial, plant and animal life. This spring-semester course covers the biology of these organisms, emphasizing their ecological interactions and the habitats they are adapted to (e.g. coral reefs, kelp forests, hydrothermal vents, etc.). Considerable attention is also placed on the role of humans in these ecosystems, ecosystem health, and conservation issues. This course will be based largely on discussions of class readings (there is a high reading load). This class is ideal for junior and senior Biology, Biology–Environmental Studies, and Conservation Biology majors. Prerequisite is Biol 221. Offered each spring semester. Also fulfills the advanced ecology requirement of the conservation biology major.

380. Tropical Ecology.

A seminar course based on current research in tropical biology. Emphasis is on the structure, function and biology of tropical organisms and ecosystems, especially as compared to temperate systems. Lectures include South American, Australasian and African tropical ecosystems. The course addresses the role of plant-animal interactions, mutualisms, sustainable development, conservation measures and the roles of indigenous cultures in tropical ecosystems. Prerequisite: Biology 101, 102. *Also offered as Environmental Studies 380.* Also fulfills the advanced

ecology requirement of the conservation biology major.

381, 382. Research Methods Training. (0.5 or 1 unit)

Special courses intended to offer non-senior research training specific to a faculty member's research program. Many techniques covered are not generally taught within the lab of a regular course offering. The course will be indicated on the student transcript as "Research Methods in X" with "X" being the research area (e.g., endocrinology). These offerings are by permission only in consultation with the appropriate faculty mentor. Such courses do not count as one of the minimum six units for the major.

387. Cellular Mechanisms of Memory.

This course examines the molecular mechanisms of neuronal plasticity. Topics include an analysis of the cellular processes that have been proposed to be at the core of memory formation, with discussion of the electrophysiological methods that have been used to analyze these processes; the biochemical mechanisms for short-term and long-term information storage at the cellular level and the vertebrate and invertebrate experimental models used for studying the molecules involved in memory formation. Prerequisites: Biology/Neuroscience 288. Counts toward the neuroscience major (cellular track). Offered on alternate fall semesters. *Also offered as Neuroscience 387.*

388. Drugs and the Brain. (*with lab*)

This course will focus on how psychoactive drugs modify nervous system function and human behavior. The neurochemical and behavioral techniques used to study drug action will be addressed. Students will learn how drugs are metabolized by the body (pharmacokinetics), act (pharmacodynamics) and affect behavior (psychopharmacology), gaining comprehensive understanding of the neurotransmitter systems of the brain and how different drugs affect these systems. The laboratory component will utilize the nematode *C. elegans* as a model system to explore drug action; students will learn research techniques and carry out independent research. Three hours of lecture and three hours of laboratory per week. Prerequisites: Biology/Neuroscience 288. Counts toward the neuroscience major (both tracks). Offered every spring semester. *Also offered as Neuroscience 388.*

389. Advanced Neuroscience.

Builds on the fundamental concepts presented in Biology 288 (Introduction to Neuroscience) and begins to examine neurobiology from a systems perspective. Topics include the biological basis of sexual orientation, sleep and dreaming, sleep disorders, epilepsy and seizures, motivation and addiction, Alzheimer's disease, disorders of thought and volition, and mood disorders. Prerequisite: Biology/Neuroscience 288. Required for the neuroscience major. Offered every spring semester. *Also offered as Neuroscience 389.*

391. Research Methods in Scanning Electron Microscopy. (*with lab*) (5 unit)

This course deals with the theoretical and practical aspects of scanning electron microscopy (SEM) and elemental analysis using EDS. Specifically, we will be using a brand new state of the art Quanta 450 SEM with Oxford EDS detector. Mastery of the course topics will require 6 hours of lab/class as well as 3-6 hours of independent work per week for 7 weeks. Those who master these skills will be welcome to use the instruments to conduct independent (senior or mentor guided) research. The initial classes will have greater emphasis on theory, and as we progress, we will spend more time on the scope. All students will be trained how to properly use this instrument. Students

are expected to spend time outside class working on specimen prep, imaging, and image processing. This will culminate in a final portfolio of images. *Also offered as Geology 391.* Prerequisite: at least one 200- or 300-level science course.

392. Research Methods in Fluorescence and Confocal Microscopy. (*with lab*)

Fluorescence microscopy allows a biological specimen to be fluorescently labeled and imaged. This technique is employed in many research labs and is a standard tool to locate the presence of a particular protein or cell structure. This technique, however, has limitations and is not precise in its ability to discern the specific depth of structures. Confocal microscopy was developed to address the issue of specificity of position. Precise imaging has led to confocal becoming a major tool in biological research. Students in this course will learn the theory and practice of both fluorescence and confocal microscopy. Students will be assigned a variety of specimens to be stained. These specimens are selected specifically to teach new techniques in specimen prep or imaging. Students will learn lab and laser safety, light and fluorescence, optics, the upright fluorescence microscope, the inverted confocal microscope, photomultiplier tubes, resolution and numerical aperture, specimen preparation, basic immunology, and image acquisition, processing, and presentation. Semester will culminate with individual portfolios of selected images. Prerequisites: any 200- or 300-level science course. Also fulfills methods course requirement for the neuroscience major (cellular track). Offered each semester.

394. Research Methods in Biochemistry. (*with lab*)

This course focuses on introducing basic laboratory techniques and skills that are common in fields related to biochemistry. Attention is paid to both theory and application. Students keep a detailed laboratory notebook, and write up an extended project in the style of a journal article. Prerequisites: Chemistry 222 and any one of Biology 231, 245, 250, 391 or Chemistry 309 (which can be taken as a co-requisite). Also required for the biochemistry major. *Also offered as Biochemistry 394.* Offered each spring semester.

395. Research Methods in Molecular Biology. (*with lab*)

Molecular techniques have revolutionized how biologists address problems in genetics, medicine, ecology, systematics, conservation and many other fields. Students obtain hands-on experience using basic and advanced molecular techniques, such as nucleic acid (DNA and RNA) isolation and purification, DNA sequencing, gel electrophoresis and polymerase chain reaction (PCR), to study gene expression and genetic variability. The molecular techniques studied are the same used in laboratories worldwide. In addition to gaining practical experience in the laboratory, students learn about the theories behind each molecular protocol and study how biologists apply molecular techniques to answer fundamental biological questions. Prerequisites: Biology 245, 250 or 394. *Also offered as Biochemistry 395.* Also required for biochemistry major and fulfills methods course requirement for the neuroscience major (cellular track). Offered each fall semester.

399. Current Topics in Neuroscience.

This seminar course will cover a wide variety of topics related to current neuroscience research. Our main source of information will be neuroscience primary literature articles available in the public domain. Students enrolled in the course will decide on the topics that will be addressed throughout the semester, will read the primary literature and will lead critical and comprehensive discussions on each research topic. Examples of topics that can be covered in this course include: epigenetics; mirror neurons; autism spectrum disorders; neurobiology

of mental disorders; learning and memory; drug abuse and addiction; and the aging brain. Prerequisites: Biology/Neuroscience 288. Counts toward the Neuroscience Major (both tracks). Offered on alternate fall semesters. *Also offered as Neuroscience 399.*

412. Cross-Cultural Perspectives of Healing.

This class uses healing traditions as the lens with which to examine culture. During the semester students will have the opportunity to meet healers from around the world. In a typical semester presenters include a Traditional Chinese Medical practitioner, an Ayurvedic physician (from India), a shaman from Peru, an exorcist, a native American Healer an allopathic physician, new age healers, a Christian Scientist and others. This course cannot be used to fulfill the requirements for the biology major. *Also offered as Religious Studies 412 and Global Studies 412.*

415. Advanced Biochemistry.

A variety of topics are covered in depth depending on the interests of the students. The course begins with an overview of metabolism and its hormonal regulation. Other topics may include protein synthesis and targeting, molecular immunology, sensory systems and neurotransmission, hormone action, membrane transport, oncogenes and cancer, photosynthesis and advanced topics in metabolism. Topics of current interest may also be included. Through both written and oral presentation, students develop their abilities to use the scientific literature and communicate in science. Prerequisite: Chemistry 309 or permission of instructor. Also required for biochemistry major and counts as an elective for the neuroscience (cellular tracks) major. *Also offered as Biochemistry 415.*

440. Conservation Biology. (with lab)

This senior capstone course examines the problem of maintaining biological diversity in a changing world. Emphasis is on the biological concepts involved in population biology, genetics and community ecology, and their use in conservation and management of biodiversity. Labs mix local projects and trips to sites of interest for conservation. Prerequisite: Biology 221 or 245. Also required for the conservation biology major.

447, 448. SYE: Special Topics.

These courses on topics not regularly offered in the curriculum are intended for senior majors only. May be offered for .5 or 1 unit of credit and may include a laboratory. Prerequisites depend on course content and consent of instructor.

460, 461. Seminar in the Techniques of Teaching Biology.

Required Courses

- Four biology courses: 101, 102, 288, 341.

Participation in the review, revision, preparation and presentation of materials in the lecture and laboratory portions of the General Biology course; responsibility for presenting a seminar concerning a week/s core curriculum and for student evaluation. Biology 460, no credit, may be repeated. Biology 461 may be taken once for one-half unit of credit following one semester of 460.

462, 463. Senior Seminars in Biology.

Intensive investigation by a group of students and faculty of advanced topics not regularly offered in the curriculum. Students are responsible for preparation and presentation of much of the course content. Prerequisite: permission of instructor. One unit may apply to the minimum requirements for the major.

468, 469. SYE: Tutorial Research. (.5 or 1 unit)

Mentored study and research that is not experimental in design yet requires the analysis of primary literature-based data and the integration of this with current knowledge of the subject matter. A thorough understanding of the methodologies used in acquiring the published data is critical for this integration. Prerequisite: sponsorship by a faculty member.

489,490. SYE: Experimental Research. (.5 or 1 unit)

Field or laboratory research projects for students desiring to pursue directed, experimental research in biology. Students integrate acquired research skills and subject knowledge to collect original experimental data and to analyze the results in reference to the existing scientific primary literature. Prerequisite: sponsorship by a faculty member.

499. SYE: Honors Research. (.5 or 1 unit)

Senior students integrate acquired research skills and subject knowledge gained through the major to collect original experimental data and analyze the results in reference to the existing scientific primary literature. Graduation in biology with the designation of honors requires exceptional academic accomplishment as demonstrated by a major GPA equal to or above a 3.5, completion of a second semester of SYE honors research according to established guidelines, a public presentation of results, and an honors thesis that is bound and archived in the department and in the science library. Prerequisite: sponsorship by a faculty member and nomination by honors committee. See honors guidelines above or at the biology webpage.

Biology-Physics

Interdisciplinary major offered

More information on this interdisciplinary major can be found at

www.stlawu.edu/physics/biology-physics.

Students may elect an interdisciplinary major in biology and physics as a basis for work or advanced study in such fields as biophysics, radiation biology, radiological health or environmental science. The major is also acceptable for pre-medical students.

Required Courses

Physics

(4) 151 or 103, 152 or 104, 221, 222

Biology *or* Physics

Two additional units chosen from appropriate courses at the 200 level or above

Chemistry

(2) 221, 222

A senior research project in some area of biophysics, with advisors from both biology and

physics.

Recommended Courses

Chemistry

342. Biophysical Chemistry.

Mathematics

205. Multivariable Calculus.

Advising is provided through both the biology and physics departments. Since this major is expected to serve students with a wide range of interests, anyone interested is encouraged to consult with these departments about appropriate scheduling of courses, including interdepartmental offerings.

Students contemplating this major should also be aware of possibilities for advanced placement in chemistry, mathematics and physics courses that could provide added flexibility to their program. Physics 151/152 is better preparation for 221/222 than Physics 103/104, but any combination of the introductory sequence is acceptable.

Business in the Liberal Arts

Major offered

Associate Professor Chezum (economics), coordinator.

Visit the program's Web page at

www.stlawu.edu/business-liberal-arts.

At St. Lawrence University, we believe that business leaders are not trained in the “ways of business,” but rather that leadership in business is rooted in one’s ability to bring multiple ways of thinking to bear on a question, circumstance or challenge. We believe that business leaders should be thinkers gifted in the art of seeing through multiple lenses and thinking creatively and critically across a broad array of perspectives. They must also be sophisticated readers of different cultures so as to recognize opportunities to create value for others and understand how to collaborate effectively in a diverse world. To this end, the business in the liberal arts curriculum at St. Lawrence is rooted in the premise that a liber-

ally educated individual will bring to bear multiple perspectives and deploy multiple strategies in solving a wide variety of problems.

Successful business leaders may come from any disciplinary background and are often people who can see across disciplinary lines. Preparation for business leadership does not depend on a specific course of study, but is instead the product of the individual’s ability to think critically, present evidence effectively, and have a depth of knowledge in at least one area of the liberal arts. Therefore, business is not viewed as a stand-alone major, but must be paired with another major offered at St. Lawrence that capitalizes on the individual’s strengths and interests. Additionally, business in the liberal arts majors must complete seven core courses, an experiential learning component, and three electives from the four categories listed below. Ideally, these electives will also satisfy requirements in the student’s paired major and/or general education requirements.

Students may declare the Business in the Liberal Arts major during the second semester of their sophomore year, but no sooner, and normally they may not declare the business major after the first semester of their junior year. Before declaring the Business in the Liberal Arts major, students must have already declared their primary major.

Major Requirements

- I. A dynamic business leader brings multiple perspectives to bear on business decision making. To encourage greater depth of knowledge, business in the liberal arts majors are required to complete a second major (i.e., they must double-major in business in the liberal arts and one other field) at St. Lawrence University.
- II. All business in the liberal arts majors must complete the following seven courses:
 - ECON 100. Introduction to Economics.
 - ECON 251. Intermediate Microeconomics.*
 - ECON 252. Intermediate Macroeconomics.*
 - ACC 203. Financial Accounting.
 - ACC 204. Managerial Accounting.
 - MATH 113. Introduction to Statistics. *and* an Excel Course.**
 - PHIL 202. Reasoning.

**These courses should be completed before the second semester of the student's junior year. Normally, students who have not completed these courses by this time will not be allowed to declare the business in the liberal arts major.*

***Students are required to complete an approved online excel course as well as STAT 113 to satisfy this requirement. Alternatively, students may take ECON 200: Quantitative Methods in Economics or STAT 213: Applied Regression Analysis to satisfy this requirement.*

III. Business in the liberal arts majors must complete at least one experiential learning opportunity:

Approved Internship

Community-Based Learning

Off-campus Study

IV. Business in the liberal arts majors must complete one course in three of the following four elective areas. Students double-majoring in economics and business in the liberal arts may not take their business electives from courses taught in the economics department. Students may petition the business in the liberal arts program coordinator for additional courses they believe may satisfy one of these elective areas but are not listed below. Special Topics courses may not be used as electives in the business in the liberal arts major. Because the business in the liberal arts major relies on courses taught within the existing course structure at St. Lawrence, transfer courses must be approved by the appropriate department as a St. Lawrence course equivalent to count toward the Business in the Liberal Arts major. Additionally, because the program relies on courses taught through the regular curriculum the business program is unable to approve transfer courses for St. Lawrence credit. Courses that satisfy the elective areas defined below may be found at <http://myslu.stlawu.edu/~bchezum/index.html>.

A. Social Responsibility

To be successful, business leaders of tomorrow must be mindful of the full implications of their products and services, work environments, and relationship to the communities where they find themselves. As such, students are required to take courses that challenge them to think through all the implications of business decisions as well as evaluate the implicit

values in the seeking of profit. Future business leaders educated at St. Lawrence University will be voices for more holistic decision-making that balances civic obligation, environmental sustainability and profitability.

B. Global Citizenship

The high degree of global economic activity and communication that characterizes the world of the 21st century demands that students entering the business world come prepared for that reality. Business in the liberal arts majors will be required to take at least one course that introduces them to global cultural, historical or political economy issues. Majors are encouraged to maximize the opportunities to familiarize themselves with global issues or particular areas of the world beyond the one course requirement.

C. Analytical Thinking

Business leaders must be prepared to confront new innovations that continuously arise in a dynamic world. To this end, we believe that business leaders must have exposure to scientific and analytic methods and should be prepared to evaluate the costs and benefits brought forth by an innovation. The courses in this area inherently foster analytical problem-solving skills, preparing students to make informed choices regarding innovations.

D. Social Contexts

Students entering the business world must be cognizant of the social contexts within which all businesses operate. Courses that examine the complexity of society and social interaction, human learning and/or personality will prepare students interested in business careers to be mindful of social contexts and, where appropriate, their own place within them. Such preparation will help students to appreciate the ways in which business functions internally as well as part of a larger whole. The courses available to students in this elective area address domestic and/or global social contexts.

Honors

Students wishing to complete honors are encouraged to do so in their second major.

Canadian Studies

Combined major and minor offered

Professors Jockel (chair), Thacker; **Senior Lecturer** Forkey.

Visit the Canadian studies webpage at www.stlawu.edu/canadian-studies.

The Canadian studies department seeks to combine the advantages of St. Lawrence's proximity to Canadian political, cultural, economic and academic centers with the University's traditional commitment to high-quality teaching of undergraduates in the liberal arts.

Canadian studies is interdepartmental: the vast majority of courses on Canada are taught by faculty in several academic departments. These offerings provide opportunities for students to pursue Canadian affairs as an excellent sub-area of study within a major, or simply as an area of interest.

Interdisciplinary courses are also taught under the rubric of Canadian studies. These include Introduction to Canada, Canadian-American Relations, Québec, the Junior/Senior Seminar and various special topic courses (examples of the latter are Native Peoples of Canada, and Canadian Pacific: The West in Confederation). There are also options for internships, independent projects and honors theses.

Combined Major Program

Under the Canadian studies combined major program, students fulfill all of the major requirements of one department in the social sciences or humanities, such as English, government or history. In addition, they (1) pursue a Canadian studies core consisting of an independent project plus the Introduction to Canadian Studies and the Canadian-American Relations courses, and (2) choose four Canadian studies electives from the offerings of the several academic departments. These department electives should be partially drawn from the department of the student's combined major. For example, a student pursu-

ing a combined major in history and Canadian studies should select at least one Canadian history course, thereby meeting a major requirement in both history and Canadian studies and, in the process, reducing the number of electives needed for the combined major.

Such a combined major provides students with the opportunity for special study within the traditional major as well as the ability to pursue both the methodological depth of that traditional discipline and the multidisciplinary breadth of Canadian studies.

All Canadian studies combined major programs require the following courses:

101. Introduction to Canada.	1 unit
201. Canadian-American Relations.	1 unit
401. Senior Seminar. or	
479,480. SYE: Internship. or	
489,490. SYE: Independent Project. or	
498,499. SYE: Honors Thesis.	1 unit
Electives from offerings in Canadian studies in the various academic departments*	<u>4 units</u>
Total	7 units*

**Electives from the department offerings should be chosen partially from the electives in the departmental half of the student's combined major. A combined major of up to 14 courses is thus possible. In no case may more than 16 courses be pursued for a combined major.*

Minor Requirements

To minor in Canadian studies, a student is required to take Canadian Studies 101 and 201 and three courses on Canada from those offered by the several academic departments. The three elective courses must be approved by the chair of the Canadian studies department.

Study in Canada Option

Study in Canada is a logical complement to the Canadian studies department's offerings. Students (not necessarily those pursuing a Canadian studies combined major) may participate for an arranged period of time. Students on the global franco-phone programs spend the first two weeks of their semester at Laval University in Québec City.

Courses in various departments conduct academic work in Canadian venues such as Toronto and Carleton University in Ottawa. In addition, the program has a standing arrangement with Trent University in

Peterborough, Ontario; qualified students may pursue a diploma in Canadian studies while concurrently fulfilling their St. Lawrence degree requirements. Interested students should see the chair for more details.

Courses

101. Introduction to Canada.

A multidisciplinary seminar designed to provide students with a comprehensive introduction to Canada. The course stresses the basics of geography, history, economics, politics and culture. At the same time, it uses contemporary events and issues (such as ongoing debate over Canada's constitutional and economic directions) to demonstrate the importance of geographic fact, historical frictions and political and cultural diversity to an understanding of the Canadian nation(s). Major consideration is given to the ways Canada is both similar to and different from the United States.

201. Canadian–American Relations.

Examination of the economic, cultural, military and environmental aspects of the Canada–United States relationship, as well as of the public and private institutional arrangements involved in the maintenance of that relationship. Although the evolution of the Canadian–American interaction is dealt with, the emphasis is on the contemporary period. Prerequisite: Canadian Studies 101 or permission of the instructor. *Also offered through Peace Studies.*

202. Québec.

This multidisciplinary seminar builds on Introduction to Canada by focusing on Québec from a variety of perspectives. A distinct society with French as its dominant language and culture, Québec is unique within North America. Its geography, history, culture, economics, politics and place in the Canadian Confederation are explored, as well as Québec's presence on the world stage as a member of the Francophonie. Throughout, the French influence on the rest of North America is examined. Prerequisite: Canadian Studies 101.

401. Junior/Senior Seminar.

This multidisciplinary seminar is offered periodically as capstone to the combined major or minor. Topics vary. Past offerings have included Canadian biography, the Group of Seven, and contemporary Canadian culture. Prerequisite: Canadian Studies 101 or permission of instructor.

479, 480. SYE: Internship.

Prerequisite: permission of program director.

489, 490. SYE: Independent Project.

Prerequisite: permission of program director.

498, 499. SYE: Honors Thesis.

Prerequisite: permission of program director.

Plus offerings in several departments.

Caribbean and Latin American Studies

Minor offered

Professors Jennings (history), Llorente (modern languages and literatures), Stoddard

(global studies), White (modern languages and literatures); **Associate Professors** Casanova-Marengo (modern languages and literatures), Chew-Sánchez (global studies); **Assistant Professors** Diaz de Leon (modern languages and literatures, visiting), Feinstein (history, visiting), McLane (sociology).

Visit the Caribbean and Latin American studies program website at www.stlawu.edu/caribbean-and-latin-american-studies.

Caribbean and Latin American studies (CLAS) is an interdisciplinary program designed to introduce students to the richness and diversity of the cultures, societies and ecologies of Central and South America, Mesoamerica and the Caribbean. Within the broader context of global processes and relationships, the program emphasizes understanding the experiences of Caribbean and Latin American peoples: political and economic structures and changes, both peaceful and violent; population processes and transitions; environmental stresses and local responses; post-colonial and cultural theories; and forms of expression in music, dance and literature. Because of the program's global and comparative emphasis, the CLAS minor complements many of the University's majors and minors, and also fulfills the requirement for an Integrated Learning Component (ILC).

Minor Requirements

Students must earn six units of CLAS credit from at least two departments and/or programs to complete the minor. Among these, students must complete at least one of the following survey courses:

- CLAS 104/HIST 115.
Survey of Caribbean and Latin American Studies.
- CLAS 231/GOVT 230.
Latin American Politics.
- CLAS/HIST 233.
Colonial Latin America.
- CLAS/HIST 234.
Modern Latin America.
- CLAS/SPAN 444.
Survey of Latin American Literature.

Students must complete an additional five units, which may include other courses from the list of

survey courses. These five elective units will be courses that are multi- or cross-listed with CLAS, or offered in a suitable off-campus program, including St. Lawrence programs in Trinidad and Tobago or Costa Rica, and ISEP programs in Latin America and the Caribbean, as well as selected courses in Madrid. Students must obtain the CLAS coordinator's approval in writing for off-campus units to count toward the minor. The electives must be in at least two departments and/or programs on campus.

Students may petition the coordinator for credit for transfer courses, summer off-campus courses, pertinent internships credited in a St. Lawrence department or program, or courses pertaining to the region that are completed at St. Lawrence or ISEP off-campus programs.

If the student makes a successful proposal to the coordinator of CLAS, an independent study or SYE with a Caribbean and/or Latin American studies focus may substitute for one of the five electives. The project may be supervised by any St. Lawrence faculty member.

Courses

104. Introduction to Caribbean and Latin American Studies.

This interdisciplinary core course is designed to introduce students to the richness and diversity of Latin American cultures, the region's turbulent history of conquest and colonization, and the problems of its development. The course familiarizes students with the vitality of Latin American art and literature and relates 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. *Also offered as History 115 and through Peace Studies.*

3000-3999. Special Topics.

Special topics courses offer students the opportunity to study specific topics in CLAS when offered by departments. The content of each course or section of these 200-level special topics courses varies and will be announced each semester.

4000-4999. Special Topics.

Special topics seminars offer students the opportunity to study specific topics in CLAS when offered by departments. The content of each course or section of these 300- or 400-level special topics courses varies and will be announced each semester.

Departmental Offerings

Economics

265S. The Spanish Economy, the EU and the Latin American Challenge. *(Spain Program)*

This course analyzes the possibilities for economic cooperation

between the European Union and Spain, and Latin American economies. Study will focus on the challenges associated with the important structural changes that are taking place in Europe as well as Latin America in the context of the growing integration of both regions in international markets. Prerequisite: Econ 100.

English

224. Caribbean Literature in English.

A survey of literature by authors from formerly British colonies: Jamaica, Trinidad, St. Lucia, Barbados, St. Kitts and Dominica. The course considers colonial and postcolonial fiction, poetry and non-fiction by writers from various ethnic groups, including people of African, East Indian, Chinese and European descent. Representative authors are Derek Walcott, Jamaica Kincaid, V.S. Naipaul, Jean Rhys, George Lamming, Edgar Mittelholzer, Olive Senior, Erna Brodber and Michelle Cliff. *Also offered through Anthropology and Caribbean and Latin American Studies.*

Global Studies

102. Introduction to Global Studies II:

Race, Culture, Identity. *(when taught by Chew-Sánchez)*

Examination of their own identities and social locations leads students to an understanding of how those identities exist in a global matrix of cultural, economic and political relationships. Students are introduced to various theoretical and political positions on identity, with a focus on gender, race, ethnicity, class, spirituality and sexuality. While much of the material is drawn from the contemporary era, the historical context of European conquest and expansion and the Middle Passage frame a critical examination of the evolving ideas of "America" and the "West." *Also offered through African-American Studies, Native American Studies and Peace Studies.*

206S. Spain and Latin America:

Construction of a Common Cultural Space.

(Spain Program)

España y América Latina: la construcción de un espacio cultural común course touches on Latin American and Spanish fundamental topics on anthropology, focusing on cultural heritage and colonization discourses and how they are reflected in the collective imagination on both sides of the Atlantic. The course analyzes the challenges and the role of such challenges in the globalized world with its sociodemographic and cultural specificities.

250. La Frontera: Cultural Identities on the Mexican-U.S. Borderland.

This course investigates the cultural expressions derived from the interactions among people on both sides of the Mexico-U.S. border. The goal is to understand the different ways in which immigration, drug smuggling and transnational industries affect the everyday lives of borderlanders through historical and critical approaches to the cultural expressions (music, images or other forms of discourse) that have served as mechanisms to mediate the contradictions arising out of the border. *Also offered through Native American Studies and Peace Studies.*

255. Popular Culture. *(when taught by Chew-Sánchez)*

This course introduces students to key themes in the study of popular media and to debates about the role of media in contemporary societies. It also introduces methodologies used to study culture and asks students to apply them to case studies from music, sports, comics, fashion, television, cyberculture, film or advertising. Emphasis is on various cultural expressions of ethnic subcultures in the United States

and their complex negotiations with the dominant culture and their co-resisters in a global/local struggle over meaning. *Also offered through Caribbean and Latin American Studies.*

260. Transnational Migration. (*when taught by Chew-Sánchez*) Students acquire a global perspective on the nature of migration movements, why they take place and how they affect migrating peoples, as well as the societies receiving them. Themes include transnationalism and new approaches to national identity and citizenship; migration as a social network-driven process; gendered migration; migration and the formation of ethnic minorities. The course analyzes how transnational movements of people, goods and services affect and transform the relationships between cities and nations and explores the political meaning of contemporary nationalism and the possibilities of new forms of citizenship. Emphasis is on the (trans)formations of Latino identities in the U.S. *Also offered through Native American Studies.*

Government

321. Latin American Politics.

This course introduces students to the politics of Latin America, a geographically and socially diverse region with wide-ranging levels of economic development. Tracing the roots of current political conflict to the colonial era and early years of independence under the shadow of an increasingly powerful United States, the primary focus of the course is on political change in Latin America today.

337. Torture, Truth and Memory.

Authoritarian regimes have often committed massive human rights abuses that included murder, torture, disappearances and forced adoptions. Drawing on memoirs, torturers confessions, declassified documents, films, literature and analytical texts this course explores the ongoing struggle over who will interpret the political past, and what roles justice and forgiveness might play in securing democracy for the future. *Also offered through Peace Studies.*

381. U.S. Foreign Policy Toward Latin America.

This course tracks the development of U.S. policy toward Latin America and shows how asymmetric power relations have influenced resolution of key problems in the Western Hemisphere. The course will review formative events such as U.S. military occupation of countries in the Caribbean Basin and Cold War covert operations. Students will consider how the United States and Latin America see shared policy problems differently, including the debt crisis, immigration, illicit drug flows, and environmental problems.

History

233. Colonial Latin America.

This course surveys the formation and historical development of colonial Latin America. We begin with initial encounters between indigenous peoples of the Americas and Iberians in the 15th century and end with Portugal and Spain's loss of their mainland colonies in the Americas in the 1820s. Part of our task is to understand the dynamics of race, class and gender in the colonial societies that developed from the violent collision of cultures during the conquest.

234. Modern Latin America.

This course surveys the history and development of modern Latin America. We begin with a brief overview of the colonial and early national periods, but the main focus of the course is from 1870 to the present. Some of the issues that concern us include the historical roots of the human and cultural diversity of modern Latin America, the region's relationships to a changing world economy, politics and human rights,

and migration and diasporic cultures. *Also offered through Peace Studies.*

256. Slavery and Freedom in the Americas.

This course surveys the genesis and dissolution of the transatlantic slave trade and the slave societies that created the demand for this trade in both North and South America and the Caribbean. The perspective is Atlantic in scope, trying to understand the impact of this forced migration on Africa and Africans and on American societies, defined as all of the Americas, not just the U.S. We also discuss some of the movements to abolish the slave trade and slavery itself, examining how the people involved defined freedom.

Modern Languages and Literatures

Spanish

103,104. Intermediate Spanish.

201. Advanced Spanish.

Review and expansion of the four skills, with emphasis on the oral and written expression of ideas in Spanish on topics of current interest and cultural significance in the Spanish-speaking world. Materials studied include journalistic texts, videos, audiotapes, songs and literary works. For students who have completed Spanish 103,104, or who have four years or more of Spanish at the secondary level.

202. Hispanic Cultural Studies.

A language course with the aim of acquainting students with current Hispanic culture through the analysis of literary texts, films, advertisements and other materials drawn from Spain, Hispanic America and the Latino community in the United States. Includes a research project on a cultural topic. This course fulfills the diversity distribution requirement.

221. Latin America in Film.

This class examines how Latin America is represented in films by directors from Hispanic America, Brazil, Europe and the United States. The films form the basis of conversation and research on themes related to contemporary history, interethnic conflict, traditional gender roles and immigration. The class is conducted entirely in Spanish, though some of the theoretical and technical readings on film are in English.

317. Taller de Literatura Creativa.

The Taller de Literatura Creativa, conducted entirely in Spanish, offers guided writing exercises on a weekly basis. Students learn how to criticize each other's work in constructive ways, incorporating the results of these discussions in additional drafts of their creative work. The themes of these poems, short stories and non-fictional works revolve around Hispanic culture and study abroad on SLU-sponsored programs, primarily in Spain and Costa Rica. The workshop is a place where students can compare these abroad experiences as well as experiences about being a Spanish-speaker in the U.S. Toward the end of the semester, students work collectively to edit material and to produce the online cultural journal *Aquí y Allá*. The instructor is a published writer of poetry and prose fiction.

344SP. Survey of Latin American Literature.

(Spain Program)

Indigenous oral traditions and texts from the period prior to the arrival of the Europeans are examined, as are works from the colonial period to the present. Authors studied from the colonial period include Bernal Díaz del Castillo, Bartolomé de las Casas and Sor Juana Inés de la Cruz. Contemporary authors include Borges, García Márquez, Allende and Rigoberta Menchú.

444. Survey of Latin American Literature.

(equivalent to Spanish 344)

445. Literary Translation: Theory and Practice.

(not currently multi-listed with CLAS)

In this workshop, students use translation as a tool to learn how to express themselves more effectively in both English and Spanish. Theorists such as Octavio Paz, José Ortega y Gasset, Willis Barnstone, Carol Maier, Walter Benjamin, Tejaswini Niranjana and others help illuminate the practice of translation in a variety of genres that include poetry, autobiography, book reviews and subtitling of films. For students with considerable background in Spanish, including, preferably, residence in a Spanish-speaking country.

446. Oral Expression in Spanish.

Analysis of contemporary oral usage through the study of film, video and audio materials as well as printed texts. Advanced pronunciation practice. Study of techniques of oral presentation. Assignments are designed to promote the development of persuasive skills and include formal debates on contemporary issues and other public speaking activities.

449. Afro-Hispanic Culture and Literature. (In Spanish)

This course explores the African Legacy in the culture of the Hispanic Caribbean: Cuba, the Dominican Republic and Puerto Rico. While examining a variety of texts we will engage in conversation around topics that include slavery and resistance, cultural racism, class, identity construction and representation. The course also incorporates cuisine, music, dance and other sources as the basis for work that may bring in creative, disciplinary or career interests. Taught in Spanish, and permission of the instructor is required.

489, 490. SYE: Independent Study.

Independent study in French, Portuguese or other fields and departments may be credited to CLAS with permission of the coordinator.

Additional information and a complete list of the approved courses for the minor can be obtained through the coordinator of Caribbean and Latin American studies or the Center for International and Intercultural Studies.

Chemistry

Major and minor offered; major in biochemistry jointly administered with biology; combined major with environmental studies

Professor French; **Associate Professors** Dixon (joint appointment with biology), Gao, Glazier, Marano (chair), Skeels; **Assistant Professors** Hill, Krois (visiting), Tartakoff.

Visit the chemistry department webpage at www.stlawu.edu/chemistry.

Chemistry is hailed as the central science, a distinction merited by the role it plays in understanding the functioning of the natural world. The focus is at the atomic and molecular levels, on the structure

and function of molecules, their interactions with other molecules, their transformations into new substances and the physical laws that govern these processes. The laboratory-intensive curriculum provides students with hands on experience with modern separation and spectroscopic methods for substance purification, quantitation and identification.

The chemistry department offers a program noted for close student-faculty collaboration in and out of class and at every level from general chemistry through a required senior-year research experience. The curriculum is bolstered by outstanding instrument and computer facilities that enable us to offer exciting laboratory experiences and provide wonderful support for faculty-student research projects.

While completing one of two possible major plans, students can prepare themselves for future educational opportunities including graduate study in chemistry, biochemistry, the pharmaceutical sciences, forensics, oceanography, environmental science and geoscience, among others. An undergraduate chemistry degree is a prelude for many to medical, dental, veterinary, law and related professional schools. Alternatively, a degree in chemistry can be crafted in conjunction with the appropriate education courses to prepare for a career in secondary school science education. Bachelor-level chemistry graduates are employed in many areas of industry and commerce including research and development, marketing and sales, management, banking and patent law.

In addition to the major, a student may opt for a six-course minor in chemistry or a combined major in environmental studies and chemistry. The department also offers a biochemistry major in collaboration with the biology department and a chemical engineering program in which students complete three years at St. Lawrence and two years at an engineering school, receiving bachelor's degrees from each institution. Please see "Pre-Professional Programs" in the Curriculum section for more information on the latter.

Except for transfer students, a maximum of two courses applied toward the chemistry major or minor may be taken at other institutions.

Major Requirements

A student majoring in chemistry elects from two basic courses of study:

Plan 1 provides basic preparation for medical or dental school and secondary school teaching. It also provides greater flexibility for those who wish to participate in study abroad programs. Students are required to complete Chemistry 103-104, 205, 221, 222, 341, and 342. In addition, students must complete a minimum of three upper-level, 0.5 unit advanced laboratory courses selected from 351, 352, 353, 394 and 452, and a senior project (489 and/or 490). Unless special permission is obtained in advance, two .5-unit SYE courses are required over two semesters. In rare cases, permission may be obtained to complete 1.0 unit in a single semester. Two semesters of calculus (Math 135, 136) and physics (either 103,104 or 151,152) are also required. We recommend completing the math requirements in the first year and physics during the second.

Plan 2 is endorsed by the committee on professional training of the American Chemical Society (ACS); satisfactory completion of this course of study entitles the student to certification by the society. Those contemplating graduate study in chemistry or careers in industrial research are encouraged to opt for this plan. The ACS-certified degree requires Chemistry 103-104, 205, 221, 222, 341, 342, 403. Four 0.5 unit upper-level laboratory courses are required: 351 or 394, 352, 353 and 452; and the senior project as explained under Plan 1 above.

The senior project must involve original research (one of 489 or 490). Two semesters each of calculus (Math 135, 136) and physics (calculus-based Physics 151,152) are also required.

Note that to fulfill prerequisites for moving from Chemistry 103 to 104, a grade of 1.75 is required. To advance from Chemistry 104 to 221 and 205, from 221 to 222 and from 222 to 309 requires a grade of 2.0 or higher.

Planning

It is extremely important that those considering a major in chemistry complete General Chemistry,

the prerequisite to all upper-level courses, during their first year. Although the courses required to major in chemistry are almost completely prescribed, some flexibility is possible to allow for participation in study abroad programs or late starts in the major. Such departures from the normal path should be made only with guidance from your advisor. It is important to note and schedule appropriately the necessary mathematics and physics prerequisites for upper-level chemistry courses, particularly Physical Chemistry. First-year students contemplating a major should establish a secondary advising relationship with a faculty member.

Typical Major Curriculum

Year Courses

First 103-104. General Chemistry.

Second 221,222. Organic Chemistry.
205. Quantitative Analysis. (*spring*)

Third 341. Quantum Chemistry and Spectroscopy.
342. Biophysical Chemistry.
Advanced Laboratories (*3 half-unit courses*)

Fourth 403. Advanced Inorganic Chemistry. (*fall*)*
452. Instrumental Analysis. (*spring*)*
489 and/or 490. Senior Project.
0.5 unit each semester

**Requirement for the American Chemical Society certified major (Plan 2).*

Suggested Courses

Many of the most important and stimulating chemical research areas involve projects at the interface of chemistry with other disciplines including biology, geology, physics, psychology and computer science. Based on their interests, students should consider introductory and advanced coursework in at least one of these disciplines.

Minor Requirements

A minor in chemistry entails completion of 103-104, 221-222, and two additional electives at the 200 level or above, one of which may be a half-unit advanced laboratory course, and one of which must be at the 300 level or above.

Combined Major

A combined environmental studies–chemistry major is available. Refer to the entry for Environmental Studies in this *Catalog* for details.

Advanced Standing

Students who have taken AP chemistry in high school and received a grade of 4 or 5 on the advanced test, or who have taken IB chemistry and scored a 5 or better on the higher level exam, are eligible to receive one unit of college credit for Chemistry 103. These students are eligible to enroll in Chemistry 104 in the spring but may choose to enroll in Chemistry 103 in the fall if they prefer, especially if they do not have much laboratory experience.

Research and Independent Study

Student research is at the heart of the chemistry curriculum and culminates in a year-long senior project carried out in close collaboration with a faculty mentor. In special cases, it is possible to complete the SYE in one semester with the approval of the advisor and the chair. Examples of recently completed senior projects can be found at the department's Web page. For the senior project, students enroll each semester in Chemistry 489 or 490, for which they typically receive .5 unit of credit each. Students undertaking the American Chemical Society certified degree option must enroll in 489 or 490 and complete a project that involves original research.

Students are encouraged to avail themselves of research opportunities prior to the senior year. Both academic year and a limited number of paid summer research assistantship positions are available every year. The Stradling Fund provides a stipend for a research assistantship each summer and other sources of funding are normally available to support summer student research. Many chemistry students have also won SLU fellowships for summer research with a chemistry mentor.

Certification to Teach Chemistry

Students seeking initial certification as a 7-12 chemistry teacher in New York must major in chemistry and also complete the certification minor in education. Chemistry majors intending to complete student teaching after graduation in the University's Post-Baccalaureate Teacher Certification Program must complete the chemistry major and the educational studies minor in education (or its equivalent) as undergraduates. Consult the

Education section of this *Catalog* and/or speak to the coordinator of the teacher education program in the education department as early as possible.

Seminars

The department hosts a series of seminar speakers throughout the academic year; attendance at these events by all majors is encouraged and is a requirement for seniors as part of their senior project.

Honors

Chemistry department honors require a minimum GPA of 3.5 in major courses, original research and the submission and defense of a thesis. The student must assemble a thesis committee including three faculty members (at least two from chemistry) prior to the end of the first semester of his or her senior year. The committee will conduct the oral examination that is part of the student's presentation and defense. Qualified students can elect to complete the requirements for honors within the context of the senior project. A minimum grade of 3.5 on the senior project is required for honors. Students do not register for honors; an honors award will be reflected with a course title and number change on the transcript.

Awards

The department recognizes outstanding performance by students in research and as teaching assistants with annual Clarke L. Gage prizes. A local honorary society, Chymist, offers membership to junior and senior chemistry and biochemistry majors and minors who have completed six courses in chemistry/biochemistry that would count toward the minor with a GPA of 3.5 or higher (and 3.2 overall chemistry GPA excluding courses not intended primarily for science majors) and who have an overall GPA of 3.2 or higher.

Courses

103, 104. General Chemistry. (1.25 units each)

An introduction to chemistry or science and non-science majors. Both courses use in-class experimentation, discussion and lecture to ask and answer questions of general chemical interest, including applications in biology, physics, astronomy and geology. Students discuss experimental data using the logic and language of chemistry and are frequently asked to substantiate conclusions using both conceptual and quantitative reasoning. Topics include water and its unique properties, atomic structure and properties, molecular structure, types of chemical bonding and reactions, redox systems and electrochemistry, reaction equilibria, thermodynamics and kinetics. Three class periods plus one laboratory

period per week; students may also participate in weekly peer-led team learning workshops. Prerequisites: secondary school algebra or enrollment in a college mathematics course. A grade of 1.75 or higher in 103 is required to fulfill the prerequisite for enrollment in 104. A grade of 2.0 or higher in 104 is required to fulfill the prerequisite for enrollment in 200-level courses. Required for the neuroscience major.

107. Forensic Science.

This course is designed for non-chemistry majors who are interested in criminal justice, fine arts, environmental studies or anthropology. An appropriate breadth and depth of chemical concepts are introduced to provide the means to understand and solve mysteries involving violent crimes, art and document forgery, violations of environmental regulations, and archeology and anthropology discoveries. Students will study examples, case studies, and practice their forensic skills in hands-on activities. Offered in spring semester in alternate years; may be offered as an FYS.

3000–3999. Special Topics in Chemistry.

The content of each course or section of these 100- or 200-level special topics courses varies and will be announced each semester.

205. Quantitative Analysis. (1.25 units)

An introductory course dealing with the chemical, physical and logical principles underlying modern quantitative chemical analysis. Among the broad topics treated are data evaluation, titrimetry, solution equilibria, chromatography and absorption spectroscopy. Lectures plus one laboratory per week. Prerequisite: Chemistry 104 or 105 (with a 2.0 grade or higher) or permission of instructor. *Also offered as Environmental Studies 205.* Offered only once per year, usually in the spring semester.

221, 222. Organic Chemistry. (1.25 units each)

An introductory course focusing on the chemistry of naturally occurring and synthetic carbon compounds; description and determination of structure with an emphasis on spectroscopic methods; reactivity and its theoretical basis; mechanism; and synthesis of organic compounds. The microscale laboratory emphasizes preparation, purification and identification of organic compounds, isolation of organic substances, mechanistic studies and separation techniques. Spectroscopic methods are applied to structure elucidation. Prerequisites: Chemistry 104 with a grade of 2.0 or higher. Acceptance into 222 requires a grade of 2.0 or higher in 221. Chemistry 221 is required for the neuroscience major.

306. Environmental Chemistry and Toxicology.

This course is designed for chemistry majors and students in environmental studies who have a strong background in chemistry. It explores the sources and levels of chemical pollutants, the pathways along which they move through the environment, and the toxicological effect they have on humans and other living things. Prerequisite: Chemistry 221 or permission of instructor. *Also offered as Environmental Studies 306.* Offered in alternate years, usually in the spring semester.

309. Biochemistry.

The course is organized around several themes: the relationship of structure to function in biomolecules, production of energy, regulation and control of metabolism. Topics covered to illustrate these themes include enzyme action and regulation, hemoglobin and the transport of oxygen and carbon dioxide, metabolism of carbohydrates for energy production, structure and function of biological membranes, and structure and function of molecules involved in transmission and expression of genetic information. Prerequisite: Chemistry 222 with a grade of 2.0 or higher or permission of instructor. Counts toward the neuroscience major (cellular track). *Also offered as Biochemistry 309*

and Biology 309.

324. Synthesis of Pharmaceutical Substances.

An advanced course in organic synthesis applied to the production of pharmaceuticals. Both strategic planning of synthetic routes and methodology for execution are focal points. Methods for carbon-carbon bond formation, functional group interconversion and manipulation of oxidation state are emphasized, as are all relevant control and selectivity issues. Differences among discovery syntheses, pilot plant scale-up and commercial routes are discussed. Emphasis on the organic chemistry utilized to create these substances is supplemented by consideration of the molecular basis of their biological activities. Offered only in the spring semester.

341. Quantum Chemistry and Spectroscopy.

A study of the sometimes unexpected consequences of quantization and the wave-particle duality of light and matter in chemical systems that will uncover the foundations of quantum chemistry. Experimental evidence, usually collected from spectroscopic results, is used to support postulates and gain further insight into the macroscopic properties of atoms and molecules. Topics include tunneling, molecular motions, quantum mechanical origins of orbitals and energy levels of the hydrogen atom, molecular orbitals, chemical bonding and related spectroscopic methods. Offered only in the fall semester. Prerequisites: Chemistry 104 or 105, Physics 104 or 152, Mathematics 136.

342. Biophysical Chemistry.

This course introduces the mathematical and theoretical bases for chemical equilibria and kinetics. The extrema principle will be used to predict the direction of chemical equilibria in a wide variety of chemical and biochemical reactions. This principle shows that reactions which maximize entropy and minimize enthalpy are spontaneous. We will study several ways to calculate familiar quantities like Gibbs energy, as well as new, more sophisticated quantities like partition functions to better understand molecular driving forces. In the last part of the course, we will study reaction kinetics to determine the timescales and possible reaction mechanisms of favorable reactions. Offered only in the spring semester. Prerequisites: Chemistry 104 or 105, Physics 104 or 152, Mathematics 136.

351. Advanced Organic Laboratory: Synthesis, Separation, Analysis. (0.5 unit)

Experimental emphasis on advanced laboratory techniques associated with organic synthesis, structure elucidation and study of reaction mechanism. Examples include diastereo and enantio-selective reactions, low temperature reactions, organometallic reagents, sample manipulation, multistep syntheses, natural product isolation and structure determination. Various chromatographic separation techniques are explored. Analysis by IR, GC-MS, multi-nuclear one and two-dimensional NMR and UV-VIS is integral to experiments. Classroom presentations on theory associated with reactions undertaken, separation science and spectroscopic analysis accompany and complement the laboratory work. This course is writing-intensive; special emphasis is placed on written and oral presentation of experimental results. Two lectures and two laboratories per week. Normally taken by first-semester juniors. Offered only in the fall semester for the first seven weeks. Prerequisite: Chemistry 222.

352. Inorganic Chemistry Laboratory. (0.5 unit)

Laboratory experiments emphasize the synthesis, characterization, and properties of inorganic compounds. This includes synthesis in an inert atmosphere and its associated techniques. Products of

inorganic syntheses will be characterized by a variety of techniques that include ultraviolet-visible, infrared and nuclear magnetic resonance spectroscopy. Written assignments are designed to develop rhetorical skills using chemical language, primary literature sources, practical data processing and presentation skills. The course is organized into one lecture and two laboratories per week. Normally taken in the junior year. Offered only in the spring semester for the second seven weeks. Prerequisites: Chemistry 205 and 341 or 342.

353. Physical Chemistry Laboratory. (0.5 unit)

Laboratory experiments include examination of physical, thermodynamic and kinetic properties of chemical reactions. Spectroscopic methods such as ultraviolet-visible fluorescence, infrared and Raman are used to study binding reactions, energy transfer between molecules, protein denaturing and characterization of unknowns. The labs demonstrate important concepts from quantum chemistry and spectroscopy, thermodynamics and kinetics. Data analysis and scientific reasoning are emphasized in writing assignments. Primary literature is used to evaluate data from experiments and to explore recent discoveries in literature meetings. Pre-lab lecture provides the theoretical background and practical guidelines for each experiment. This course is normally taken by second-semester juniors. Offered only in the spring semester for the second seven weeks. Prerequisites: Chemistry 205 and 341 or 342.

389, 390. Research for Juniors. (.5 or 1 academic credit)

394. Research Methods in Biochemistry. (0.5 unit)

This course focuses on introducing basic laboratory techniques and skills that are common in fields related to biochemistry. Attention is paid to both theory and application. Students keep a detailed laboratory notebook and write up an extended project in the style of a journal article. Prerequisites: Chemistry 222 and any one of Biology 231, 245, 246, 250, 391, or Chemistry 309 (which can be taken as a co-requisite). Required for the biochemistry major and also carries credit toward the biology major/minor and the chemistry major/minor. Offered only in the spring semester. Also offered as Biology 394 and Biochemistry 394.

4000-4999. Special Topics in Chemistry.

The content of each course or section of these 300-level or 400-level special topics courses varies and will be announced each semester.

403. Advanced Inorganic Chemistry.

The central themes of this course are understanding the periodic trends of the elements and the chemistry of metals. This course draws upon and extends the skills and knowledge acquired in previous chemistry courses to explore chemical bonding and molecular structure, Lewis acid-base theory, group and molecule orbital theory, and coordination chemistry. The course also investigates active fields of research, including surface and solid-state, nanomaterial, organometallic, bioinorganic, and f-block chemistry. Offered only in the fall semester. Prerequisite: Chemistry 341, 342, or permission of instructor.

415. Advanced Biochemistry.

A variety of topics are covered in depth, depending on student interest. The course begins with an overview of metabolism and its hormonal regulation. Other topics may include protein synthesis and targeting, molecular immunology, sensory systems and neurotransmission, hormone action, membrane transport, and photosynthesis. Through both written and oral presentation, students develop their abilities to use the scientific literature and communicate in science. Prerequisite: Chemistry 309 or permission of instructor. Counts toward neuroscience major (cellular track). Also offered as Biochemistry 415.

452. Instrumental Analysis. (0.5 unit)

An advanced course emphasizing instrumentation in methods of chemical analysis. Principal instrumental methods examined include absorption and emission spectrometry, electroanalytical methods and chromatographic and other separation methods. Some introduction to analog and digital signal processing principles and computer-assisted data acquisition and processing is presented. Two lectures and two laboratories per week. Offered only in the fall semester for second seven weeks. Prerequisites: Chemistry 205, 342, and 351 or 352.

489, 490. SYE: Research for Seniors.

(0.5 or 1 unit of academic credit)

Computer Science

Major and minor offered under the auspices of the mathematics, computer science and statistics department

Associate Professor Harcourt, Look (chair), Torrey; **Assistant Professor** Lee.

Visit the mathematics, computer science, and statistics department webpage at www.stlawu.edu/math-computer-science-and-statistics.

The computer is a tool of profound complexity in practice but of equally profound simplicity in definition. The study of computer science at St. Lawrence University brings together the theory and practice of computing to solve a wide range of problems. Computer science considers problem-solving in the abstract, developing a set of intellectual skills for finding and designing solutions that will benefit majors and non-majors alike. All students are encouraged to take advantage of these courses to explore abstract problem-solving and the use of modern computers.

The introductory sequence of programming courses lays the foundation of general problem-solving and the use of computer technology to express those solutions. Advanced courses focus on the theory and practice of computation, the study of languages as mathematical constructs, and the design and analysis of algorithms.

These courses prepare computer science majors for the many careers where computers and problem-solving play a central role, such as software development, telecommunications

design, computer graphics and even technical writing. Majors can pursue advanced degrees in computer science as well as computer engineering, and business, and mathematics. At St. Lawrence, majors have many opportunities to conduct independent research during paid summer internships, independent study courses and senior research projects.

Computer science courses can augment the learning of all students, not just computer science majors. Programming courses can help non-majors develop useful abstract problem-solving and technical skills; with computers playing a broader role in many disciplines, these skills are of increasing importance.

The information technology infrastructure supports fully computerized classrooms, networked access to class resources, and advanced machines and capabilities for upper-level courses.

Major Requirements

There are 11 requirements for a major in computer science: four required basic CS courses, three required core courses, two elective courses, one mathematics course, and one Senior-Year Experience (SYE).

Basic Courses (*four required*)

- 140. Introduction to Computer Programming.
- 219. Techniques of Computer Science.
- 220. Computer Organization.
- 256. Data Structures.

Core Courses (*three required*)

- 362. Algorithm Analysis.
- 364. Programming Languages.
- 380. Theory of Computation.

Electives (*any two*)

Any 300-level non-core CS course can count as an elective.

Mathematics (*one required*)

- 280. A Bridge to Higher Mathematics.

Senior-Year Experience (*one required*)

There are several ways to satisfy the SYE requirement. First, completing the SYE requirement for another major also satisfies the computer science requirement. Second, with permission of an instructor, students may

conduct a project in CS489 or CS498. Third, with permission of the department chair, students may take a third elective course.

Students wishing to receive honors in computer science must conduct an honors project in CS498, and must also have a final major GPA of 3.5 or higher.

Minor Requirements

The minor in computer science consists of six courses, including CS140, 219, 220, 256 and two additional computer science electives at the 300-level or above.

Mathematics Courses

Although only one mathematics course is required for the CS major, students are strongly encouraged to consider other courses in mathematics and statistics, particularly if they are interested in pursuing graduate study.

Advanced Placement

Students who enter St. Lawrence with a 4 or 5 on the Advanced Placement Computer Science A test will receive credit for Computer Science 219. Students who complete the Advanced Placement Computer Science Principles with at least a 4 will receive credit for CS140. Other students may begin in Computer Science 219 if their background is sufficiently strong. The 140 requirement will be waived for such students, but they will not receive University course credit.

Courses

140. Introduction to Computer Programming.

An introduction to programming using a high-level language. Assumes no prior knowledge of programming, and focuses on essential skills. Students learn to create programs ranging from practical utilities to simple games. Offered every semester.

219. Techniques of Computer Science.

An in-depth look at computing and programming in a high-level language. Introduces more advanced programming problems and more principled programming techniques. Prerequisite: Computer Science 140 or the equivalent. Offered every semester.

220. Computer Organization.

An in-depth look at the underlying organization and architecture of modern computer systems. Topics include data representation, the organization of CPUs including caches and the memory hierarchy, digital circuits, machine language, and an introduction to assembly language programming. Prerequisite: Computer Science 219. Offered

in spring semester.

250. Computer Science Seminar.

Explores topics of interest beyond the core Computer Science curriculum. The course is worth 0.25 credit, meets once per week, and is graded pass/fail. As topics vary from one offering to the next, it is possible for students to repeat the course for credit. Prerequisite: Computer Science 219. Offered as scheduling allows.

256. Data Structures.

An overview of the essential strategies for the organization, retrieval and processing of data. Topics include arrays, lists, stacks, queues, maps, and trees, as well as an introduction to algorithm analysis. Prerequisite: Computer Science 219. Offered in fall semester.

302. Symbolic Logic.

A study of elementary symbolic logic. Topics include sentential and predicate logic. Prerequisite: Math 280 or Computer Science 220 or Philosophy 202. Also offered as *Philosophy 302 and Mathematics 302*.

318. Graph Theory.

Graph theory deals with the study of a finite set of points connected by lines. Problems in such diverse areas as transportation networks, social networks and chemical bonds can be formulated and solved by the use of graph theory. The course includes theory, algorithms, applications and history. Prerequisite: Mathematics 217 or 280. Offered every other year. Also offered as *Mathematics 318*.

321. Computer Networking.

An overview of computer networking and the technologies behind the internet. Topics include protocols at the application level (HTTP, DNS, FTP, BitTorrent, etc.), transport level (TCP/UDP), and network level (IP/ATM), as well as issues related to network security. Prerequisite: Computer Science 256. Offered as scheduling allows.

332. Web Programming.

Introduces the concepts and languages of modern web programming. Topics include HTML/CSS, client-side and server-side scripting, and interaction with a database. Prerequisite: Computer Science 256. Offered as scheduling allows.

340. Software Engineering.

Examines the challenge of creating reliable, maintainable software in teams. Introduces modern tools and strategies for design, version control, testing, debugging, and documentation. Prerequisite: Computer Science 256. Offered as scheduling allows.

345. Database Systems.

A look at how data is logically organized, physically stored on a digital device, and queried. Focuses primarily on relational database systems and structured queries. Other topics include non-relational data models, privacy, security, performance, and reliability. Prerequisite: Computer Science 256. Offered as scheduling allows.

362. Algorithm Analysis.

An investigation of core techniques for designing and analyzing algorithms for computational problem-solving. Introduces well-known algorithms for common types of problems, and teaches students to evaluate algorithm efficiency. Prerequisites: Computer Science 256 and Mathematics 280. Offered in fall semester.

364. Programming Languages.

Addresses several advanced topics in programming: the process of

code interpretation, the principles behind the design of programming languages, and the paradigms of functional and concurrent programming. Prerequisite: Computer Science 220 or 256. Offered in spring semester.

370. Operating Systems.

An overview of operating system principles. Topics include process scheduling and synchronization, memory management including virtual memory, file system interfaces and implementations, and design considerations for desktop/ mobile platforms. Prerequisites: Computer Science 220 and 256. Offered as scheduling allows.

374. Artificial Intelligence.

A programming-intensive introduction to the concepts and uses of artificial intelligence. Teaches students to approach complex, messy problems with strategies like heuristic search, genetic algorithms, and machine learning, and explores the simulation of human abilities in areas like natural language processing. Prerequisite: Computer Science 256. Offered as scheduling allows.

380. Theory of Computation.

Addresses the theoretical basis of computer science. Introduces a hierarchy of computational models and the types of problems they can and cannot solve, as well as a set of problem complexity classes and their relationships. Prerequisite: Mathematics 280. Offered every other spring semester. Also offered as *Mathematics 380*.

389. Independent Project.

Permission required.

489. SYE: Senior Project.

Permission required.

498. SYE: Senior Honors Project.

Permission required.

Conservation Biology

Major offered

Professor Baldwin, Barthelmess (coordinator), McKnight; **Associate Professors** Pai, Olendzenski, Temkin, Willson (all biology).

More information on this multidisciplinary major can be found at www.stlawu.edu/conservation-biology or by linking directly to it from the Majors, Minors and Programs page at www.stlawu.edu/academics.

Conservation Biology has as its central tenet the protection of the world's biodiversity. Biodiversity, the sum total of all living things, represents the immense variation and richness found in the natural world. Ecosystem services provided by the world's biodiversity sustain human life on earth. Biodiversity conservation requires an understanding not only of organisms and their interactions with environments but also of how biodiversity changes through time, how people value biodiversity, how modern economic systems influence the lifestyle and conservation choices people are

willing to make, and how globalization affects the distribution of organisms through space and time.

Objectives of the major are that students 1) gain knowledge about fundamental principles important to the conservation of global biodiversity; 2) learn the particular methods associated with biodiversity conservation; 3) develop an appreciation for conservation needs at both local and global levels; 4) have the opportunity to participate in a meaningful conservation-oriented research project or internship; and 5) prepare for careers in conservation biology.

Note that students majoring in Conservation Biology may not also double-major or minor in Biology or in the Biology–Environmental Studies combined major. First-year students considering a Conservation Biology major should seek early advisement from a participating faculty member and should begin the introductory courses required for the major in the first year.

Honors

To graduate with honors in Conservation Biology, a student must have a 3.5 major GPA and must satisfactorily complete a 2-unit, year-long honors research project. Students conducting honors projects enroll in 1.0 unit of independent research (Biology 489) during the fall and 1.0 unit of honors research (Biology 499) in the spring of the senior year. The project is supervised and finally approved by an honors committee comprised of the project advisor and two other faculty members. Students wishing to conduct an honors project should consult with potential project advisors by the end of the junior year.

Major Requirements

Conservation Biology majors must complete a predetermined set of courses (outlined below) and are strongly encouraged to complete a significant period of study outside of northeastern North America through study abroad, study at a biological field station, or through participation on certain courses with a travel component. Students should consult with Conservation Biology faculty member in planning how to complete this expectation.

Required Courses

Full course descriptions can be found by visiting the *Catalog* section for the sponsoring department.

I. Specific Courses

Students must take all of the following courses:

- Biology 101 and 102. General Biology.
- Global Studies 101.
Introduction to Global Studies I:
Political Economy.
- Economics 100.
Introduction to Economics. **or**
- Economics 108.
Economics for Environmentalists.
- Biology 221. General Ecology.
- Biology. 440. Conservation Biology. (*seniors only*)

II. Allied Science or Math Courses

Students take one of the following options:

- A. • Geology 103. Dynamic Earth. **and**
• Geology 104. Evolving Earth. (*both with lab*)
- B. • Chemistry 103. **and** Chemistry 104.
General Chemistry. (*both with lab*)
- C. *Any two of the following four:*
• Statistics 113. Applied Statistics. **or**
• Math 213.
Applied Regression Statistics Analysis.
• 135. Calculus I. **or** • 136. Calculus II.
- D. • Statistics 113. Applied Statistics. **and**
• Global Studies 233. GIS. (*with lab*)

III. Electives

Students completing the major must take one genetics/evolution elective, one advanced ecology elective, one advanced global studies elective, and a global perspectives elective. In addition, students must fulfill a biodiversity requirement by taking either three organismal diversity courses **or** by taking two organismal diversity courses and one conservation science course. Only one organismal diversity course about vertebrate animals may be counted toward completing requirements for the major. Approved courses are listed below. Students may petition the major coordinator to have other courses fulfill these electives. Students may count up to two courses taken while abroad toward the requirements for the major.

The following fulfill the Genetics/Evolution elective:

- Biology 245. Genetics.
- Biology 343. Evolution.
- And certain special topics courses

The following fulfill the Advanced Ecology

elective:

- Biology 330. Ecology of Lakes and Rivers. *(with lab)*
- Biology 335. Winter Ecology. *(with lab)*
- Biology 360. Marine Ecology
- Biology 380. Tropical Ecology.
- And certain special topics courses.

The following fulfill the Advanced Global Studies elective:

- Global Studies 301.
Theories of Global Political Economy.
 - Global Studies 333.
Ethics of Global Citizenship.
 - Global Studies 365.
Rethinking Population and Environment.
- To fulfill the Biodiversity Requirement, students may take either three organismal diversity courses or two organismal diversity courses and one conservation science course.*

Organismal diversity courses (only one about vertebrates will count toward the major requirement):

- Biology 209.
Vertebrate Natural History. *(with lab)*
- Biology 215.
Fundamentals of Animal Diversity. *(with lab)*
- Biology 224.
Biology of Vascular Plants. *(with lab)*
- Biology 227. Mammalogy. *(with lab)*
- Biology 231. Microbiology. *(with lab)*
- Biology 258. Ethnobotany. *(with lab)*
- Biology 281. Ornithology. *(with lab)*
- Biology 319. Plant Systematics. *(with lab)*
- Biology 325. Mycology. *(with lab)*

Conservation science courses:

- Biology 230. Food from the Sea.
- Biology 242.
Biodiversity Conservation and Management in East Africa. *(Kenya Semester Program)*
- Biology 342.
Pastoralist Nomads and Wildlife Conservation. *(occasional summers in Kenya)*

The following fulfill the Global Perspectives elective. Students must take one:

- Anthropology 102. Cultural Anthropology.
- Economics 228. African Economics.
- Economics 234. Comparative Economics.
- Economics 236. Globalization Issues: Equity, the Environment and Economic Growth.
- Economics 308. Environmental Economics.
- Economics 336. Economic Development.

- Economics 384.
Natural Resource Economics.
- Environmental Studies 261.
Sustainable Agriculture.
- Environmental Studies 263.
Global Change and Sustainability
- Environmental Studies 363.
Ecotourism: Panacea or Viable Sustainable Development.
- Government 312.
Environmental Law and Politics.
- Government 327.
Politics of Development and Underdevelopment.
- Philosophy 310.
Philosophy of the Environment.
- Sociology 253.
Race, Class and Environmental Justice.
- Sociology 465. Environmental Sociology.

Students are encouraged to consider taking at least one semester of independent research with a faculty member and to study a foreign language, but doing so is not a requirement of the major.

Economics

Major and minor offered

Professors Bansak, Blewett, Horwitz, Young;
Associate Professors Chezum, Del Rossi
(associate dean), FitzRandolph, Jenkins (chair);
Assistant Professors Milani, Motika; **Visiting Assistant Professor** Gill; **Lecturer** Lockard.

Visit the economics department webpage at www.stlawu.edu/economics.

Economics is broadly defined as the study of the allocation of scarce resources among alternative uses. It studies the behavior of individual economic decision-makers (namely consumers, firms, workers and government policy-makers) and how they respond to changing incentives. It also examines nations' overall economic condition — their output, price level, level of employment and economic growth — and the variety of ways individuals, households, firms, and nations interact in the world economy. Economics evaluates the efficiency and equity of economic outcomes and studies the roles of market and political institutions in creating economic growth. The economics curriculum is designed

to familiarize the student with economic theory and “the economic way of thinking,” to provide knowledge about economic institutions, to foster the development of skills in applying economic analysis to contemporary issues, and to create a foundation for critical thinking and intelligent, engaged citizenship.

Many students combine their interest in economics with another discipline. They may double-major by satisfying the requirements in economics and another department; they may elect a combined major with African studies, Canadian studies or environmental studies; or they may pursue interdisciplinary majors in economics–mathematics or international economics–modern languages.

Economics majors find many opportunities for careers in business, law, teaching and government. Upon graduation, students who have majored in economics generally pursue one of two paths: some enter directly into employment, while others enter graduate programs in economics, law, business or public administration.

Major Requirements

A major in economics consists of nine to 12 units in economics, including Economics 100, 200, 251 and 252. Majors must take a minimum of four economics electives at the 200 level or higher (at least three must be at the 300 level or higher). Also required is one unit from the department’s Senior-Year Experience offerings: Economics 450 (Senior Seminar), 489/490 (Senior Independent Research) *or* 495/498/499 (Honors). Majors must maintain a grade point average in economics of at least 2.0 and must earn a grade of at least 2.0 in both Economics 251 and 252. A grade of P (pass) in Economics 251 or 252 does not count as a 2.0. No more than one independent project or off-campus economics course may count toward the minimum number of economics courses required for a major or minor.

Students interested in majoring in economics should take Economics 100 (Introduction to Economics) as early as possible, preferably during their first year. Credit for Economics 100 is granted to students who earn a grade

of 4 or 5 on the College Board’s Advanced Placement Examinations in microeconomics or macroeconomics.

Economics 200 (Quantitative Methods in Economics) is a research methods course required of all majors. It is recommended that this course be taken as early as possible, preferably before Economics 251 and 252. Statistics 113 (Applied Statistics) is a prerequisite for Economics 200. Students who have completed Mathematics 213 should not take Economics 200 and must choose an additional economics elective (at the 200 or higher level) instead. Economics 200 may be taken pass/fail only under extraordinary circumstances.

Economics 251 (Intermediate Microeconomic Theory) and Economics 252 (Intermediate Macroeconomic Theory) are economic theory courses required of all majors. Every 300 and 400-level course in economics has either Economics 251 or Economics 252 as a prerequisite. Potential majors are advised to take Economics 251 and Economics 252 during the sophomore year. First-year students can register for Economics 251 and Economics 252 by permission only. It is expected that Economics 251 and 252 be taken at St. Lawrence. Exceptions to this policy are granted only in special cases.

Although Accounting 203 and 204 do not count toward the major in economics, it is strongly recommended that economics majors take one or both of these courses at some point during their time at St. Lawrence.

Students should work closely with their academic advisors to select courses for the major and those interested in graduate programs, especially graduate work in economics, should discuss their plans with their advisor as early as possible. Students interested in graduate study in economics are advised to pursue the economics–mathematics interdisciplinary major or to take as many courses in that major as possible. Students interested in graduate work in business are advised to take Accounting 203 and 204, Computer Science 140 (Introduction to Computer Programming), Mathematics 135 (Calculus I) and Economics 313 (Financial Economics).

Minor Requirements

A minor in economics consists of at least six courses in economics including Economics 100, 200, 251 and 252. Students who have passed Statistics 113 or Psychology 205 need not take Economics 200. Instead, they must take another economics elective to complete the minimum requirement of six courses. Minors must maintain a grade point average in economics of at least 2.0. The economics minor may not be combined with a major in business in the liberal arts.

Certification to Teach Social Studies

Students seeking initial certification as a 7-12 social studies teacher in New York can major in economics. In addition to completing the certification minor in education, students majoring in economics must also take one government course (Government 103, Introduction to American Politics, is recommended if no other government course is taken); History 103 (Development of the United States, 1607-1877) and 104 (Development of the United States, 1877-Present); Global Studies 102 (Introduction to Global Studies II: Race, Culture, Identity); and at least one course in the major that illuminates U.S. and/or world history and geography. Students are also encouraged to take courses in other social sciences and area studies to round out their preparation for teaching social studies.

Economics majors intending to complete student teaching in the University's Post-Baccalaureate Teacher Certification Program after graduation must complete the educational studies minor in education (or its equivalent) as undergraduates and all the social science requirements listed above (or their equivalents). Consult the Education section of this *Catalog* and/or speak to the coordinator of the teacher education program in the education department as early as possible.

Honors

Department honors are awarded to students who have, upon graduation, at least a 3.5 average in economics courses and have successfully

completed an honors project. Students who expect to pursue an honors project should consult with their advisor and the department chair as soon as possible in their junior year. Prospective honors students should also take Economics 342 (Econometrics) during their junior year (See also Honors in the Curriculum section of this *Catalog*.)

Courses

Accounting

203. Financial Accounting.

An introduction to the basic financial accounting process, the underlying principles and the development and analysis of financial statements. Includes a weekly, computer-oriented laboratory session. Not open to first-year students.

204. Managerial Accounting.

An introduction to the accounting procedures and methods used for internal management purposes. Topics include cost accounting, differential analysis, responsibility accounting, budgeting and performance analysis. Prerequisite: Accounting 203. Not open to first-year students.

Economics

100. Introduction to Economics.

A general introduction to the discipline of economics, including both microeconomics and macroeconomics. The course is designed to develop an understanding of how economic principles and analysis can be used to study social problems and issues. Topics include supply and demand, comparative advantage, inflation, unemployment, economic growth, money and the banking system. Applications and issues vary by section. *Also offered through Peace Studies.*

108. Economics for Environmentalists.

An introduction to the basic concepts, tools and theories of microeconomics that are applied to problems typically associated with the use of the environment. The course begins with basic microeconomic principles, advances to important economic theories that are commonly used to describe environmental resource allocation problems and concludes with an examination of case studies such as air pollution and acid rain, destruction of rainforests, climate change, alternative sources of energy and waste disposal. This course does not count toward the major or minor in economics or economics–environmental studies and is not open to first-year students or students who have received credit for Economics 100, 101, or 102. Prerequisite: Environmental Studies 101 or permission of the instructor. *Also offered as Environmental Studies 108.*

200. Quantitative Methods in Economics.

An introduction to mathematical and statistical techniques used in economic analysis. Topics include the representation of economic hypotheses, sources and uses of economic data, probability, hypothesis testing and regression analysis. Emphasis is on the application of statistical techniques to economic problems. Prerequisite: Economics 100 and Statistics 113. *Also offered through Statistics.*

209. The Economics of Gender and Family.

This course examines ways basic economic theory has been applied to questions of gender. It explores a variety of empirical and historical evidence about the economic status of women, the division of labor in

the household, contemporary changes in labor markets, the economic forces affecting the ongoing evolution of the American family and the effects of government policy on all these. The course may also discuss the role of economics, as well as its limits, in understanding social phenomena. Offered every other year. Prerequisite: Economics 100.

228. African Economies.

An overview of sub-Saharan African economies with emphasis on basic economic principles, problems and indigenous institutions within an African context. Current development and structural adjustment issues are analyzed as well. Contrasts and comparisons with North American counterparts are made. Special emphasis is placed on exploring how cultural differences affect economic activities and institutions. Students learn of the diversity and complexity of economic relationships in African societies and increase their understanding of economics in their own society. Offered every other year. Prerequisite: Economics 100. *Also offered through African Studies.*

234. Comparative Economics.

This course offers a broad perspective on the history of the economies of the U.S./Western Europe, the former Soviet Union and the developing world by comparing the economic and political institutions in each. A historical look at the economic arguments for markets and planning provides theoretical framework for detailed exploration of the evolution of capitalism, the rise and fall of socialism and current attempts at reform in Russia and other countries, and the influence that both systems, along with colonialism, have had on the economic development of the rest of the world. The focus is on relationships among institutions societies adopt, the processes by which those institutions emerge, and the economic consequences that follow. Majors in other social sciences or area studies programs are encouraged to enroll. Offered every other year. Prerequisite: Economics 100. *Also offered through Peace Studies and as Global Studies 234.*

236. Globalization Issues: Equity, the Environment and Economic Growth.

Do globalization and economic growth contribute to increased inequality within countries and among them? Under what circumstances do global market forces contribute to the impoverishment of already disadvantaged nations and to the benefit of the already advantaged? What is the relationship between economic growth and damage to environmental resources? Under what circumstances do global market forces contribute to the degradation of the environment? This course endeavors to answer these questions and more, beginning with a study of recent literature by professional economists as well as by examining other data and evidence. Offered occasionally. Prerequisite: Economics 100. *Also offered through Peace Studies.*

251. Intermediate Microeconomic Theory.

Expands upon basic models of supply and demand, consumer theory, the theory of the firm and production, and theories of market behavior learned in Introduction to Economics. Examines the role of prices in the allocation of resources and examines the effects of changes in policy on economic choices. Prerequisite: Economics 100.

252. Intermediate Macroeconomic Theory.

A study of economic aggregates, including the determination of national income, employment and the price level, the topics covered include inflation, unemployment, economic growth, international macroeconomics and the appropriateness and effectiveness of monetary and fiscal policies. Prerequisite: Economics 100.

289, 290. Independent Project.

Individual study of a topic under the supervision of a faculty member. Prerequisites: GPA of at least 3.0 in economics and permission of instructor.

305. Industrial Organization and Public Policy.

A theoretical and empirical analysis of the structure, conduct and performance of American industry. Emphasis is placed on the use of microeconomic theory to analyze the effects of public policies on market incentives and resource allocation. Topics include theories of the firm, monopolization, mergers, antitrust law, price fixing, price discrimination and other contemporary problems. Prerequisite: Economics 200 and 251.

307. Law and Economics.

This course analyzes the law using economic principles. In particular, it employs the techniques of microeconomic theory in the study of policy issues and legal rules. Topics such as property rights, externalities, contract law, tort law (accidents), product liability and criminal adjudication are critiqued in terms of how different incentive structures motivate economic actors. The course includes the study of how economic goals conflict with and complement other goals of the law, such as justice and fairness. Prerequisite: Economics 251.

308. Environmental Economics.

An analysis of deficiencies of the market system and existing property rights structure that generates pollution problems. This course applies the theories of externalities, public goods, the second-best, nonmarket valuation, and benefit-cost analysis to environmental policy and regulation. Alternate policy options are considered, including command-and-control and incentive-based approaches. This course discusses local environmental quality issues (such as the management of municipal and toxic waste) and global problems (such as ozone depletion and climate change that require international policy). Students learn tools of economic analysis and their application to environmental issues and problems. Prerequisite: Economics 251.

309. Labor Economics.

A study of labor markets and the role they play in the determination of wages, employment and working conditions. The demand for labor by employers, leisure-labor supply decisions by households, investment in human capital, distribution of earnings among individuals and the effects of labor unions are discussed. Topics covered may include analysis of the role of government policy in the areas of income maintenance, unemployment, education, and occupational health and safety. Prerequisites: Economics 200 and 251.

311. Money and Banking.

This course explores the roles of money, banks and government policy in promoting economic growth and stability in a modern economy. In particular, the course investigates the operational principles of modern banks and the Federal Reserve System and compares their strengths and weaknesses to other historical and theoretical banking systems. The course focuses on the effects of monetary institutions and policy on macroeconomic stability, including inflation and business cycles. Other topics may include the history of American banking, current issues in bank regulation, electronic money, the role of financial markets and international monetary economics. Prerequisite: Economics 252.

313. Financial Economics.

This course is a standard course in investments. Among the subjects to be covered are the role of financial intermediaries and financial instruments, the time value of money, bond valuation, stock valuation, risk and return, market efficiency and investment companies. Special attention is devoted to hedge funds, options and futures. Prerequisites: Economics 200 and 251.

315. Public Sector Economics.

This course uses microeconomic tools and theory to examine the efficiency of markets and to enumerate potential roles for government when markets fail. The efficiency and equity of government expenditures and tax policies are examined by looking at their impact on individual behavior and the distribution of income. Current policies of state, local and federal governments are examined to see how real-world complications (like politics and information problems) can lead to outcomes that are very different from economic prescriptions. Prerequisites: Economics 200 and 251.

322. International Economics.

This course focuses on the theory of international trade and finance and its application to current policy problems such as protection, intervention in foreign exchange markets, international debt and foreign investment. Prerequisites: Economics 251 and 252 or permission of instructor. *Also offered through European Studies.*

330. History of Economic Thought.

Analysis of the development of major economic concepts. Ideas are examined for their relevance both to their own time and to ours. Coverage extends from the ancient philosophers into the 20th century, with special emphasis on Adam Smith, Karl Marx, and John Maynard Keynes. Offered occasionally. Prerequisites: Economics 251 and 252 or permission of instructor. *Also offered through European Studies.*

333. Austrian Economics.

An introduction to the body of ideas known as the Austrian School of economics, which is associated with the work of Ludwig von Mises and F. A. Hayek. The course explores the history of the school and how its approach to economics compares with the neoclassical orthodoxy, covering topics such as: the nature of human action, the role of knowledge in the market, the process of economic calculation, competition as a discovery process, the Austrian theory of the business cycle, the problems of socialism and regulation, and the Hayekian critique of social justice. Offered every other year. Prerequisites: Economics 251 and 252.

336. Economic Development.

This course examines the problems of economic growth and development in the less developed countries (LDCs) of Asia, Africa and Latin America. Although a variety of approaches to development economics are studied, the analysis of new institutionalist economics is emphasized. By the end of the semester, participants should be able to understand (1) the economic diversity, as well as the diversity of development problems, among LDCs, (2) the conditions necessary or conducive to economic growth and the institutional hindrances to growth, and (3) the economic implications of alternative development strategies and policies. Prerequisites: Economics 200, 251 and 252. *Also offered through African Studies.*

342. Econometrics.

A study of statistical techniques economists have found useful in analyzing economic data, estimating relationships among economic variables and testing economic theories. Topics include multiple regression, probit and logit analysis, heteroscedasticity, autocorrelation and simultaneous equations models. Prerequisites: Economics 200, 251 and 252 and Mathematics 135. *Also offered as Statistics 342.*

343. Time Series Analysis.

Statistical methods for analyzing data that vary over time are investigated. Topics include forecasting systems, regression methods, moving averages, exponential smoothing, seasonal data, analysis of residuals, prediction intervals and Box-Jenkins models. Application to real data, particularly economic data, is emphasized along with the mathematical theory

underlying the various models and techniques. Prerequisite: Math 136 or permission of the instructor. *Also offered as Mathematics 343.*

344. Mathematical Economics.

A systematic study of the mathematical structure of economic theory, with emphasis on the application of calculus and linear algebra to economic analysis. Topics include optimization theory, comparative statics analysis of market and macroeconomic models, general equilibrium analysis and game theory. Prerequisites: Economics 251, 252, Mathematics 205 and 217.

362. American Economic History.

This course offers an overview of the economic development of the United States. The specific topics covered will vary by instructor, but have included the economic causes of the American Revolution, the evolution of financial markets, the economics of slavery and Reconstruction, the Populist movement, the growth of government in the Progressive Era, the effects of war and other crises on the U.S. economy, and the Great Depression. Emphasis is placed on the role economic theory can play in understanding pivotal events of U.S. history and their relevance for current events. Prerequisites: Economics 251 and 252. *Also offered as History 362.*

371. Behavioral Economics.

Early economists knew that their models described a simplified, idealized type of behavior, but it is only in the past few decades that we have systematically studied the ways in which human behavior is different from what “rational” models suggest. This course covers theory and empirical research aimed at explaining key differences between standard economic models and the choices made by real people. The focus is on understanding behavioral models and their implications for both business and policy.

376. Experimental Economics.

Experimental economics is the study of how various kinds of experiments help economists improve their models. The course explores, and involves participation in, a wide variety of experiments that have contributed to our understanding of how markets clear, the effects of various public policies, and issues in human decision making in the field of behavioral economics. The emphasis is on learning research methods; each student will prepare and run at least one in-class experiment as well as writing an original proposal to study a topic of their choosing. This course provides excellent preparation for students interested in using the economics lab for summer research or senior projects. Prerequisites: Economics 200 and 251.

384. The Economics of Sustainability and Natural Resources.

This course complements Economics 308 (Environmental Economics). Standard economic approaches to problems of economic and ecological sustainability and natural resources are presented and criticized from a variety of different perspectives to give students a deeper appreciation of the role of economic analysis in achieving sustainable futures in the context of natural resource scarcity. Specific topics may include economics and population growth, economics and environmental ethics, economics of energy, materials, water and marine resources. Prerequisites: Economics 251.

389, 390. Independent Project.

Individual study of a topic under the supervision of a faculty member. Prerequisites: GPA of at least 3.0 in economics and approval by the department.

410/411. Federal Reserve Challenge I and II.

(Economics 410 is 1 unit/Economics 411 is 0.5 unit)

This course prepares students to compete in the Fed Challenge, a competition sponsored by the Federal Reserve System, in which teams from participating schools present monetary-policy analyses to a panel of judges at regional Federal Reserve Banks and regional winners advance to a national competition in Washington, D.C. It is an excellent opportunity for students to develop professional skills such as strong knowledge of macroeconomic and financial data, solid command of software to create charts and presentation materials, and extensive practice of oral communication skills. The course may be taken as a junior (Economics 410), then as a senior (Economics 411). Prerequisites: Economics 200 or Statistics 113, Economics 251 and 252, or permission of the instructor.

450. SYE: Senior Seminar.

The purpose of the seminar is to provide an integrative experience for senior majors that will allow them to use what they have learned in previous courses to study a particular issue in economics. Writing, speaking and research skills are emphasized. The issues and topics that form the basis of the seminar vary by semester and instructor. Prerequisites: Economics 200, 251 and 252, and senior standing. Course descriptions will be provided to majors in the spring of their junior year.

489, 490. SYE: Senior Independent Research.

Individual study, under the supervision of a faculty member, that provides an integrative experience for senior majors, allowing them to use what they have learned in previous courses to study a particular topic in economics. Majors choosing this option for their SYE in the fall are encouraged to enroll in Economics 495. Prerequisites: Economics 200, 251, 252, senior standing, GPA of at least 3.0 in economics and approval of the department prior to the semester the project begins.

495. Senior Honors Seminar.

Designed to prepare senior majors who are eligible for departmental honors, this seminar is focused on enhancing capabilities in conducting scholarly work in economics. The seminar is offered in the fall of each academic year and it is presumed that students enrolled plan to complete an honors thesis during the spring semester. Prerequisites: GPA of at least 3.5 in economics and approval of the department chair for those pursuing Honors.

498-499. SYE: Honors.

These courses are for senior majors who are eligible for department honors. Each student plans and writes an honors thesis under the guidance and supervision of a faculty member. Prerequisites: GPA of at least 3.5 in economics and approval of the department. Students must enroll in Economics 495 in the fall of their senior year.

Economics- Mathematics

Major offered

More information on this interdisciplinary major can be found at www.stlawu.edu/math-computer-science-and-statistics/economics-mathematics-combined-major.

The disciplines of economics and mathematics

are closely related in many respects. Economics has relied heavily on mathematical analysis in the development of economic theory, while mathematics has provided solutions to optimization and control problems posed by economists. Economists have also used modern statistical techniques to test their theories, and statisticians have developed procedures appropriate for analyzing economic data. The interdisciplinary major in economics–mathematics gives students an opportunity to explore the relationship between these disciplines through a highly structured program of study.

The objectives of the interdisciplinary major are:

1. To provide students whose primary interest is economics an opportunity to study economic theory and applied economics more thoroughly and more rigorously than is possible in the usual curriculum.
2. To introduce important areas of economics, and applications of mathematics and statistics to students whose primary interest is mathematics.
3. To provide a background for students interested in graduate study in economics, applied mathematics, statistics, and management science.
4. To provide training in mathematics, statistics, and econometrics for those entering directly into employment upon graduation.

Major Requirements

Economics

- 100. Introduction to Economics.*
 - 251. Intermediate Microeconomic Theory.
 - 252. Intermediate Macroeconomic Theory.
 - 342. Econometrics.
 - 344. Mathematical Economics.
- Electives (3), at least two at the 300-400 level

Mathematics/Statistics

- 135. Calculus I.*
- 136. Calculus II.*
- 205. Multivariable Calculus.
- 217. Linear Algebra.
- 325. Probability.
- 326. Mathematical Statistics. **or**
- 343. Time Series Analysis.

Electives (2) at the 300-400 level or Math 280

**These courses may be omitted with advanced placement credit or other advanced standing. Students considering graduate*

work in economics are strongly encouraged to take Math 280 and Math 305.

Education

Minors offered

(certification or educational studies)

Associate Professor Ladd; **Assistant Professors** Frank, Collins; **Visiting Assistant Professors** Dodd, Jeon, Oey; **Visiting Instructor** Boyd.

Visit the education department's webpage at www.stlawu.edu/education.

Students at St. Lawrence may enroll in undergraduate education courses — not only as a way to explore the multidisciplinary subjects of teaching and learning for their intrinsic values — but also as a way of preparing to enter the teaching profession in public and/or private schools after graduation. The teacher education program offers two sequences of courses: An educational studies minor that does not include student teaching, and a certification minor in education that culminates in the professional semester (student teaching), which is required for teaching certification.

By completing the certification minor, students may be recommended for an initial New York State Teaching Certificate upon graduation. By completing specified prerequisite courses in the educational studies minor at an acceptable level, students are eligible to enter the professional semester (student teaching) following graduation.

The education department offers opportunities for graduate study leading either to the initial certificate or to full professional certification in New York State, as well as to certification or licensure in counseling and educational leadership. The undergraduate and graduate programs also satisfy academic requirements for certification in many other U.S. states and Canadian provinces.

The teacher education programs at St. Lawrence are based on the conviction that teachers must be

highly competent in their subject areas and that a liberal arts education provides such competency. In addition, a liberal education prepares teachers to approach problems and inquire into ideas from multiple perspectives, qualities that are in turn modeled to their students in the schools. Integration of teaching skills and subject matter competencies is achieved throughout the student's career at St. Lawrence, through coursework in subject matter and pedagogy, by field experiences in public schools, and by study with practicing professionals who teach the program's courses in subject-specific instructional approaches.

St. Lawrence offers the following teacher certification programs, which are registered and approved by the New York State Education Department for grades 7-12: English, social studies, mathematics, biology, chemistry, physics, earth science, French and Spanish. The University also offers a registered and approved teaching certification program for K-12 art.

Requirements for New York State Teaching Certification

NOTE: The programs described in this *Catalog* are registered and approved by the New York State Education Department and meet the regulations for initial teaching certification established by the New York State Board of Regents. St. Lawrence University's Teacher Education Program holds full national accreditation by the Teacher Education Accreditation Council (TEAC) for a period of seven years, from November 2013 to November 2020. Students can be recommended for an initial teaching certification in New York by successfully completing the following requirements:

1. **A bachelor's degree in the liberal arts with an academic major in a discipline functionally related to the teaching certificate.** Specific requirements are outlined in the sections of the *Catalog* describing each separate major.

NOTE: For students seeking certification in 7-12 social studies, students must major in history, government, economics, sociology

anthropology or global studies.

Regardless of the major, a minimum of 21 semester hours is required in the study of New York, United States and world history and geography.

NOTE: For students seeking certification in 7-12 general science, students must major in one of the natural sciences (biology, chemistry, geology), complete the requirements for initial certification in that subject, and also complete a total of five courses in at least two additional natural sciences listed here — for example, major in biology and complete three chemistry courses and two geology courses, or major in geology and complete two physics courses, one biology course and one chemistry course.

2. **Completion of the certification minor** (8.5 courses) in education, which includes the professional semester (student teaching).
3. **A passing grade in at least one semester of study at any level in a language** other than English.
4. **Passing scores on four New York State Teacher Certification Examinations** (NYSTCE):
 - Portfolio-based Teacher Performance Assessment (edTPA)
 - Educating All Students Test (EAS)
 - Academic Literacy Skills Test (ASLT)
 - (revised) Content Specialty Test (CST) in the area of certification
5. **Completion of specified workshops** (offered in the professional semester curriculum) on topics mandated by New York Education Law:
 - Identification and Reporting of Child Abuse
 - Safety and Fire Prevention in Public Schools
 - Violence Prevention in the Public Schools
 - Development of a Safe Learning Environment
 - Prevention of Alcohol, Drug, and Tobacco Abuse in School-Age Populations
6. **Fingerprint clearance** through the State of New York and the Federal Bureau of Investigation (FBI).

With careful planning, these requirements can be completed during the four-year undergraduate curriculum, leading to teaching certification upon graduation. Students should check regularly with the education department at St. Lawrence to learn about changes to the requirements or the

program.

Coaching Certification in New York

Students interested in pursuing coaching certification in New York State may complete the necessary coursework at St. Lawrence.

For descriptions of these courses, which are offered through the intercollegiate athletics and recreation department, go to Sport Studies and Exercise Science at www.stlawu.edu/sport-studies-and-exercise-science.

Minor Programs

Certification Minor

Students may be admitted for the certification minor in education at any time during the sophomore year or later, providing they have good academic standing at the University. A 2.0 grade point average is required in the certification minor for graduation and a 2.5 grade point average in the prerequisite courses is required for entry into the professional semester. The certification minor requires the following courses:

Education

- 250. Teaching in a Differentiated Classroom: Meeting the Needs of All Learners.
 - 350. Teaching and the Context(s) of Learning: Teacher as Researcher.
 - 450. Principles of Teaching Adolescents: Curriculum, Instruction and Assessment.
- Any other two EDUC courses.

Professional Semester (Student Teaching)

The professional semester (student teaching) requires a full load of 4.5 courses in education, to be taken during one semester of the senior year. Student teaching in English, mathematics, science and social studies is offered only during the fall semester; student teaching in foreign language and art is offered only during the spring semester.

- 405. Seminar: The Dynamics of School Teaching.
- 406. SYE: Supervised Student Teaching.
- 410-415. Methods, Materials and Literacy Development in the Content Area.
(only one methods course for each certificate area required)
- 436. Individual Differences in Inclusive Classrooms.
- 437. Classroom Organization and Management.
(0.5 credit)

Educational Studies Minor

The educational studies minor consists of any five courses in education not included in the professional semester (student teaching) and not including 250, 350 or 450. Students may be admitted for the minor in education at any time during the sophomore year or later, providing they have good academic standing at the University. A 2.0 grade point average is required in the minor for graduation.

Criteria for Admission into Student Teaching

Students intending to student-teach in any fall semester should submit an application to the education department by March 1, and an application portfolio by March 15, of the previous semester. Students intending to student-teach during any spring semester should submit an application to the education department by October 1, and an application portfolio by October 15, of the previous semester. The Academic Affairs Committee will review applications for admission into student teaching on the basis of the following criteria:

1. Senior standing (or higher) at the University, verified by transcript attached to the application.
2. Satisfactory social standing at the University, verified by communication from the dean of student life and co-curricular education.
3. Satisfactory academic writing, verified by evidence that the student has cleared any prior U/W on the transcript.
4. Satisfactory academic achievement at the University, verified by one of the following:
 - a 2.5 cumulative GPA
 - a 3.0 average the semester before student teaching *or*
 - approval by the Academic Affairs Committee
- 5(a). Satisfactory completion at the 2.5 level or higher of the three prerequisite courses in education (Education 250, 350 and 450).
- 5(b). Satisfactory completion at the 2.5 level or higher of two additional courses in education.
- 6(a). Recommendation by the department of the academic major, verified by communication from the department chair or designee.

- 6(b). A 2.8 cumulative GPA in the major (or content area equivalent)
(Students seeking certification in 7-12 French or Spanish must complete at least one semester abroad.)
7. Recommendation by the department of education faculty members under whom the student has studied, verified by internal communication with the Teacher Education Program coordinator.
8. An application portfolio, submitted via LiveText, evidencing successful completion of field experience requirements in the prerequisite education courses.

Students may register for the professional semester once they are admitted to student teaching by the Academic Advisory Committee. Student teaching placements in the schools are arranged only by the University's coordinator of teacher education and the school administrators. Because weekly seminars during the professional semester are required, student teaching placements are generally made within St. Lawrence County.

Post-Baccalaureate Teacher Certification Program

For St. Lawrence undergraduates who do not complete the certification minor in education, the Post-Baccalaureate Teacher Certification Program offers an alternative route to initial teaching certification. In this graduate program, St. Lawrence students who complete the prerequisite courses for student teaching as part of the pre-certification minor as undergraduates, and who receive a grade of 2.5 or higher in each course, may then apply for student teaching during any appropriate semester following graduation with a bachelor's degree. Students who undertake this option must apply to the education department both for admission to the graduate school and also to the professional semester.

Their applications for student teaching will be reviewed by the Academic Advisory Committee using the same criteria listed above. Students in the program take the 4.5 courses of the professional semester as graduate-level courses and pay graduate tuition. Three of the courses will count

toward the master's degree in general studies in education at St. Lawrence.

The Post-Baccalaureate Teacher Certification Program is also open to St. Lawrence students (and graduates of other accredited colleges) who did not complete the prerequisite courses prior to graduation. In those cases, students must complete graduate courses in education that are equivalent prerequisites to student teaching, so the program will take longer than one semester. In addition, they must satisfy the University's requirements for subject matter competency in the teaching field. Information about application procedures and details regarding the Post-Baccalaureate Teacher Certification Program are included in the *Graduate Studies Catalog*, available at www.stlawu.edu/education/resource/graduate-catalog.

Initial Teaching Certification in Other States and in Canada

The teacher preparation program at St. Lawrence provides sufficient academic preparation for initial certification in 45 U.S. states that have a reciprocity agreement with New York State for teacher preparation. To be certified in any state, the student must apply directly to the education agency in charge of teaching certification in that state; if the student has already been certified in New York, the reciprocity agreements will hold for academic preparation, and the student must submit a copy of the New York certificate as a part of the application process. These reciprocity agreements do not include competency testing requirements or mandated workshops, which each state may determine separately.

To meet standards for a Provisional Certification of Qualification (initial certificate) in a Canadian province, students must first be certified in New York State, and then apply to the province using the current New York certificate. Because certification standards in other states and provinces are changing, students should check with the education department for details regarding specific certification requirements in

any other state or province.

Courses

203. Contemporary Issues in American Education.

This course introduces students to a range of current critical issues in education. We will explore connections between U.S. education and larger society. How does education function for society? What have been the different purposes of school throughout history, and who benefits/suffers from these different objectives today? We will consider how schooling is constructed in often complicated and contradictory manners: School as vital to democracy, as producing literate, thoughtful citizens; school as job-preparation; school as a means to assimilate diverse groups under some "norm"; school as a sorting/tracking machine; school as an untapped market to sell goods and services; school as a path to social advancement, as the "great equalizer"; school as a means to exclude; school as a means to socialize young people; and many more! We will consider how political and social forces shape school life—how do the structures of race, class, sexuality, and gender reproduce themselves inside of schools? How do capitalism, globalization, neoliberalism, and democracy play out in education? *Also offered through Peace Studies and African-American Studies.*

250. Teaching and Literacy in a Differentiated

Classroom: Meeting the Needs of All Learners.

This course is an introduction to teaching for students who intend to teach in secondary schools, with a focus on students who intend to become certified teachers. Students will be introduced to differentiated instruction and understanding by design, and will plan lessons using these approaches to curriculum and instruction. The goal of differentiated instruction and understanding by design is planning lessons that engage and challenge each learner. In order to accomplish this goal, students in this course will study learners, the content area they intend to teach and how literacy works in their content area. Particular attention will be paid to culturally responsive pedagogies, inclusive education, special education and English language learners. Students will spend at least twenty hours observing and teaching at a local secondary school. There are no prerequisites for the course, but this course is by permission of the instructor only. Fulfills diversity requirement.

270. Outreach to Schools I.

Outreach to Schools is both a set of courses and a University program. The program seeks to "bridge the gap" between the University campus and the public schools by having college students teach lessons in public schools as requested by the K-12 school teachers. The courses expose college students to research-based educational practice by designing and teaching lessons that apply constructivist learning theory in classroom situations; they are student-run courses tightly structured and monitored by the instructor. EDUC 270 focuses on public education and the development of teaching skills. Open only to education minors. Prerequisite: EDUC 203, 250 or 305.

305. Educational Psychology.

A consideration of educational and psychological principles and theories applicable to learning, with emphasis on the public schools. Particular attention is paid to such areas as human growth and development, motivation, theories of learning and teaching, evaluation and assessment, student differences and behavior management in the classroom. A field experience in the public schools is required.

350. Teaching and the Context(s) of Learning:

Teacher as Researcher.

Intended for students who plan to become secondary school teachers, this course examines the social, political and economic contexts in which teaching and learning take place. Students will learn how context informs curriculum, instruction and assessment practices. Students will examine a variety of contexts that shape learning—from school policies and district requirements, to racial and economic inequalities within the community, from the out-of-school interests of adolescents, to the political climate of teacher evaluation—and students will begin to translate knowledge of these contexts into meaningful, effective practices. The course introduces students to teacher research and action research methodologies, and it positions inquiry into one's own classroom, school and community as an important part of professional practice. Students will consider how teachers might be positioned as learners, researchers, leaders, advocates, activists, and more. Students will spend at least twenty hours in school (and other settings), using research skills to observe and learn about adolescents and the social contexts of their learning. EDUC 250, or permission of instructor, is a prerequisite for this course. Fulfills diversity requirement.

353. American Philosophies of Education.

This course will examine how American thinkers and writers describe the struggle to become an educated person. The authors that we will read together this semester all come to a point where they ask: Why does the world seem to conspire against individuals who aim to become educated? Each of our authors sees the struggle for education in different ways, describing it as a struggle: against the old (world); against our self and our self-conceptions; against injustice; against our language; against our forms of thinking and ways of knowing; against racism and other forms of prejudice; against our limitations (real and perceived). Together we will witness the struggles for education that our authors manage to (beautifully) express, and we will work together to discover what lessons these expressions hold for our understanding of education and our own struggles to become educated.

370. Outreach to Schools II.

Outreach to Schools is both a set of courses and a University program. The program seeks to “bridge the gap” between the University campus and the public schools by having college students teach lessons in public schools as requested by the K-12 school teachers. The courses expose college students to research-based educational practice by designing and teaching lessons that apply constructivist learning theory in classroom situations; they are student-run courses tightly structured and monitored by the instructor. EDUC 370 concentrates on advanced teaching skills as well as organizational and evaluative skills important for effective operation of the program. Open only to education minors. Pre-requisite: EDUC 270.

405. The Dynamics of School Teaching.

Student teaching seminar prepares student teachers to enter schools prior to full-time student teaching, addresses issues or concerns that arise throughout the professional semester and assists student teachers in understanding their own socialization in the teaching profession. Special workshops cover state-mandated topics including school safety and fire prevention, violence prevention, the identification and reporting of child abuse and the prevention of drug/alcohol/tobacco abuse. Open only to seniors and graduate students approved for the professional semester. Prerequisites: Education 250, 350, 450. Enrollment by permission only.

406. SYE: Supervised Student Teaching.

Students in the professional semester enroll in Education 405, 406,

410, 436 and 437 for a full semester of student teaching in the public schools. General supervision is provided by University supervisors in concert with cooperating teachers in the classroom setting. Education 405, 410, 436 and 437 are taught intensively during the first four weeks of the semester, at which time student teachers undertake a 40-hour field experience in the classroom. Then the courses change to a weekly schedule for the remaining student teaching experience. Instructors discuss problems and concerns arising throughout the professional semester and assist student teachers in understanding their own socialization in the teaching profession. Open only to seniors and graduate students approved for the professional semester. Prerequisites: Education 250, 350, 450. Enrollment by permission only.

410-415. Methods, Materials and Literacy Development in the Content Area.

As a part of the professional semester, separate courses are offered in art (410), English (411), foreign languages (412), mathematics (413), the sciences (414 and social studies (415). Each methods course involves a study of standards and objectives, special techniques appropriate for the teaching of the particular subject, materials and aids for facilitating instruction, lesson and unit planning and assessment, and an analysis of problems unique to the teaching of the subject. Focus is on strategies for language and literacy. Open only to seniors and graduate students approved for the professional semester. Prerequisites: Education 250, 350, 450. Enrollment by permission only.

436. Individual Differences in Inclusive Classrooms.

This course addresses the need for teachers to facilitate the learning of students with a variety of special needs in inclusive classroom settings. Attention is paid to the special education referral and planning process spelled out by the Individuals with Disabilities Education Act (IDEA), the role of the classroom teacher in meeting the educational needs of mainstreamed students and strategies for helping all students to meet the New York State learning standards. A field experience in the public schools is required. Open only to seniors and graduate students approved for the professional semester. Prerequisites: Education 250, 350, 450. Enrollment by permission only.

437. Classroom Organization and Management. (0.5 credit)

This course is designed to assist student teachers in the professional semester to develop successful approaches to classroom management for diverse learners. Students investigate the current theories in classroom organization and behavior management, critically analyzing them according to recent research on learning and school structure. As a part of the professional semester, students have opportunities to apply theories learned in the course in actual classroom situations. Open only to seniors or graduate students approved for the professional semester. Prerequisites: Education 250, 350, 450. Enrollment by permission only.

450. Principles of Teaching Adolescents: Curriculum, Instruction and Assessment.

This course prepares students for teaching in secondary schools. The purposes, problems, issues, strategies, and materials in teaching at the middle and high school levels will be examined critically through classroom discussions, individual and group work, a field experience and class projects. This course is as much about the methods as it is about their underlying pedagogies and their overarching, though often unexamined, principles. A field experience in the public schools is required, with the objective of encouraging reflection and building

connections between theory and practice. Entry in the professional semester at St. Lawrence University is contingent upon successful completion of this course at the 2.5 level or higher. EDUC 250 and 350 are prerequisites.

455. Language Acquisition and Literacy Development Across the Curriculum.

A multidisciplinary consideration of the ways young people learn the language arts (speaking, reading, writing and listening) across the subject matter disciplines. This course addresses language acquisition and literacy development for students who are native English speakers and students who are English language learners. A field experience in the public schools is required. Students must register for one of the 1.5-hour CBL labs to complete the field experience.

Graduate Programs

Graduate courses may be taken for graduate credit only. Undergraduate students who have three or fewer units to complete before graduation may enroll in graduate courses with the permission of the instructor. In addition to the Post-Baccalaureate Teacher Certification Program, St. Lawrence offers master's degree programs in teaching, educational leadership and counseling, with programs leading to certificates of advanced study in educational leadership and counseling as well. Completion of a master's degree program at St. Lawrence helps meet requirements for initial and/or professional teaching certification in New York State as well as provisional and/or permanent certification in educational administration and/or school guidance and mental health.

English

Majors and minors offered

Professors Cowser, Singer, Sondergard, Thacker; **Associate Professors** Breashears, Gates, Graham, Hussmann, Kittler, Ponce; **Assistant Professors** Barber, Sturges, Vlagopoulos; **Viebranz Visiting Professor** Arroyo; **Visiting Assistant Professors** Hubert, Schaff; **Teaching Professor Emeritus** Bailey.

Visit the English department webpage at www.stlawu.edu/english.

The English department considers the study of writing and the study of literature to be mutually enhancing. The writer studying literature develops a critical acumen that fosters sophistication of technique; the literary critic studying creative writing achieves an

understanding of the ways an author thinks about craft. Courses in our department help students explore cultural backgrounds and values, examine the relationship between art and life, and discover the liberating qualities of the imagination.

A major in English provides valuable preparation for careers in professional areas such as law, business, banking, management, and public relations, as well as in those fields traditionally considered literary in nature: editing, publishing, journalism, advertising, freelance writing, teaching, writing for entertainment media, or librarianship.

As another option, students may elect the Environmental Studies–English interdisciplinary major. The English department also cooperates in a program leading to the New York State certification for teaching. In addition, the University's semester program in England provides an international experience, including an extensive array of internships, which strongly supports majors in English and performance and communication arts.

Membership in the Irving Bacheller Society, a chapter of Sigma Tau Delta, the international English honor society, is open to students who have a 3.0 overall GPA and four or five English courses with a 3.5 average, or a 3.0 overall average and six or more English courses with a 3.25 average.

First-year students need departmental approval to take English courses at the 300 level, but all 200-level courses are open to them.

A unit of credit toward graduation is given for a test score of 4 or 5 on the Advanced Placement test in English Language/Composition; a unit of credit is also given for a score of 4 or 5 on the Advanced Placement test in English Literature/Composition.

Students may also take dramatic literature courses offered in the department of performance and communication arts for credit in English when they are dual-listed with English.

Students planning to teach English at the secondary level are encouraged to include all four surveys of British and American literature (225, 226, 237 and 238) in their major, along with

the following additional courses: English 319 or 320 (Shakespeare), and Performance and Communication Arts 111 (Rhetoric and Public Speaking) or 113 (Introduction to Performance Studies). Students interested in teaching certification should consult the Education section of this *Catalog*.

Requirements for the Major

The English Major in Literary Studies

A minimum of 10 semester units in English:*

1. Five courses at the 100, 200, or 3000 level, to include English 250 and four other introductory courses (one of which may be in creative writing).
2. Five courses at the 300, 400 or 4000 level, with no more than two courses from any one of the Studies rubrics. These five courses must include a Senior Seminar (English 450).

The English Major in Creative Writing

A minimum of 10 semester units in English:*

1. Five courses at the 100, 200, or 3000 level, to include English 250, two introductory creative writing courses (201, 241, 242, 243, 244, or 295), and two literature courses.
2. Five courses at the 300, 400, or 4000 level. These five courses must include a Senior Seminar (English 450). Two courses must be taken under the Studies in Advanced Writing (AW) rubric, but no more than two courses may be taken from any one of the Studies rubrics.

**Students may take more than the minimum of 10 courses in English. However, the registrar will not give credit toward graduation for more than 14 courses in a single department.*

Studies Rubrics for 300 and 4000-Level Courses

Applied Theory Studies (AT)

These courses provide advanced practice of some of the literary theories studied at the 200 level. Students develop an increased sophistication in practicing the creative dimensions of literary criticism, and the critical dimensions of creative

writing. Prerequisite: English 250.

Author Studies (AS)

These courses offer close analysis of the literary craft as practiced by specific authors. Study focuses on creative concerns such as voice, aesthetics, style, recurring themes, milieu, influence and rhetorical design. Prerequisite: English 250.

Genre Studies (GS)

These courses examine the evolution, definition and practice of specific literary genres and modes. While developing an understanding of the theoretical assumptions of those specific genres, students also consider factors influencing the popular reputations of the genres. In addition, the courses examine topics such as genre hybridity and anti-genre aesthetics. Prerequisite: English 250.

Studies in Advanced Writing (AW)

These courses develop advanced practice of the literary genres offered at the 200 level. Students work independently, with emphasis on craft, voice and style. Peer manuscript review, through workshops and other structures, sharpens students' critical skills. The courses also study a range of model authors in the specific genre. Prerequisite: The 200-level introduction to the advanced genre.

Studies in Literary Traditions (LT)

These courses situate the study of literature within historical and ideological contexts. The establishment and development over time of literary traditions will be traced as students examine the relationship between social values, cultural currents and literary production. Prerequisite: English 250.

Requirements for the Minor

The English department offers two ways to minor in English, each one consisting of a group of six courses.

1. **The English minor in literary studies** requires English 250 (Methods of Critical Analysis); two literature courses at the 200 or 3000 level; and three literature courses at the

300, 400, or 4000 level.

2. **The English minor in creative writing** requires English 250 (Methods of Critical Analysis); one literature course at the 200 or 3000 level; three writing courses, one of which must be from the Studies in Advanced Writing (AW) rubric; and one literature course at the 300, 400, or 4000 level.

Environmental Studies–English Major

The environmental studies–English major gives students an opportunity to combine seven core courses in environmental studies with seven core courses/electives in English, thus providing substantial study in both disciplines, as well as in their intersection. The interdisciplinary major seeks to attract students who combine an interest in the environment with the desire to explore existing literature and to create new literature on environmental themes. Note that students pursuing this major may not also major in English. Please consult the Environmental Studies section of this *Catalog* for the complete list of courses.

Certification to Teach English

Students seeking initial certification as a grade 7-12 English teacher in New York must major in English and also complete the certification minor in education. English majors intending to complete student teaching after graduation in the University's Post-Baccalaureate Teacher Certification Program must complete the English major and the educational studies minor in education (or its equivalent) as undergraduates. Consult the Education section of this *Catalog* and/or speak to the coordinator of the teacher education program in the Education department as early as possible.

Honors

To receive honors in English, students must achieve a minimum GPA of 3.5 in the major and submit for evaluation a critical or creative writing project of substantial length. The proposal for an honors project must be submitted to the department's Honors/Independent Projects Committee by March 1 of the semester preceding the beginning of the project.

Courses

125. Introduction to Dramatic Scripts.

Students are introduced to the formal aspects of play texts and develop the critical skills necessary to read plays and critique live and video performances. Representative dramas from the Greeks to the present are investigated in terms of character development, dialog, settings and central ideas, as well as their original theatrical contexts: theater architecture, stage conventions, scenic devices, costuming, and acting techniques. The emphasis is on analysis of scripts and the relationship among performance conditions, cultural context and dramatic conventions. *Also offered as Performance and Communication Arts 125.*

190. Introduction to Literary Forms.

Students are introduced to the concept of literary genres. Each section focuses on a single genre — poetry, fiction, fairy tales, nature writing, graphic novels — with a view to describing and illustrating its major characteristics. Emphasis is on the varieties within generic types, and students are exposed to examples drawn from a wide historical range. In the process of studying the particular literary form, students also learn to respond critically to the challenges posed by literary texts and receive guidance in the composition of effective written responses to those texts. Topics vary according to instructor and semester. No seniors.

3,000-3,999. Special Studies in Language and Literature.

The content of each course or section of these introductory special topics courses is different and is announced in the *Class Schedule*. Open to all students.

200. Sophomore Seminar.

The Sophomore Seminar is a seminar on the enduring value of literature—why we read it, how it brings us pleasure, and how it makes us better people. It examines how literature enables us to imagine new possibilities for ourselves and our world, and how it helps us to connect with ideas we have never considered. It is a seminar that emphasizes the value of literature in a liberal arts education. Topics will vary according to instructor and semester. Sophomores only.

201. Journalism.

A general study of journalistic principles and methods, as well as extensive practice in the gathering and writing of news. In the first half of the semester, students learn to analyze and compose basic types of stories in a style particular to new media, with an emphasis on accuracy, clarity and efficiency. In the second half of the semester, students practice and refine their reporting skills in an atmosphere closely resembling the conditions of a modern newsroom. They cover actual events of local, state, national and international importance as they unfold in real time—all under the pressure of real deadlines.

212. The London Stage.

Offered by St. Lawrence's program in England. Students read, view and discuss plays being produced in London during the semester. The formal study of the plays and their productions is supplemented by frequent attendance at various forms of theatre and occasional tours and lectures. Students with some background in drama may petition to take this course as 312L and substitute an independent project for the regular course work (*see below*).

215. Dramatic Texts in Context.

This course examines how knowing the theatrical and cultural contexts of plays helps theater practitioners make informed choices regarding how to stage them. *Also offered as Performance and Communication Arts 215.*

222. Introduction to Multi-Ethnic American Literature.

The twentieth century saw an explosion in texts produced by U.S. ethnic minorities, as well as a new commitment to legitimizing their voices. What kind of American story emerges from this rich tapestry? This course offers an overview of twentieth and twenty-first century multi-ethnic American literature, including texts produced by African American, Asian American, Latino/a, and Native American writers. Emphasis is on race and ethnicity as they intersect with gender, class, and nationality through broader thematic concerns, including migration and border crossing, diaspora and displacement, colonialism and neocolonialism, tensions between assimilation and the preservation of cultural integrity, the legacy of slavery, and globalization and transnationalism. Paying close attention to the social, political, cultural, and aesthetic meanings circulated in our readings, we explore how these writers reflect and shape our understandings of American identity.

223. Playwriting.

This course explores the processes of composition characteristic of the playwright. In a series of weekly assignments, various aspects of the art are introduced: dialogue, characterization, dramatic action, and others. The course concludes with the writing of a one-act play. Students read exemplary plays from the modern repertoire. *Also offered as Performance and Communication Arts 223.*

224. Caribbean Literature in English.

A survey of literature by authors from formerly British colonies: Jamaica, Trinidad, St. Lucia, Barbados, St. Kitts and Dominica. The course considers colonial and postcolonial fiction, poetry and non-fiction by writers from various ethnic groups, including people of African, East Indian, Chinese, and European descent. Representative authors are Derek Walcott, Jamaica Kincaid, V.S. Naipaul, Jean Rhys, George Lamming, Edgar Mittelholzer, Olive Senior, Erna Brodber and Michelle Cliff. *Also offered through Anthropology and Caribbean and Latin American Studies.*

225, 226. Survey of English Literature I and II.

These courses provide an overview of British literature beginning with the Anglo-Saxon period and extending into the 20th century. English 225 begins with the earliest works in English literary history, ends at 1700, and includes selections from Medieval and Renaissance literature. English 226 includes selections from Neo-classical, Romantic, Victorian and modern British literature. Students contemplating graduate study in English are strongly encouraged to take both courses. *Also offered through European Studies.*

228. Irish Literature.

A cultural studies course on 20th-century Ireland, with a focus on literature. Literary texts are contextualized by cinematic and musical sources, history and politics. The course examines the ways literature from the early 20th century and the contemporary period has been used to create and represent the postcolonial nation of Ireland, what stories it tells about history, identity and nationhood. Attention is paid to the vexed relationship between the Irish nation/culture/people and the divided politics that occupy the island today. Authors include Yeats, Joyce, Lady Gregory, Synge, O'Casey, Friel, Nuala O'Faolain, Edna O'Brien, Heaney, Muldoon, Doyle and others. *Also offered through European Studies.*

230. Introduction to African-American Literature.

Beginning with a consideration of Frederick Douglass and the slave narratives of the 19th century, this course concentrates on the writers of the Harlem Renaissance and follows the development of

African-American writing in poetry, fiction and drama to the present. Representative authors are Douglass, Langston Hughes, Countee Cullen, Zora Neale Hurston, Richard Wright, James Baldwin, Gloria Naylor, Toni Morrison, Connie Porter and August Wilson. *Also offered through African-American Studies.*

237, 238. Survey of American Literature I and II.

These courses offer an overview of American literature from the early colonial era to the present, with selections from fiction, nonfiction, poetry, and drama. Both courses invite students to view American literature through the lens of different historical contexts, and both feature a variety of writers from different social classes and cultural traditions. In addition, both courses examine the American literary imagination by focusing on a set of key issues: colonial contact and resistance; slavery and abolition; women's rights; environmental politics; contested terrains of race, class, and gender; movements for social justice and equality; and the shifting relationship between self, community, nation, and globe. English 237 covers writings from the colonial period to 1865; English 238 concentrates on literary texts from the Civil War until the early 21st century.

239. Introduction to Canadian Literature.

The background and development of Canadian literature in English. Though beginning with a survey of late 19th and early 20th-century writing, the course emphasizes post-1920 Canadian literature, especially that written since 1940.

240. Writing in the World.

Students will be introduced to ways that creative writing is revitalized by its commerce with the world—that writing can be a means of understanding, and even an engine of change. Students will produce original creative work (some of which will involve background research), craft critical responses to course readings and activities, and give oral presentations on outside texts. Instructors will offer regular skills lectures, and student pieces will be “workshopped” in small group and whole class settings. Topics and writing genres will vary according to instructor and semester. Open to all students; no previous creative writing experience needed.

241. Techniques of Fiction.

An introductory study of basic technical problems and formal concepts of fiction writing. John Cheever once suggested that fiction “is a sort of sleight-of-hand that displays our deepest feelings about life.” As beginning fiction writers, students will mine autobiography, secondary research and other sources for ideas that pique their artistic interests. Through close reading of published fiction and nonfiction on the writer's craft, students learn how to shape their material into compelling stories using characterization, point of view, time, setting and other narrative techniques.

242. Techniques of Poetry.

An introductory study of prosody and poetics. Class attention is divided among student writing, theory and published models. Weekly writing assignments address a variety of technical issues connected with both traditional and experimental verse, while reading assignments providing examples to follow or possibilities for further study. Matters of voice, affect, intuition, chance and imagination are given as much attention as those analytic skills necessary for clear communication. All students are required to share their oral and written work for group discussion and critique.

243. Techniques of Creative Non-Fiction.

An introductory study of basic technical problems and formal concepts of the literary essay. Students read and write essays on various topics, including travel, personal experience, landscape, natural science and

politics. Weekly written exercises and student essays are read aloud and discussed in class. *Also offered through Outdoor Studies.*

244. Techniques of Screenwriting.

An introductory study of basic technical problems and formal concepts of screenwriting. The study of produced screenplays and formal film technique, along with writing scene exercises, builds toward the construction of a short (50-minute) script. *Also offered as Performance and Communication Arts 244, and through Film and Representation Studies.*

245. Literatures in Context.

Students will be introduced to the ways in which literary works engage with the world that lies outside the text: historical events, social movements, political issues, artistic trends, scientific developments, geographic regions, and so on. Each course focuses on a specific work or set of works that have developed within particular real-life contexts, and students will learn strategies for analyzing the relationships between texts and contexts. While the course emphasizes critical reading, writing, and research skills, students may also have the opportunity to engage in creative writing as well. This course is suitable for students at any stage of their academic careers. Topics vary according to instructor and semester; open to all students.

250. Methods of Critical Analysis.

This course introduces students to a range of scholarly methods used to interpret literary works. While each section of the course may focus on a different theme or on a different group of primary texts, all sections aim to encourage students to recognize and to apply a variety of literary critical methods. In addition, students learn the citation and formatting conventions most commonly employed in the field of literary study.

263. Introduction to Native American Literature.

This course concentrates on Native American fiction in English, most of it produced in the 20th century. It suggests some of the subjects and themes common to Native American literature in general and examines some of the forms and techniques used to treat them. Writers represent a broad spectrum of Native American cultural groups and may include Louise Erdrich, Linda Hogan, John Joseph Mathews, N. Scott Momaday, Leslie Silko, and James Welch. *Also offered through Native American Studies.*

282. Going Locavore.

Selected texts, films, speakers, and various writing assignments will provide a contextual framework for class visits to and volunteer work on three local farms. In order to understand the historical roots and possible alternatives to a growth economy and the shift from local, small scale farming to the crop monoculture and CAFO feedlot model of current agribusiness. With this framework in mind, students will read work by contemporary writers immersed in the experience of local food and local living. Additionally, students will study the strengths and weaknesses of their various rhetorical strategies to understand that effective “environmental” writing is as varied as other forms of creative nonfiction and depends equally on context, venue, subject, audience, and authorial intent. *Also offered as Environmental Studies 282.*

293. A Literary Harvest.

This is a creative writing course in literary nonfiction that focuses on food, food security, and farming. In *Closing the Food Gap*, Mark Winne talks about affordable access to good, healthy food as an issue of social and environmental justice. While environmental writers and activists such as Wendell Berry, Michael Pollan, and Vandana Shiva have alerted us to the ecological, ethical, and health problems associated with large-

scale industrial farming, the North Country has long been a haven for sustainable, small-scale organic agriculture. The course has both a CBL component and a cross-cultural, comparative focus (India). Students will do their CBL work on a local farm or in a food kitchen, and are required to sign up for the CBL lab as well. Prerequisite: Environmental Studies 101. *Also offered as Environmental Studies 293.*

295. Nature and Environmental Writing.

This course is designed for students who want to explore nature writing—the intersection of self and the natural world. We explore how this genre combines the observational, scientific “eye” with the personal, narrative “I” through readings in non-fiction, anthologies, novels and/or memoirs. Students write essays on nature and the environment that reflect different objectives within the genre, such as the political essay, the literary field study and the personal essay. Students also keep a “naturalist’s journal.” Discussion of the readings is interspersed with workshop sessions. *Also offered as Environmental Studies 295, and through Outdoor Studies.*

306. AW: Advanced Screenwriting Workshop.

An extension and intensification of English 244. Students are expected to work independently on the preparation of two feature-length screenplays. Workshop format emphasizes the revision and editing process. Prerequisite: English 244. *Also offered as Performance and Communication Arts 306 and through Film and Representation Studies.*

307. GS: The Short Story.

An exploration of the evolution of the modern short story with special emphasis on the American tradition from World War I to the present. Representative authors include Chekhov, Joyce, Kafka, Anderson, Fitzgerald, Hemingway, Faulkner, Porter, Cheever, Baldwin, Updike, Barthelme, Carver, Oates, Munro, Cisneros, Alexie. Prerequisite: English 250.

308. AW: Advanced Creative Non-Fiction Writing.

The students’ own writing provides much of the material for this course, although essays by contemporary writers are read and studied. Students are given opportunities to use non-fiction topics and forms of their own choice. Special attention is paid to problems of voice and narrative method, in particular to the role of narrators in mediating what is observed. The revision and editing process is also emphasized. Prerequisite: English 243. *Also offered through Outdoor Studies.*

309. AW: Feature Writing / Literary Journalism.

In this course, students study the basic techniques of literary journalism, a specific genre that combines best practices of journalistic reporting with creative writing. Students survey examples of excellent feature stories, develop their own topics, and produce a series of feature stories, experimenting with various sub-genres, story lengths and literary approaches. Prerequisite: ENG 201, 221, 243, or 295.

310. AW: Advanced Fiction Writing.

Building upon the craft techniques acquired in English 241, Techniques of Fiction, students encounter authors who challenge basic assumptions about the nature of fiction through writing narratives that experiment with the givens of traditional story forms. Discussion of student-produced manuscripts in a workshop setting is one of a number of pedagogies employed. Emphasis is on writing improvement through increasing awareness of the technical dynamics of the short story genre and through cultivating an understanding of contemporary idioms and the uses of the imagination. Prerequisite: English 241.

311. AW: Advanced Poetry Workshop.

An extension and intensification of English 242. The class combines workshop critique of student poems with discussion of readings in twentieth century and contemporary poetry (including Modernism, Confessionalism, the Beats, the Black Mountain School, the New York School, and Ellipticism). Poetic theory is also discussed. Students are required to complete a formal manuscript of poems, an *ars poetica* or manifesto, and to read from their work in public. Prerequisite: English 242.

312. GS: The London Stage.

Offered by St. Lawrence's program in England. Students attend the same plays as the English 212L class but undertake an independent project instead of the regular classwork. Prerequisites: two English courses, one of which must include the study of drama, and permission of the instructor.

317. LT: Early Modern English Poetry.

Examines the powerful and enduring artistic influence exerted by the male and female poets of the sixteenth and seventeenth centuries in England. Includes study of narrative, romantic, spiritual and polemical/political poetry, with historical contexts. Prerequisite: English 250. *Also offered through European Studies.*

319, 320. AS: Shakespeare.

An intensive study of Shakespeare's plays. English 319 concentrates on the comedies and histories; 320 on the tragedies and romances. Prerequisite: English 250. *Also offered as Performance and Communication Arts 319, 320, and through European Studies.*

324. GS: Elizabethan and Jacobean Drama.

An examination of the vibrant popular genres (the revenge tragedy, the city comedy, the revisionist history, feminist drama, tragicomedy) practiced 1580-1640 by the finest of Shakespeare's contemporaries and followers. Performance challenges associated with each play are also discussed. Prerequisite: English 250. *Also offered as Performance and Communication Arts 324, and through European Studies.*

325. LT: Eighteenth-Century English Literature.

This course often has a thematic focus: during a recent semester the study of 18th-century English literature and culture concentrated on the relationship between low and high culture, the popular and the polite. The course asked, to what degree can these categories be separated, and in what ways do they intersect or merge in writings of this period? How do texts fit within these categories? What determines these categories — genre? audience? circulation? subject? publication format? Course texts include works by canonical figures such as Pope, Swift and Johnson, women writers and precursors of Romanticism. Prerequisite: English 250. *Also offered through European Studies.*

328. LT: English Romanticism.

A study of English romantic literature in its historical and philosophical contexts. Authors normally studied include Blake, Wordsworth, Coleridge, Percy and Mary Shelley, Jane Austen, Byron and Keats. Prerequisite: English 250. *Also offered through European Studies and Outdoor Studies.*

331. LT: American Romanticism: 1830-1860.

In this course students will embark on a wild ride through the canon of mid-nineteenth-century American literature. During this literary odyssey, we'll explore both land and sea in the company of several great American writers: Cooper, Emerson, Fuller, Thoreau, Poe, Hawthorne, Melville, Whitman, and Dickinson. Our discussions will highlight the broad philosophical shift from the Enlightenment to Romanticism; the tension between transatlantic contexts and American literary

nationalism; the emergence of new forms of environmental aesthetics; and the political agenda of a generation of writers who were committed to radical projects of social reform, sexual freedom, and racial equality. Prerequisite: English 250.

334. GS: Reading the Land:**Pastoral and Georgic Literature.**

Two different ethics have dominated environmental literature since the classical age. The pastoral involves a retreat from society, an escape into the wilderness, and an embrace of rural leisure. Pastoral writing often features shepherds frolicking in fields, tending their flocks, and piping on flutes. In contrast, the georgic celebrates more intensive agricultural labor and promotes an ethic of hard work. Georgic writing often depicts crop-based agriculture, draft animals pulling plows, and farmers who are committed to a particular piece of ground. In this course, we will study the pastoral and georgic modes as they took shape in the work of the Roman poet Virgil, gained popularity in British literature, and then migrated across the Atlantic to America and across genres from poetry into prose. To conclude the semester, we will discuss the emergence of a "new" georgic in response to contemporary environmental concerns.

339. LT: The Eighteenth-Century Novel.

The novel is a relatively new genre, a form that emerged in the 18th century and differed from previous ones in appearing only in print. Why did the English novel originate at this time? What did authors imagine it as being and doing? And how did the genre evolve throughout the 18th century? To answer these questions, we situate the novel within its historical contexts, examining English politics and culture. We also survey the century's most influential novels and assess the development of subgenres such as the epistolary novel, the Gothic novel and the novel of manners. Prerequisite: English 250. *Also offered through European Studies.*

340. LT: The Victorian Novel.

The Victorians ran the greatest global power of their time and struggled with many of the same issues that we do — both public (technology, prejudice, pollution) and private (love, marriage, family). This course examines their novels within this context, starting with realistic works and ending with a few novelistic forms that arose or resurfaced at the end of the period (sci-fi, horror, detective fiction). Prerequisite: English 250. *Also offered through European Studies.*

344. AS: Ethnic American Women Writers.

This course focuses on the writings of women from four major American ethnic groups: African-American, Native American, Asian-American and Latin American. Works are examined as products of particular ethnic traditions as well as products of a common female American literary heritage. Writers may include Toni Morrison, Alice Walker, Gloria Naylor, Louise Erdrich, Leslie Silko, Amy Tan, Maxine Hong Kingston, Sandra Cisneros and Julia Alvarez. Prerequisite: English 250.

346. LT: American Literature and the Environment.

This course explores the relationship between American culture and the natural environment through the lens of literary expression. We will study the evolution of environmental aesthetics from the colonial period through the Romantic era and into the twentieth century. Students will draw upon the insights of environmental history and apply them to literary analysis. The course will generally take shape around a particular theme (e.g., the history of frontier settlement, the politics of wilderness preservation, Adirondack literature, Arctic/Antarctic exploration, animal studies, environmental justice movements, or the desert/ocean aesthetic). Prerequisite: English 250. *Also offered as*

Environmental Studies 346.

349. GS: Modern British and American Poetry.

A survey of modern poetries from the Anglo-American canon. Major authors include Thomas Hardy, A.E. Houseman, W.B. Yeats, Robert Frost, D.H. Lawrence, Hilda Doolittle (H.D.), Ezra Pound, T.S. Eliot, William Carlos Williams, Wallace Stevens, Robinson Jeffers, e.e. cummings, Marianne Moore, W.H. Auden, Philip Larkin, Robert Lowell, Gwendolyn Brooks, Dylan Thomas and Sylvia Plath. The general aim of the course is to strengthen our capacity to read carefully and experience more deeply the work of a wide variety of poets. Prerequisite: English 250.

352. GS: Contemporary Literature and the Environment.

A study of the contemporary literary response to rising national interest in the natural world and rising awareness about the danger to natural resources. Readings are predominantly in prose (novels and essays), with some poetry included. Among the questions the authors ask: as we approach the natural world, how can we move beyond metaphors of dominion? What are the biases of gender, geography, and culture that we bring to our inquiry? What is the relationship between the human and the “natural”? What does it mean to fully invest ourselves in our local environment? Prerequisite: English 250. *Also offered as Environmental Studies 352, and through Outdoor Studies.*

354. GS: The Modern American Novel.

A study of modern American novelists from Dreiser, Cather, and Lewis through Hemingway, Fitzgerald, Faulkner, and important writers of the 1930s. Prerequisite: English 250.

356. LT: Contemporary American Literature.

How do American writers conceptualize past, present, and future from a contemporary moment, and how does literature structure our contemporary identities in a global age? Focusing on U.S. fiction, this course examines works from the 1950s to the present in historic, social, political, and aesthetic contexts. Course texts engage with a variety of themes related to the construction and deconstruction of American identity. Topics include the culture of the Cold War; postmodernism and paranoia; consumerism and technology; Native American dispossession and resistance; the legacy of slavery; diaspora and displacement; issues of identity and collective memory; border crossing and migration; globalization; and the post-9/11 world. Questioning shifting definitions of citizenship and nationhood in a period characterized by transnational circuits of exchange, we also consider whether it even makes sense to speak in terms of national affiliations and literatures in an era of globalization. Prerequisite: English 250.

357. AT: Postcolonial Literature and Theory.

This course introduces a distinct way of organizing literary study, substituting for the study of national traditions the notion of post-coloniality as a global condition affecting not only literature but also categories we use to think about human experience: relations between colonizers and colonized and between culture and power; identity, authenticity and hybridity; roots, motherland, mother tongue; nationality. Readings include contemporary literature produced in the Indian subcontinent, Australia, New Zealand and the Pacific, Africa, Canada and the Caribbean, as well as important theoretical texts about post-coloniality. Prerequisite: English 250. *Also offered as Philosophy 357, and Global Studies 357.*

358. GS: Canadian Fiction.

An examination of Canadian prose since 1920. Though concentrating on the novel, the course pays significant attention to the short story. Prerequisite: English 250.

359. LT: American Women Writers.

A survey of the contributions of women writers to the development of the American literary tradition. Representative writers include Stowe, Jewett, Freeman, Chopin, Cather, Wharton, Porter, Morrison, Godwin and Rich. Prerequisite: English 250.

360. GS: Special Studies in Literary Nonfiction.

Students read and analyze classic and contemporary nonfiction texts, reading widely in theory and criticism. The course has a shifting thematic focus, with recent iterations including “The American Essay,” “Memoirs of the American West” and “The History of the Personal Essay.” Authors frequently studied include E.B. White, James Baldwin, Joan Didion, Wallace Stegner, Phillip Lopate, Scott Russell Sanders, Annie Dillard, Gayle Pemberton, George Orwell, and Virginia Woolf. Prerequisite: English 250.

364. AS: J.R.R. Tolkien.

This course takes up the case of J.R.R. Tolkien, using his work as a 20th-century scholar of Old English language and literature in order to explore the ways a body of creative work can grow out of a particular mind responding to particular historical and literary contexts and influences. Required texts: *The Hobbit*, *The Lord of the Rings*, *The Silmarillion*, *Beowulf*, and selections from Tolkien’s scholarship and short fiction. Prerequisite: ENG 250.

368. LT: Contemporary American Poetry.

A survey of the major “schools” of poetry beginning with the “Middle Generation” of the 1950s through the present. Emphasis is on the way that the traditions established by the Confessional poets (Lowell, Sexton, Berryman, Plath) and the New York school (O’Hara, Schuyler, Berrigan, Ashbery) develop into late twentieth and early twenty-first century Post-Confessionalism and Ellipticism (Doty, Olds, Addonizio, Young, Armantrout, Wright, Muldoon). While a great deal of attention is given to primary texts, poetic theory and social history are also examined. Prerequisite: English 250.

389, 390. Projects for Juniors.

Student-initiated projects involving significant study and writing carried out through frequent conferences with a faculty sponsor. These projects are completed in addition to the five courses required for the advanced level of the major. Prerequisites: junior standing, a 3.25 GPA in English, and approval by the departmental Honors/Independent Projects committee. Proposals must be submitted to the committee by March 1 of the semester preceding the beginning of fall projects, and by November 1 of the semester preceding spring projects.

4,000-4,999. Special Studies in Language and Literature.

The content and the studies rubric area of these advanced special topics courses varies, and is announced when the *Class Schedule* is published prior to registration.

409. Internships in Communications.

The department sponsors a limited number of closely supervised internships on campus. There are various prerequisites for these, and an application process for enrollment. Information about internships is available in the English department office. The internship counts as a writing course and is completed in addition to the five courses required for the advanced level of the major.

450. SYE: Senior Seminar.

Senior seminars are designed to provide students with the opportunity to apply the knowledge and skills they have developed in their own progress toward completion of the major. Seminars vary in topic, but each requires participants to complete a substantial writing project and to contribute both formally and informally to classroom discussions. Prerequisites: ENG 250 and senior standing.

489,490. Projects for Seniors.

Student-initiated projects involving significant study and writing carried out through frequent conferences with a faculty sponsor. These projects are completed in addition to the five courses required for the advanced level of the major. Prerequisites: senior standing, a 3.25 GPA in English, and approval by the departmental Honors/Independent Projects committee. Proposals for fall projects must be submitted to the committee by March 1 of the semester preceding the beginning of fall projects, and by November 1 of the semester preceding the beginning of spring projects.

498. Honors Projects.

Honors Projects are offered in the fall semester only and are for students working on an independent project to submit for departmental honors in the spring semester. Students meet regularly with their individual project advisors and as a group several times during the semester for guidance about conducting research, revising, and preparing thesis manuscripts. These projects are completed in addition to the five courses required for the advanced level of the major, and students must have completed at least two courses at the 300, 400, or 4000 level by the time of application. Prerequisites: senior standing, a 3.5 GPA in English, and approval by the departmental Honors/Independent Projects committee. Proposals must be submitted to the committee by March 1 of the semester preceding the beginning of the project. Proposals must be submitted to the committee by March 1 of the semester preceding the beginning of the project.

Environmental Studies

Major and interdisciplinary majors offered

Professors Barthelmess (biology), Harris (emeritus), Johns (chair); **Associate Professor** Rosales; **Assistant Professors** Ashpole, Murphy, Pettengill; **Also Professors** Greene (psychology), Koon, (physics), McKnight (biology), Singer (English), Thacker (Canadian studies), Young (economics); **Associate Professors** Assefa (sociology), Buck (government), Gao (chemistry), Hussmann (English), O'Donoghue (physics), Pai (biology), Skeels (chemistry), Stewart (geology), Willson (biology); **Assistant Professor** McLane (sociology), Milani (economics).

Visit the environmental studies department webpage at www.stlawu.edu/environmental-studies.

The increase in consumption and human population coupled with increasing misuse of natural resources has led to serious degradation of

the environment and threatens natural ecosystems and human societies which depend upon them.

In order to understand these problems, root causes, contemporary drivers and potential solutions, the environmental studies curriculum incorporates environmental science (both natural and social) and perspectives from the humanities (e.g. literature, philosophy).

In environmental studies, students engage the complex nature of environmental problems. Students learn that study of these problems cannot occur piecemeal. A careful examination of the interrelationships of both natural science and social systems is essential if we are to preserve environmental quality and achieve sustainability. The overall aims of the curriculum are to provide specific knowledge of the relationship between traditional disciplines and interdisciplinary perspectives of environmental studies and to foster integrated approaches for environmental problem-solving. Courses explore the holistic nature of environmental issues by analyzing of environmental problems and their solutions. The curriculum includes courses listed with other departments as well as in particular areas of environmental studies.

While many students incorporate off-campus study for at least one semester, most courses focus on the study of rural issues, both inside and outside the classroom, to make maximum use of the Adirondacks and St. Lawrence River Valley.

A student may choose environmental studies as a stand-alone major, a combined major in conjunction with other departments (see below), or as one field in a multi-field major (see Curriculum, Multi-field Major Program). Students can earn a B.S. degree emphasizing environmental science via combined majors with biology, chemistry, geology, mathematics or psychology; or a B.A. degree in the stand-alone major or in a combined major with economics, English, government, philosophy or sociology.

Students enroll in Environmental Studies 101 in their first or second year. Students intending to pursue an interdisciplinary major in environmental studies must take 101 by the end of their fourth semester. A major in environmental studies cannot be declared later than the end of the fourth week

of a student's fifth semester, or equivalent.

Goals for Environmental Studies Majors

Students in environmental studies will:

- Gain the capacity to analyze and evaluate how human activities influence the environment on local, regional and global scales;
- Understand the underlying scientific basis for existing and emerging environmental issues;
- Utilize interdisciplinary approaches appropriate for the complexity of environmental issues and their solutions;
- Learn how the scientific understanding of environmental issues is translated into environmental policy and be able to assess the effectiveness of those policies and their implementation;
- Understand the evolution of environmental thought in North America as a basis for the contemporary environmental movement;
- Recognize justice and sustainability as key elements in environmental decisions and understand the patterns of unequal responsibility for environmental degradation;
- Develop the capacity to conduct research and communicate findings to enhance public understanding and to contribute to environmental problem-solving;
- Cultivate a personal environmental ethic that includes advocacy for environmental stewardship.

Restrictions

1. Students desiring to major in any of the environmental studies majors must have earned a minimum of 2.25 in ENVS 101 to be admitted to the major.
2. For the stand-alone major and all combined majors, Environmental Studies 335, all Environmental Science and Policy (ESP) courses, and all required dual-listed electives, must be taken in the environmental studies department at St. Lawrence University.
3. For students undertaking double majors and including environmental studies as one of the two majors, no more than two courses dual-listed with the department of the second major may be counted as electives toward the

environmental studies major.

4. For the stand-alone major no more than two courses can be counted as electives from other institutions and University-approved abroad/away programs. For all combined majors only one ENVS course can be counted.
5. A major in environmental studies cannot be declared later than the end of the fourth week of a student's fifth semester, or equivalent.

Stand-Alone Major

The stand-alone major (B.A.) serves students who wish to concentrate their efforts in environmental studies. This major is tailored to individual interests and emphasizes depth in selected sub-areas, as well as the integrative, interdisciplinary approaches of environmental studies.

Requirements

All interdisciplinary majors in environmental studies require the following courses:

101. Introduction to Environmental Studies.	1 unit
Environmental Science and Policy (ESP) courses	5 units
Natural Science Course	1 unit
<i>(from dual-listed course options)</i>	
Social Science/Humanities Course	1 unit
<i>(from dual-listed course options)</i>	
Electives*	<u>3 units</u>
Total	11 units

Possible Environmental Studies Course Tracks within the Interdisciplinary Major

Sustainability Track

It is recommended that students particularly interested in issues of sustainability enroll in at least three of the following ESP courses:

- 261. Sustainable Agriculture.
- 263. Global Change and Sustainability.
- 275. Energy and the Environment.
- 327. Topics in Environmental Sustainability.
- 379. Renewable Energy Systems.

In addition, an SYE that utilizes the Ecological Sustainability Landscape (see below) should be selected.

SYE options that commonly utilize the Ecological Sustainability Landscape include:

- 461. Research Seminar.
- 489. and 490. Senior Research.
- 499. Honors Project.

Pollution Science Track

Students intrigued by a scientific understanding of environmental problems and ways to solve those problems should consider enrolling in at least three of the following ESP courses:

- 216. Climate Change Policy and Advocacy.
- 231. Health Effects of Pollution.
- 249. Outdoor Recreation and Public Land.
- 275. Energy and the Environment.
- 301. Pollution of Aquatic Ecosystems.
- 302. Air Pollution.
- 371. Global Amphibian Decline.

Any of the above courses might then be used as a basis for pursuing an SYE as 489 and 490 Senior Research or 499 Honors Project.

Ecosystem Management Track

Students concerned about natural resources and appropriate management of them might choose at least three of the following ESP courses as part of their stand-alone major:

- 203. Land Use Change in the Adirondacks.
- 249. Outdoor Recreation and Public Land.
- 326. Once and Future Forests
- 369. Restoration Ecology.
- 370. Landscape Ecology.

SYE options for this track include:

- 421. Directed Readings.
- 489. and 490. Senior Research.
- 499. Honors Project.

Interdisciplinary Majors

Environmental studies, in conjunction with other departments, has created 10 interdisciplinary majors, allowing students to integrate substantial efforts in traditional disciplines with environmental studies. These majors are designed for students who wish to acquire expertise in another department while still benefiting from the integrative approaches of environmental studies. Five B.S. options are available with natural science departments: biology, chemistry, geology, mathematics and psychology. Five B.A. options are available with departments in the social sciences and humanities: economics, English, government, philosophy and sociology. In each interdisciplinary major, it is essential that the student work closely with advisors in both departments.

Progress in both halves of the interdisciplinary major should take place at about the same pace.

Interdisciplinary Major Core Courses

All interdisciplinary majors in environmental studies require the following courses:

- 101. Introduction to Environmental Studies. 1 unit
- Environmental Science and Policy (ESP) courses 4 units
- Electives* 2 units
- Total** 7 units

**One elective must be a dual-listed natural science course for B.A. students or a social science or humanities course for B.S. students. Some combined majors require an SYE in either department which may raise the total units to 8 if taken in environmental studies. Honors is always in the major, incorporating both departments and at least one committee member from each department. The faculty mentor may be in either department.*

Environmental Studies-Biology

Interdisciplinary Major Core (listed above) 7 units

Biology

- 101,102. General Biology. 3 units
- 221. General Ecology. 1 unit
- Electives* 5 units
- Total** 16 units

**Electives that are dual-listed should be taken under the biology number. These electives count toward the biology portion of the combined major. Biology electives must include two 300- or 400-level courses. And one of the following: (1) four units with lab, (2) three units with lab and one unit of lab or field based SYE, or (3) two units with lab and one unit of research methods with lecture and lab. Students planning for graduate work in biology should take General Chemistry and Statistics.*

Environmental Studies-Chemistry

Interdisciplinary Major Core (listed above) 7 units

Chemistry

- 103,104. General Chemistry. **or** 2.5 units
- 105. Accelerated General Chemistry. 1.25 units
- 205. Quantitative Analysis. 1.25 units
- 221, 222. Organic Chemistry. 2.5 units
- 306. Environmental Chemistry. 1 unit
- and Toxicology.
- 341. Quantum Chemistry and Spectroscopy. **or**
- 342. Biophysical Chemistry. 1 unit
- Lab courses, to be selected from:* 2 units
- 351. Advanced Organic Laboratory.
- 352. Inorganic Chemistry Laboratory.
- 353. Physical Chemistry Laboratory.
- 452. Instrumental Analysis.
- Total** 16 or 17.25 units

Environmental Studies-Economics

Interdisciplinary Major Core (listed above) 7 units

Economics

- 100. Introduction to Economics. 1 unit

COURSES OF STUDY — ENVIRONMENTAL STUDIES

200. Quantitative Methods in Economics.	1.5 unit
251. Intermediate Microeconomic Theory.	1 unit
252. Intermediate Macroeconomic Theory.	1 unit
308. Environmental Economics. or	
384. Natural Resource Economics.	1 unit
Electives*	<u>3 units</u>
Total	15.5 units

*Electives that are dual-listed should be taken under the economics number. Dual-listed electives count toward the economics portion of the combined major. Economics electives must include at least two 300- or 400-level courses.

Environmental Studies–English

Interdisciplinary Major Core (listed above) 7 units

English

A. At least three writing courses, two of which are in the sequence:

- 201 and 309 journalism
- 241 and 310 fiction
- 242 and 311 poetry
- 243 and 308 creative nonfiction
- 243 and 309 nonfiction/journalism
- 244 and 306 screenwriting

A relevant special topics course in writing or independent study in writing may count as one course.

The following may also count as writing courses:

- 202. Creative Expressions. (*Adirondack semester*)
- 282. Going Locavore.
- 293. A Literary Harvest.
- 295. Nature and Environmental Writing.

The following may also count as sequences:

- 243 and 295
- 202 and 295
- 243 and 273 or 282

B. At least four literature courses, which must include:

1. *At least one of the following 200-level survey courses:*

- 226. Survey of English Literature.
- 237. Survey of American Literature.
- 263. Native American Fiction.

2. ENG 250. Methods of Critical Analysis.

3. *At least one of the following 300-level literature courses:*

- 328. English Romanticism.
- 331. American Romanticism: 1830-1860.
- 334. Reading the Land:
Pastoral and Georgic Literature.

A relevant special topics seminar or independent study in literature.

4. *At least one dual-listed English/ environmental studies course:*

346. American Literature and the Environment.	
352. Contemporary Literature and the Environment.	<u>4 units</u>

Total 14 units

Note: Courses that are dual-listed should be taken under the course number for English. These electives count toward the English portion of the combined major.

Environmental Studies–Geology

Interdisciplinary Major Core (listed above) 7 units

Geology

103. The Dynamic Earth. <i>with lab</i>	1 unit
211. Geomorphology.	1 unit
216. Sedimentology.	1 unit
319. Hydrology and Hydrogeology.	1 unit
362. Geochemistry.	1 unit
Geology elective at the 200 or 300 level	1 unit
103. General Chemistry.	1.25 units
135. Calculus.	<u>1 unit</u>

Total 15.25 units

It is also recommended that all Environmental Studies–Geology majors *take the following courses:*

Chem. 104, Math 136, and either Physics 151

or Biol. 101.

*Electives that are dual-listed should be taken under the course number for geology. These count toward the geology portion of the combined major.

Environmental Studies–Government

Interdisciplinary Major Core (listed above) 7 units

Government

103. Introduction to American Politics.*	1 unit
105. Introduction to Comparative Politics.*	1 unit
108. Introduction to International Politics.* or	
206. Introduction to Political Theory.	
290, 291, 292, or 293. Research Seminar.	1 unit
343. Ecology and Political Thought.	1 unit
Electives**	<u>2 units</u>

Total 14 units

*At least one of these courses must be taken as a writing-intensive course.

**Electives that are dual-listed should be taken under the government number. These dual-listed electives count toward the government portion of the combined major. Government electives must include one international course and one theory course (usually 108 and 206).

Environmental Studies–Mathematics

Interdisciplinary Major Core (listed above) 7 units

Mathematics

135. Calculus I.	1 unit
136. Calculus II.	1 unit
205. Multivariate Calculus.	1 unit

COURSES OF STUDY – ENVIRONMENTAL STUDIES

230. Differential Equations.	1 unit
350. Mathematical Modeling.	1 unit
Mathematics elective	1 unit

Statistics

113. Applied Statistics.	1 unit
213. Applied Regression Analysis.	<u>1 unit</u>

Total 15 units

Environmental Studies–Philosophy

Interdisciplinary Major Core (*listed above*) 7 units

Philosophy

201. Ancient Philosophy.	1 unit
202. Reasoning.	1 unit
203. Ethical Theory.	1 unit
206. Introduction to Political Theory.	1 unit
208. Modern Philosophy.	1 unit
310. Philosophy of the Environment.	1 unit

Electives* 2 units

Total 15 units

**Electives that are dual-listed should be taken under the philosophy number and count toward the philosophy portion of the combined major.*

Environmental Studies–Psychology

Interdisciplinary Major Core (*listed above*) 7 units

Psychology

100. Introductory Psychology. or	
101. Introductory Psychology. (<i>with lab</i>)	1 unit
205. Research Methods in Psychology.	1 unit
318. Environmental Psychology.	1.25 units
Electives*	<u>5.25 units</u>

Total 15.5 units

***Electives must include at least one course from the biological/evolutionary list and one from the social/cognitive list (see psychology). One course from the biological/evolutionary theme must be taken for lab credit. One elective must be a seminar or independent project. Note: Statistics 113 or Economics 200 must be taken prior to or concurrently with Psych 205.*

Environmental Studies–Sociology

Interdisciplinary Major Core (*listed above*) 7 units

Sociology

110. Global Problems. or	
112. Inequality. or	
161. Social Problems and Policy. or	
187. Environment and Society.	1 unit
<i>Other courses may be considered, in consultation with the department chair.</i>	
203. Foundations of Social Theory.	1 unit
300. Qualitative Research Methods. or	
301. Quantitative Research Methods.	1 unit
Two socio-environmental dynamics courses	2 units
235. Earning a Living.	

253. Race, Class, and Environmental Justice.	
257. Environmental Problems.	
278. China's Market Transition.	
288. Dilemmas of Development.	
314. Nomads in World History.	
377. Sociology of Consumption.	

Other courses may be considered, in consultation with the department chair.

Two electives in sociology* 2 units
 Capstone: one additional 300/400 socio-environmental dynamics course with research component 1 unit

Total 15 units

**Electives that are dual-listed should be taken under the sociology number and count toward the sociology portion of the combined major.*

Honors

Students enrolled in one of the environmental studies majors may pursue honors in that major. To qualify for graduation with honors, students must have a minimum grade point average of 3.5 in all courses of the major at the time of graduation. In addition, students must successfully complete an honors project supervised, or read, by at least one faculty advisor in the environmental studies core. An honors project will involve primary data collection and analysis of that data. An honors project may be completed in one or two semesters, depending on the project, with the adviser's consent. Juniors interested in the honors program should consult with the environmental studies faculty. (See also Honors in the Curriculum section of this *Catalog*.)

Ecological Sustainability Landscape (ESL)

The environmental studies department cares for and utilizes an approximately 100-acre parcel of University land that encompasses farmland, wetlands, woods, a barn and farmhouse adjacent to the Little River. This working landscape involves students in experiential learning activities in a number of courses, including Energy and the Environment, Sustainable Agriculture, Air Pollution, Once and Future Forest, Restoration Ecology, Global Amphibian Decline, Landscape Ecology, Topics in Environmental Sustainability and special topics courses. Students help maintain gardens with heirloom crops, a small flock of rare breeds of sheep, a solar panel system, energy conservation renovations to the farmhouse, a

tree nursery and reforestation effort, and permaculture features among other activities. The farmhouse has a seminar room used for teaching classes. Also, the ESL provides space for monitoring of groundwater and a climate monitoring station in collaboration with other science departments of the University.

Courses

The “ESP” designation indicates that this course meets the Environmental Science and Policy (ESP) requirement for the environmental studies major.

101. Introduction to Environmental Studies.

This one-semester course is an introduction to the basic concepts and inter-relationships needed to understand the complexities of environmental problems. A survey of the characteristics of natural environments and human populations is followed by a study of environmental degradation and alternative solutions to environmental problems. The student is introduced to the roles of many disciplines (including both the natural and social sciences) in the study of environmental problems. The emphasis is on interdisciplinary thinking.

103. Religion and Ecology.

How does religion shape human understanding of, and participation in, ecological systems? This course samples widely from a range of religious traditions to come to a better understanding of the diverse ways that people have developed for interacting with animals, plants, water, and the land, and how those behaviors work in tandem with systems of knowledge and practice. The class has a substantial focus on environmental ethics, and thinks hard about how different religious systems might contribute to either or both environmental degradation and solutions to environmental problems. Traditions sampled include Islam, Christianity, Hinduism, Daoism, Judaism, Buddhism, Native American religions, and Wicca/Neo-Paganism. *Also offered as Religious Studies 103.*

105. Energy.

This course covers the nature of energy, its application in modern society and a variety of issues associated with that use. We will study the physical principles of mechanical, thermal, electrical, optical and nuclear energy in order to better understand the role of energy in society, focusing on fossil fuels, electric power plants, automobiles, global warming, the ozone layer and energy conservation, as well as nuclear, solar and other power sources. This course makes extensive use of elementary algebra and scientific notation. 105 is taught in a lecture format with shorter integrated lab activities. *Also offered as Physics 105.*

110. Environmental Geology.

Environmental geology is a multidisciplinary field of applied science that involves the study of the interaction of humans with the geologic environment including the biosphere, the lithosphere, the hydrosphere, and the atmosphere. The field of environmental geology includes, but is in no way restricted to: 1) the study of the structure and processes of the earth, mineral, and rocks, especially those that are near-surface

or have some significant effect upon humans, 2) the study of natural hazards and disasters, including defining and mitigation (or adaptation) of human exposure and threat, 3) managing industrial and domestic waste disposal and minimizing or eliminating effects of pollution, and 4) managing safe and environmentally responsible stewardship of geological resources, including minerals, fossil fuels, and water and land use. This course is designed to give the student basic understanding of the processes and materials of the earth and relate these concepts/products to human activities. *Also offered as Environmental Studies 110.*

112. Global Climate.

Climate is perhaps the single most important and pervasive factor controlling global ecosystems and human well-being. This interdisciplinary course examines global climate from a historical perspective, beginning with the formation of the solar system and continuing through geologic time to the present. Topics include the development of the atmosphere; the workings of the global “heat engine” of atmosphere, oceans and continents; evidence for past climate change; causes of global climate change; the effects of climate change on human evolution; and the effects of human evolution on the global climate system. This is a studio lab course. *Also offered as Geology 112 and Physics 112 and through Global Studies.*

187. Environment and Society.

This course explores the complex interrelations between human societies and the environment via the sociological perspective. The sociological perspective is a means of making the familiar aspects of our lives, and our understandings of the world, seem strange and new. In doing so we can better analyze our world and our place in that world especially with regard to human and natural interactions. In this course we will learn about the concepts, theories, and methods that sociologists use to understand critical issues of environmental degradation and ecological crises and how these problems are experienced differently depending on one’s location in global society. By the end of the course students will become familiar with analytical tools that enable an understanding of some underlying drivers of environmental degradations and ideas of what can be done to chart a better future. *Also offered as Sociology 187.*

203. Land Use Change in the Adirondacks. (ESP)

Using the Adirondacks as a case study, this course examines current activities in land planning and the importance of historical context. Study of Adirondack history begins with 16th century information from European explorers and Native Americans. Emphasis is then placed on industrial and recreational use in the 19th century. The course highlights formation of the State Forest Preserve and the Adirondack Park, and regulations governing private land use. Study of the present utilizes political theory such as internal colonization and coreperiphery. The course employs local examples through discussion and field trips. Prerequisite: Environmental Studies 101. *Also offered as Outdoor Studies 203.*

205. Quantitative Analysis. (1.25 units)

An introductory course dealing with the chemical, physical and logical principles underlying quantitative chemical analysis. Among the broad topics treated are data evaluation, titrimetry, solution equilibria, potentiometry and absorption spectroscopy. Lectures plus one laboratory per week. Prerequisites: Environmental Studies 101; Chemistry 104 or 105 (with a 2.0 grade or higher) or permission of instructor. *Also offered as Environmental Studies 205.* Offered only in the spring semester.

209. Vertebrate Natural History.

A field-oriented course that explores the biology of vertebrate animals, with emphasis on understanding the diversity, life history, evolution and unique adaptations of vertebrates. The laboratory focus is on developing scientifically sound skills in observation and on learning to identify local vertebrates. Some extra class meetings are required for regional field excursions and for identifying local vertebrates at the times of day when they are active. Offered alternate fall semesters. Prerequisites: Environmental Studies 101, Biology 101, 102 or permission of instructor. *Also offered as Biology 209 and through Outdoor Studies.*

211. Geomorphology.

Geomorphology, literally “earth-shape-study,” is the study of the landscape, its evolution and the processes that sculpt it. The purpose of this course is to enhance the student’s ability to read geologic information from the record preserved in the landscape. This is achieved through understanding the relationship between the form of the Earth’s surface and the processes that shape that form. Students combine quantitative description of the landscape with study of landscapeshaping processes into a comprehensive investigation of the dynamic landscape system including glaciation, hills, rivers, mountains and plains. Prerequisite: Environmental Studies 101 and Geol 103. *Also offered as Geology 211.*

216. Climate Change Policy and Advocacy. (ESP)

This course focuses broadly on the actions groups of people take in the face of climate change. After a survey of relevant climate change science, most of our time will be devoted to the way knowledge, worldviews, and power affect climate change decision-making at the international level. We consider climate change policy, and attendant critiques, at the international, national, and state levels. Particular focus is given to the Kyoto Protocol and how it developed within the United Nations under the Framework Convention on Climate Change, and where those negotiations are at this year. The class incorporates emerging climate change science, policy, and advocacy as it happens. Prerequisite: Environmental Studies 101. *Also offered through Peace Studies.*

221. General Ecology.

A study of the factors influencing the abundance and distribution of species, including interactions between individuals and their physical/chemical environment, population dynamics and the structure/function of communities and ecosystems and their responses to disturbance. Labs are field-oriented and emphasize characteristics of local communities or specific techniques such as estimation of population density. Lectures and one lab per week. Prerequisites: Environmental Studies 101; Biology 101, 102 or equivalent; or permission of instructor. *Also offered as Biology 221 and through Outdoor Studies.*

231. Health Effects of Pollution. (ESP)

An introduction to the scientific study of environmental agents and their human health effects. Emphasis is on the environmental causes of disease, including biological agents, hazardous waste, radiation, pesticides, flame retardants, drinking water contaminants, food additives, housing, occupational hazards and stress. Case studies illustrate how health effects are investigated by epidemiology and how theories of disease have evolved. Procedures for establishing regulatory policy and health standards are also discussed. Prerequisite: Environmental Studies 101.

249. Outdoor Recreation and Public Land. (ESP)

Land managers are often charged with the contradictory responsibilities of allowing for an “unconfined” recreation experience while simultaneously maintaining a high degree of resource protection. This course is an interdisciplinary investigation into the phenomenon of outdoor recreation. Emphasis is given to wildland recreation—activities

that are dependent on undeveloped settings. The course examines the biophysical and social science of recreation used to inform policy and planning approaches. Examples of recreation issues are drawn primarily from North America and, where applicable, the course takes advantage of the nearby Adirondack Park for field experience and research. Prerequisite: Environmental Studies 101.

251. Independent Projects in Environmental Studies.

For students desiring to do individual research in environmental studies. May be elected only after submission of a written proposal during the prior semester and approval by core faculty of environmental studies. Prerequisites: Environmental Studies 101 and permission of instructor.

253. Race, Class, and Environmental Justice.

This course focuses on the distribution of environmental degradation and environmental protection, both domestically and globally. The social processes that generate synergistic racism and class stratification, affecting the distribution of ecological costs and benefits, are explored. Substantive topics include the siting of hazardous facilities and thermo-nuclear weapons testing, the socio-ecological conditions of migrant farm workers, extraction of resources from Native lands, and the transnational export of toxic waste to the “Global South.” The course examines the origins and impacts of a distinct environmental justice movement that has emerged in the U.S. Written and oral assignments involve individual and collaborative quests for socially equitable solutions to socio-eco-historical injustices. Prerequisite: Environmental Studies 101. *Also offered through Sociology.*

257. Environmental Problems.

Environmental problems are increasingly coming to define the times we live in. In this course we consider the nature of those problems by examining the way that human activities disrupt ecological sustainability. Next, we examine the root causes of these problems by examining how our economy and politics are organized. Environmental problems imply the need for environmental solutions. Thus, we examine political and social solutions that have been proposed to these problems as well as models of successful solutions. Prerequisite: Environmental Studies 101. *Also offered as Sociology 257.*

258. Ethnobotany.

Ethnobotany is an interdisciplinary field drawing on concepts from both natural and social sciences to investigate human-plant interactions. This course illustrates the importance of plants in our everyday life and the influence of human activities on plant populations. Independent projects center around surveys and experiments on socio-economically important plants. Field trips and labs explore Native American reservations, botanical gardens, greenhouses, nature reserves and plant population survey techniques. Three hours lecture and one three-hour laboratory per week. Prerequisite: General Biology 101 and Environmental Studies 101. *Also offered as Biology 258 and Anthropology 258.*

261. Agriculture and the Environment. (ESP)

This course introduces students to the ecological, economic and social dimensions of agriculture, both food and fiber. We critically examine modern, large-scale, industrialized agriculture—how it has arisen and how it affects land, water, biodiversity and human communities—and analyze whether it is sustainable. We then evaluate a variety of models that might represent more sustainable systems, including Native American, permaculture, urban, regenerative, organic and regional food systems. Students visit several local farms and gain hands-on experience in the gardens at the Ecological Sustainability Landscape. Prerequisite: Environmental Studies 101. *Also offered through Peace Studies.*

263. Global Change and Sustainability. (ESP)

This course broadly considers the stability of how humans relate to the environment. To do this, the course focuses on the origin of the term sustainability as it developed through the United Nations and affiliated institutions. Students also consider various case studies that exude principles of sustainability. The concept of sustainability development is critically examined as a key theme throughout the course and alternatives to this maligned concept are considered. The course includes a lab component where students visit local sites, such as an off-grid house, that exude sustainability. Prerequisite: Environmental Studies 101. *Also offered through Peace Studies.*

275. Energy and the Environment. (ESP)

This course addresses energy supply and use from individual, local, regional, national and global perspectives. The differences provide a common theme; emphasis is on how they force trade-offs and translate into energy-related decisions and policy. Production, use and impacts of energy sources are considered throughout the stages of systems that supply energy in usable forms to society. An overview of historical energy transitions leads into a look at current energy use practices and trends, ultimately focusing on development throughout the next 20-50 years. Special emphasis is given to local and regional energy concerns, such as hydroelectric power, and alternative sources including biomass and wind. A large segment of the course details strategies for reducing energy consumption. Prerequisite: Environmental Studies 101. *Also offered through Peace Studies.*

282. Going Locavore.

Selected texts, films, speakers, and various writing assignments will provide a contextual framework for class visits to and volunteer work on three local farms in order to understand the historical roots and possible alternatives to a growth economy and the shift from local, small scale farming to the crop monoculture and CAFO feedlot model of current agribusiness. With this framework in mind, students will read work by contemporary writers immersed in the experience of local food and local living. Additionally, students will study the strengths and weaknesses of the various rhetorical strategies to understand that effective "environmental" writing is as varied as other forms of creative nonfiction and depends equally on context, venue, subject, audience, and authorial intent. Prerequisite: Environmental Studies 101. *Also taught as English 282.*

293. Literary Harvest.

This is a creative writing course in literary nonfiction that focuses on food, food security, and farming. In *Closing the Food Gap*, Mark Winne talks about affordable access to good, healthy food as an issue of social and environmental justice. While environmental writers and activists such as Wendell Berry, Michael Pollan, and Vandana Shiva have alerted us to the ecological, ethical, and health problems associated with large-scale industrial farming, the North Country has long been a haven for sustainable, small-scale organic agriculture. The course has both a CBL component and a cross-cultural, comparative focus (India). Students will do their CBL work on a local farm or in a food kitchen, and are required to sign up for the CBL lab as well. Prerequisite: Environmental Studies 101. *Also offered as English 293.*

295. Nature and Environmental Writing.

This is a course designed for those students who want to explore more fully the genre of nature and environmental writing, the intersection of self and the natural world. We'll explore how this genre combines the observational, scientific "eye" with the personal, narrative "I" through readings in anthologies, books, and contemporary environmental magazines. Students will also spend time writing their own essays

on nature and the environment, that will reflect different objectives within the genre such as personal essays, trip narratives, and essays that investigate/advocate an environmental issue. Students will write three essays and one revision that will be due at the end of the semester. Our discussion of the readings will be interspersed with workshoping sessions throughout the semester. Prerequisite: Environmental Studies 101. *Also offered as English 295 and through Outdoor Studies.*

301. Pollution of Aquatic Ecosystems with lab.

(ESP) (1.25 units)

After introducing major physical, chemical and biological aspects of the ecology of lakes, rivers and coastal waters, the course focuses on the consequences of human activities on aquatic ecosystems: cultural eutrophication, oxygen-demanding wastes, persistent toxic chemicals, acidification, oil and metal pollution, global warming, and the effects of water diversions and impoundments. Lab projects emphasize water sampling and analysis, stream assessment using biotic indices, analysis of contaminants in runoff and sediments, and models of phosphorus in lakes and bio-accumulation of persistent toxins. Prerequisite: Environmental Studies 101 or Biology 101 or Geology 103.

302. Air Pollution. (ESP)

This course examines the sources, chemistry, transport and ecological and social impacts of major air pollutants. Our scale of study moves from global to regional to local. Issues include global climate change, stratospheric ozone depletion, urban air quality, photochemical smog, acidification and local industry. Emphasis is on consequences of industrialization and urbanization in both developed and developing countries. While primary focus is on ecological impacts, we also consider the equity issues, policy and implementation strategies for protecting air quality. Prerequisite: Environmental Studies 101.

306. Environmental Chemistry and Toxicology.

This course is designed for chemistry majors and students in environmental studies who have a strong background in chemistry. It explores the sources and levels of chemical pollutants, the pathways along which they move through the environment and the toxicological effect they have on humans and other living things. Prerequisites: Environmental Studies 101 and Chemistry 221 or permission of instructor. *Also offered as Chemistry 306.* Offered in alternate years, usually in the spring semester.

310. Philosophy of the Environment.

What obligations, if any, do we have towards the environment? What changes should we make in our own lives in light of those obligations? How does material consumption relate to our happiness? If we can be happy consuming less, why do so many of us continue to consume so much? How do our attitudes towards the environment reflect our social position? What is the difference between the natural and the artificial? This course examines such questions in order to come to grips with our relationship with the environment, and what these ideas mean for the way we lead our lives. Students will explore these questions in relation to the global community, to our local community, and in relation to their own lives and choices. Prerequisite: any 100-level philosophy course, or Environmental Studies 101, or permission of the instructor. *Also offered as Environmental Studies 310, Outdoor Studies 310 and also offered through Peace Studies.*

318. Environmental Psychology.

This lecture-lab course studies the relationships between humans and physical environments, both natural and built. Topics include environmental assessment, attitudes and behavior toward the

environment, and the psychological effects of such environmental factors as crowding, architectural design, extreme environments, pollution and natural disasters. The laboratory is required of all students. Prerequisites: Environmental Studies 101 and Psychology 100 or 101. *Also offered as Psychology 318 and through Peace Studies.*

319. Hydrology and Hydrogeology.

This course provides an introduction to the movement and storage of water on the Earth's surface (hydrology) and in the subsurface (hydrogeology). We discuss the fundamentals of the water cycle and hydrologic processes at the surface, the transfer of water in and out of the subsurface and the processes of groundwater flow. Human impacts upon water are also examined, including water resources, contamination, changing land-use and climate change. Prerequisite: Environmental Studies 101. *Also offered as Geology 319.*

326. Once and Future Forests. (ESP)

This course explores the magnificence of forests and trees. We study both the significance of old-growth forests as well as the management of new forests, hence the title of the course — Once and Future Forest. This is an applied, field-oriented, community service, project-based course with a strong focus on the North Country. The in-class portion of the class focuses on the science and policy of forests. The lab portion of the course continues work on three ongoing projects, one on finding old growth in the North Country, and the other two on reforestation of our department's Ecologically Sustainable Landscape. Taken together, and more importantly, we develop further our appreciation for trees. Prerequisite: Environmental Studies 101.

327. Topics in Environmental Sustainability. (ESP)

A project-based course that utilizes the ecological sustainability landscape. The specific course content varies from semester to semester depending on the interests of the faculty and students. Possibilities include fiber arts, natural sweeteners, woodlot and orchard management, environmental interpretation and landscape carbon accounting. Emphasis is on experiential education in the context of appropriate reading and reflective exercises. Prerequisite: Environmental Studies 101.

334. Reading the Land:

Pastoral and Georgic Literature.

Two different ethics have dominated environmental literature since the classical age. The pastoral involves a retreat from society, an escape into the wilderness, and an embrace of rural leisure. Pastoral writing often features shepherds frolicking in fields, tending their flocks, and piping on flutes. In contrast, the georgic celebrates more intensive agricultural labor and promotes an ethic of hard work. Georgic writing often depicts crop-based agriculture, draft animals pulling plows, and farmers who are committed to a particular piece of ground. In this course, we will study the pastoral and georgic modes as they took shape in the work of the Roman poet Virgil, gained popularity in British literature, and then migrated across the Atlantic to America and across genres from poetry into prose. To conclude the semester, we will discuss the emergence of a "new" georgic in response to contemporary environmental concerns.

343. Ecology and Political Thought.

Ecology reminds us that our activities are embedded within natural systems. What is the significance of this fact for politics? This course examines how various actors, such as citizens, consumers, social movements, scientific experts, and governmental agencies, conceptualize the relationship between humanity and the natural world. We will

evaluate the merits and shortcomings of a variety of approaches to environmental politics, including survivalism, sustainable development, deep ecology, ecofeminism and the environmental justice movement. The course does not satisfy the department's major requirement in political theory. Prerequisite: Government 206 or permission of instructor. Prerequisite: Environmental Studies 101. *Also offered as Government 343.*

346. American Literature and the Environment.

This course explores the relationship between American culture and the natural environment through the lens of literary expression. We will study the evolution of environmental aesthetics from the colonial period through the Romantic era and into the twentieth century. Students will draw upon the insights of environmental history and apply them to literary analysis. The course will generally take shape around a particular theme (e.g., the history of frontier settlement, the politics of wilderness preservation, Adirondack literature, Arctic/ Antarctic exploration, animal studies, environmental justice movements, or the desert/ocean aesthetic). Prerequisite: English 250. Meets the EL requirement. *Also offered as English 346.*

351. Internships in Environmental Studies.

Student-arranged study with an environmental organization. The internship comprises three parts: contact with daily operations; intensive work on one particular project; and extensive reading in appropriate areas. May be elected only after submission of a written proposal during the prior semester and approval by core faculty of environmental studies. A letter of support must be received from the sponsoring organization. Prerequisites: Environmental Studies 101 and permission of instructor.

352. Contemporary Literature and the Environment.

A study of the contemporary literary response to rising national interest in the natural world and rising awareness about the danger to natural resources. Readings are predominantly in prose (novels and essays), with some poetry included. Among the questions the authors ask: as we approach the natural world, how can we move beyond metaphors of dominion? What are the biases of gender, geography and culture that we bring to our inquiry? What is the relationship between the human and the "natural"? What does it mean to fully invest ourselves in our local environment? Prerequisite: Environmental Studies 101. *Also offered as English 352 and through Outdoor Studies.*

361. Research Seminar in Environmental Studies.

Faculty-directed research designed for small groups of advanced students. The focus is often on environmental problems of northern New York. Topics are usually defined in response to needs identified by local communities. The course draws together the expertise of students from different majors. Basic concepts and methodologies of field research are applied in practice. Prerequisites: Environmental Studies 101 and permission of instructor.

369. Ecological Restoration. (ESP)

This course examines how the principles and techniques of restoration ecology are used in planning and implementing projects in degraded landscapes. An introduction to restoration ecology, conservation of biological diversity, ecological integrity, and sustainable land-use are major themes. Students learn field and analytical techniques pertaining to ecosystem management. Comparisons of restoration frameworks through case study analysis illustrate modeling and analytical techniques for the restoration field. A major course project gives experience in restoration planning and implementation. Where possible, guest lectures by professionals or stakeholders augment student experience. Prerequisite: Environmental Studies 101.

370. Global Amphibian Decline. (ESP)

An introductory theoretical case-based and practical field studies course examining a global perspective on the ecology and conservation of amphibians. Lecture topics include: key aspects of amphibian ecology; habitat destruction, environmental contamination, introduced species, infectious diseases, over-exploitation, and climate change. Approximately 6 hours of night-time field studies are dedicated to learning amphibian survey techniques and collecting geospatial movement data to investigate regional threats to local amphibian species. Pre-requisite: Environmental Studies 101.

371. Landscape Ecology. (*with lab*) (ESP)

The course provides theoretical principles of landscape ecology linked with planning and the design of landscapes and the restoration of degraded environments. Lecture explores the ecological processes inherent to landscape ecology. Students will develop spatial assessment skills through the use of GIS in the lab and field. Characterization of landscape patterns and dynamics for detecting or simulating landscape change (i.e. fragmentation) and consequences for species and populations will be the basis of student projects. Pre-requisite: Environmental Studies 101.

376. Ecosystem-based Environmental Management. (ESP)

Over the past four decades, the management of environmental problems has undergone significant shifts in philosophy and practice. Once, addressing environmental problems was considered the province of technical experts applying scientific knowledge, current practice seeks to involve community members and stakeholders in an adaptive process that seeks to achieve ecological and social goals. This course will examine the theory and practice of adaptive and collaborative management frameworks for addressing environmental problems related to conservation and ecological restoration. It will examine the role of science in environmental decision making and explore integrated perspectives linking rural communities and forest landscapes. Prerequisite: Environmental Studies 101.

377. Sociology of Consumption.

In this seminar, we explore consumption along a wide range of material dimensions. The sociology of consumption is concerned with the relationships of (a) the social to the natural and (b) the social to the social and (c) their consequences, such as social disruption and environmental destruction; “things” are fetishized and humans are commodified. The sociology of consumption helps us to understand this in the context of both the capitalist world economy and cultural expressions from early modernity to post-modernity. Prerequisite: Environmental Studies 101. *Also offered as Sociology 377 and through Peace Studies.*

379. Renewable Energy Systems. (ESP)

Renewable energy technologies can play a key role in slowing global climate change by reducing greenhouse gas emissions as countries transition away from fossil fuels. The goal of this course is for students to have an in-depth understanding about how renewable energy technologies blend into the greater energy infrastructure of the U.S. and world. In addition to reading about the various renewable energy options, significant class time is dedicated to field trips, labs, or other hands-on learning activities. In general, this class will cover the following areas within renewable energy: solar power, wind power, bioenergy, hydropower, and efficiency. The class is designed for students that have no prior knowledge of renewable energy. Prerequisite: Prerequisite: Environmental Studies 101 or permission of instructor.

380. Tropical Ecology.

A seminar course based on current research in tropical biology. Emphasis is on the structure, function and biology of tropical organisms and ecosystems. Lectures include South American, Australasian and African tropical ecosystems. The course addresses the role of plant-animal interactions, mutualisms, sustainable development, conservation measures and the roles of indigenous cultures in tropical ecosystems. Prerequisites: Environmental Studies 101 and 221. *Also offered as Biology 380.*

4000-4999. Special Topics.

The content of each course or section of these 300-level special topics courses varies and will be announced each semester.

European Studies

Minor offered

Advisory Board: Professors Limouze (art and art history), Llorente (modern languages and literatures); **Associate Professors** Breashears (English), Buck (government), Denaci (art and art history), DeGroat (history), Gabriel (coordinator; history), Jenkins (economics), Salvi (modern languages and literatures).

Visit the European studies webpage by linking directly to it from the Majors and Programs page at www.stlawu.edu/european-studies.

European studies integrates course work from several fields into an interdisciplinary program of study. The minor allows students to engage in a critical examination of European society, including cultural, economic, and political issues of historical and contemporary interest as well as a definition of Europe and “European-ness” that transcends geo-political borders. Thus, the aims of the program are twofold:

1. **To provide students with a multidisciplinary approach to the study of Europe.** Through the elective component, students have the opportunity to craft a unique approach that allows maximum agency and flexibility to design a course of study that is their own. These elective courses are drawn from both on and off-campus study. The language requirement, though modest, provides students the opportunity to understand and articulate through the voices of the Other and, however briefly, experience the world differently.
2. **To encourage students to interrogate the idea of “Europe.”** The Senior-Year Experience (SYE) component of the minor

is designed as a major independent research project that asks students to draw on experiences across the curriculum and to reflect critically and integrate their knowledge and experiences. It is through the SYE that all students, regardless of their elective choices, engage a critical perspective on European identity.

The program offers a context for those who wish to understand the relationship of Europe to the rest of the world. Many fields, from education and the arts to government, business, and scientific research, have increasing interactions with European communities. Because of this, and because of the wide range of course and research options offered, the minor in European studies provides an opportunity to create an individualized course of study and contributes to preparation for a career in a variety of fields.

Study Abroad

Participation in study programs in Austria, the Czech Republic, Denmark, England, France, Italy, and Spain, as well as through ISEP (the International Student Exchange Program), provides an excellent opportunity to design a minor that combines on-campus courses with classes taken abroad, research projects undertaken abroad, and immersion in a European culture. Many of the courses offered on these international programs can be applied to the minor as electives. Research in Europe can form the basis of the capstone independent-study requirement. Students should consult with the coordinator about a European studies minor that incorporates study abroad; see also the International and Intercultural Studies chapter in this *Catalog*.

Global Studies

Students interested in pursuing a global studies major may include courses cross-listed with European studies to meet one of the area studies requirements.

Minor Requirements

I. Introduction to European Studies.

There are two options to meet this requirement:

1. Students who do not study on a European program must take History 109 (Introduction to European Studies),

205 (Nineteenth-century Europe), or 206 (Twentieth-century Europe).

2. Students who study on a European program may waive this requirement.

II. Elective Courses.

A minimum of four units of credit. Any course cross-listed with the program meets this requirement. Many courses taught on St. Lawrence's European study programs are included. Consult the program website or the coordinator for a current list of these courses. To ensure breadth, students may count no more than two courses from a single department or program for the minor. Frequently, special topics courses offered in various departments may count as program electives. Students should consult the coordinator about the appropriateness of courses not listed in the current *Catalog*.

III. Language Study.

Students (except native speakers of a European language other than English) must have at least one semester of European language study other than English. *This requirement may be filled in several ways, including but not limited to:*

1. Completion of a one-semester language course at the appropriate level offered at St. Lawrence or another college or university.
2. Completion of a language course on a continental study abroad program.

IV. Capstone.

The European studies capstone is a one-semester independent study project that students develop with a faculty supervisor of their choice. The proposal must be submitted to the European studies coordinator for approval during the registration advising period of the semester before the project is undertaken. Students will initially be registered for the project with the European studies coordinator, and then reassigned to their project advisors by the registrar. The capstone course is normally undertaken in the senior year as EUR 489,490, a Senior-Year Experience. Students who wish to complete the capstone requirement before the senior year may take the course as EUR 485.

The capstone course proposal must include the

following:

- a. A rationale for the way in which this project demonstrates the interdisciplinary nature of the minor. This is required even in the case of a creative project.
- b. The ways in which the project enhances critical thinking, research skills and communication skills.
- c. A preliminary literature review that informs the project. This must include the theoretical framework that guides the project.
- d. The ways in which the project is a reflection of the unique academic and experiential journey of the student.

The program coordinator is the advisor for the students in the minor. Questions about the minor should be directed to the coordinator.

Departmental Offerings

Art and Art History

117. Survey of Art History, Part II.
202. Art of the Italian Renaissance.
203. Art of the Northern Renaissance.
204. Baroque and Rococo Art.
206. Art of the Middle Ages.
207. Nineteenth Century European Art.
252. History of Modern European Art.

Economics

322. International Economics.
330. History of Economic Thought.

English

- 225, 226. Survey of English Literature.
 228. Irish Literature.
 317. Early Modern English Poetry.
 - 319, 320. Shakespeare.*
 324. Elizabethan and Jacobean Drama.*
 325. Eighteenth-Century English Literature.
 328. English Romanticism.
 339. The Eighteenth-Century Novel.
 340. The Victorian Novel.
 353. Time and Self in Modern British Fiction.
 355. Contemporary British Novel.
- *Dual-listed with Performance and Communication Arts.*

Government

206. Introduction to Political Theory.*
 330. Politics and Governments of Western Europe.
 347. Marxist and Critical Theory.
- *Dual-listed with Philosophy.*

History

109. Introduction to European Studies.
110. The Scientific Revolution.*

205. Nineteenth-Century Europe.
 206. Twentieth-Century Europe.
 211. Women in Modern Europe, 1750 to the Present.
 254. History of Modern France, 1815 to the Present.
 267. The Holocaust.**
 308. European Imperialisms.
 311. Nineteenth- and Twentieth-Century Science.*
 371. Eighteenth-Century Europe and the French Revolution.
 372. European Identities, 1700-2000.
 - 471-472. SYE: Seminars in European History.
- *Dual-listed with Physics; **dual-listed with Religious Studies.*

Modern Languages and Literatures

French

201. Advanced French.
 202. Advanced French: Contemporary France.
 227. Current French Writing and Culture.
 235. Paris.
 263. School Days.
 403. Modern Prose Fiction in France.
 404. French Film.*
 413. The Theater of the Classical Age.
 - 425, 426. Seminar.
 428. French Women Writers.
- *Also offered through Film and Representation Studies.*

German

104. Intermediate German.
247. Special Topics.

Spanish

213. Introduction to the Cultures of Spain.
423. Introduction to Spanish Literature.
439. Literature, Film and Popular Culture in Contemporary Spain.*

**Also offered through Film and Representation Studies.*

Music

023. Early Music Singers.
234. Music in Venice.
245. Musics of Eastern Europe.
330. "Isn't It Romantic?" Songs for Theatre, Songs for Salon.
333. Mozart and the Classical Tradition.
335. The World of Clara and Robert Schumann.

Performance and Communication Arts

- 319, 320. Shakespeare.*
 324. Elizabethan and Jacobean Drama.*
 338. Twentieth-Century Avant-Garde.*
- *Dual-listed with English.*

Philosophy

201. Ancient Philosophy
206. Introduction to Political Theory.*
208. Modern Philosophy.
301. Philosophy of Science.
327. Existential Philosophy.

**Dual-listed with Government.*

Physics

110. The Scientific Revolution.*
 311. Nineteenth- and Twentieth-Century Science.*

**Dual-listed with History.*

Religious Studies

206. Introduction to the New Testament.
 227. Religion in Ancient Greece and Rome.
 231. Christian Religious Traditions.
 267. The Holocaust.*
 272. The Crusades.

**Dual-listed with History.*

Sociology

203. Foundations of Social Theory.
 307. The Sociology of Karl Marx.
(Community-Based Learning Component)

**Also offered through Global Studies.*

Students uncertain about the appropriateness of courses not listed above should contact the coordinator.

Courses

485. Independent Project.

For students who wish to complete the capstone requirement before the senior year, this requires a major independent research project that draws on experiences across the curriculum and allows students to reflect on and integrate those experiences. If students have studied abroad, they are encouraged to use that experience as context for their research.

489, 490. SYE: Independent Project.

The senior project is a major independent research project that draws on experiences across the curriculum and allows students to reflect on and integrate those experiences. If students have studied abroad, they are encouraged to use that experience as context for their research.

Film and Representation Studies

Minor offered

Professors Papson (film and representation studies), Caldwell (modern languages and literatures, French), Sondergard (English);

Associate Professors Henderson (music), Jenseth (film and representation studies, coordinator);

Assistant Professor Henkel (modern languages and literatures, German).

Visit the program's webpage at www.stlawu.edu/film-and-representation-studies.

Film and representation studies is an interdisciplinary program designed to introduce

students to the techniques of film analysis and the history and theory of the cinema, as well as to critically approach the nature of "representation" in audio-visual texts such as television programming, advertising, music video, news and others.

Program goals are to offer students courses that support a critical engagement with audio-visual media. Among the proficiencies film and representational studies courses seek to develop are:

- An ability to critically deconstruct, analyze and interpret visual, audio-visual and Web-based texts. These include cinema, television, Web pages and other emergent media, advertising, news, music videos, multi-media, and other fictional, non-fictional and hybrid categories.
- An understanding of the politics of cultural representation around the categories of race, class, ethnicity, gender, age, religion, nationality and cultural heritage.
- A working understanding of theoretical perspectives that can be brought to bear on cinema and other forms of representations, including humanistic, feminist, Marxist, postcolonial, structural and poststructural, psychoanalytic, semiotic and audience reception.
- A knowledge of cinema that begets appreciation.

Courses are offered within the program as well as in related departments. These courses provide the opportunity to view and study some of the most important and most discussed cultural texts of the 20th century.

Minor Requirements

Students pursuing the minor are required to take six courses:

211. Introduction to Film Studies *or*

251. History of the Cinema. *or*

271. World Cinema *and*

Five electives in Film and Representation Studies.

Courses

211. Introduction to Film Studies.

This is the first course in a sequence that examines the structures, techniques, history and theory of film. Questions of history and theory are treated only in passing; the prime focus is on learning to identify, analyze and articulate what we see when we watch a film. The course studies the terminology used to describe film techniques and applies this terminology to the films viewed. The goal is to pass from close analysis of film technique and film construction to interpretation. Students

learn not only how a film is constructed, but also how the techniques employed contribute to its values and meaning.

222. Documentary Filmmaking.

Students study style and technique in the documentary film, and make a short documentary film. In looking at documentary films, the course discusses questions of truth and value as they come into play for filmmakers and filmgoers. In making documentary films, we consider how to collect and represent different truths and values.

234. Chinese Literature and Film.

This course provides an overview of Chinese literature and film. The first half surveys traditional Chinese literature with a focus on masterpieces in the golden ages of various genres. The second half introduces modern Chinese literature with a focus on film, including representative works by well-known writers Lu Xun and Ba Jin, and famous film directors such as Zhang Yimou, Chen Kaige, Wang Xiaoshuai and others. The aim is to enhance students' interests and skills in reading and analysis of Chinese literature and film, and improve students' understanding of the history, society and culture of China. All works are read in English translation. *Also offered as LTNT 234.*

236. Buddhism and Daoism through Literature and Film.

This course examines the essence of Buddhism and Taoism by exploring the rich, colorful, and fascinating religious world in Asian literature and film. Topics include Taoist fairytales, dream adventure, traveling in the netherworld, longevity practice, salvation, retribution, chan/zen, magical arts, as well as religious ideas in film and their relationship with modern society. By taking this course, students will acquire a fundamental knowledge about Buddhism, one of the three major religions in the world, and Taoism, the wide-spreading Chinese philosophy and religion; savor wisdom and mysticism in the east, which are included mainly in the Taoist classics, Chan/Zen Buddhism, and literary works; enjoy the best literary works and films in Asia; acquire useful knowledge about scholarly works; and develop skills of critical thinking and scholarly research. *Also offered through Asian Studies.*

239. Media Industries.

This course surveys the historical development of traditional media industries such as newspapers, magazines, books, television, radio, film, music recording and video games, as well as the issues related to the emergence of digital technologies epitomized by the Internet. It likewise focuses on the historical evolution of two other closely related fields—advertisement and public relations. *Also offered as Performance and Communication Arts 239.*

244. Techniques of Screenwriting.

An introductory study of basic technical problems and formal concepts of screenwriting. The study of produced screenplays and formal film technique, along with writing scene exercises, builds toward construction of a short (50-minute) script. *Also offered as English 244 and Performance and Communication Arts 244.*

251. History of the Cinema.

This course examines the development of film technology and film technique from the 19th century to 1960, and the place of the new medium in the evolving cultural-social contexts of the 20th century. Subjects include early experiments in photography; the beginnings of narrative cinema; special effects; new camera dynamics; the development of cinema stars; theories of editing and montage; the introduction of sound; film aesthetics; deep focus photography and realism; and color photography. The course studies films by Lumière, Méliès, Eisenstein,

Chaplin, Lang, Renoir, Rossellini, Welles, Truffaut and others. Movements and genres studied include German Expressionism, poetic realism, forms of comedy, film noir, Italian neo-realism and French New Wave.

255. Popular Culture.

This course introduces students to key themes in the study of popular media and to debates about the role of media in contemporary societies. It also introduces methodologies used to study culture and asks students to apply them to case studies from music, sports, comics, fashion, television, cyberculture, film or advertising. Emphasis is on various cultural expressions of ethnic subcultures in the United States and their complex negotiations with the dominant culture and their co-resisters in a global/local struggle over meaning. *Also offered as Global Studies 255.*

263. Australian Cinema.

Using Australian films as the primary texts, this course explores how Australian national identity is constructed. We look at what constitutes a national cinema (independent, government-sponsored and Aussiewood), then focus on three variables that heavily determine both the shape of Australian cinema and national identity: the power of nature, the relationship of aboriginal peoples to non-indigenous peoples, and the role of class and gender construction. Topics include white masculinity as it is constructed in relation to both nature and war; feminine(ist) themes; ethnicity and immigration; revising history and national identity to include Aboriginal peoples; and the emergence of a global postmodern cinema. *Also offered as Global Studies 263.*

269. Digital Media and Culture I.

A combination studio/seminar that explores the major theoretical issues surrounding the continually evolving culture of digital technology and the effects on various aspects of contemporary life including: aesthetics and perception, creative production, morality, contemporary art discourse, visual culture, entertainment, identity and other forms of social effects/affects. Studio projects will investigate the creative potentials of social media software, digital painting, photography, and video. Projects will respond conceptually to theoretical issues that are being discussed in class. An emphasis on individual voice, creativity, and methods of idea development will be encouraged throughout the term. Brainstorming and critique are common, and will follow the Harkness Method of student-centered discussion and inquiry to help students learn to think critically, listen analytically, and interact respectfully. *Also offered as Art and Art History 269.*

270. Dreams, Desire and Madness in Film and Literature.

Literary representations of the alienated mind interrogate the relationship between social definitions of normality and seeing otherwise, whether that is manifested as vision, rebellion, disease or fantasy. Seeing otherwise is often thought of as a symptom (e.g., mental illness), but it can also be symptomatic—a reaction to a cultural condition that is repressive, oppressive or quite literally maddening. To deal with the unsustainable societal demands, we often repress our desires, but this does not make them disappear—instead they make themselves felt through expressions of the unconscious in our dreams, fantasies, slips of the tongue and somatic symptoms. Art and artistic expression have often represented or explored such mechanisms. In this course we will read fiction and analyze films that represent the encoded and diseased ways that repressed desires express themselves through madness and hysteria, and connect the personal (experience, dreams and affect) with the materials we are reading and watching over the

course of the semester. *Also offered as Gender Studies 270.*

271. World Cinema.

This course complements Film 251 by exploring the history of film outside Western Europe and the United States. Films for each semester are typically selected from four or five regions: recent regional emphases have included East Asia, South Asia, the Middle East, Eastern Europe, West Africa and Latin America. Along with developing skills in analyzing film, students read about the history of film in different countries, consider the ways directors fit into both local and global histories of cinema, and explore the social terrain upon which filmmakers work.

281. Music Video.

Music television created new ways of visualizing music, new ways of seeing sound. This course looks at the rise of music video in the 1980s, its predecessors and its influences. While we focus primarily on the history and criticism of music video, the course also contains a substantial production component that includes creating and editing sound and video files. Offered occasionally. *Also offered as Music 281.*

302. Theories of Global Cultural Studies.

An introduction to the growing field of cultural studies through examination of its major theoretical paradigms, particularly as these bear on the question of unequal global power relations. These may include Marxism, critical theory, post-structuralism, feminist theory and emerging work in postmodernism and post-colonial studies. Students explore strategies for “reading” cultural practices and texts not simply as reflections of reality, but as political interventions, expressions of desire, attempts to persuade and producers of power. Through a combination of theoretical criticism and analysis of specific materials, students prepare to undertake independent research with an informed understanding of how cultural studies challenge and enrich traditional social science and humanities approaches. Prerequisite: Global Studies 101 or 102. Also may be counted toward the minors in Native American Studies and Peace Studies. *Also offered as Global Studies 302.*

306. AW: Advanced Screenwriting Workshop.

An extension and intensification of English 244. Students are expected to work independently on the preparation of two feature-length screenplays. Workshop format emphasizes the revision and editing process. Prerequisite: English 244. *Also offered as Performance and Communication Arts 306 and English 306.*

310. Culture & Media.

Print or electronic mediating technologies have accompanied humans for more than five centuries and at some point people started questioning the extent to which they influenced, or as we will learn to say, co-constructed our everyday reality. This class surveys some of the important intellectual contributions to this inquiry – media theories and seminal studies. At the same time, it follows some of the most significant contemporary debates that reflect the symbiotic relationship between the media and our own culture. *Also offered through Performance and Communication Arts.*

311. Film Theory.

This seminar offers a survey of film theory: its history, its important concepts and figures and its key theoretical movements. We begin with “classical” film theory, including auteur theory, realism, genre theory and political criticism. Much of the course, however, is given to contemporary film theory: semiotics, Marxism, psychoanalysis, feminism/masculinity studies, African-American film studies, postmodernism, postcolonial and global studies. To ground all this theory, we view, discuss and write about an eclectic collection of films.

Prerequisite: Film 211 or Film 251.

340. Blogging the Globe: News Analysis and Investigative Journalism.

This course fosters the tools necessary to be critical readers and viewers of the news in a complex, globalized media environment while also giving students the opportunity to become investigative journalists themselves. In addition to examining patterns in how global events are covered in mainstream and independent/alternative media outlets in the U.S. and elsewhere, the course explores deeper structural issues concerning discourse, ideology and the representation of “other” cultures; the relationship between media, corporate and state power; and the role of institutions in defining the bounds of “legitimate” knowledge. Students in the course contribute to The Weave, an online public Intellectual project, by researching and blogging about underreported stories. Prerequisite: Global Studies 101 or 102. *Also offered as Global Studies 340 and Performance and Communication Arts 312.*

369. Digital Media and Culture II.

A continuation of Digital Media and Culture I. New and more complex software will be introduced. Students will be expected to spend time developing innovative and complex ideas and forms and advancing their vision(s) via digital media processes. This is a combination studio/seminar course and includes videos, readings and reflections, and written analyses. New visions of authorship will be encouraged as will continual encouragement to consider how one’s work could function in a socially transformative way. Brainstorming and critique are common, and will follow the Harkness Method of student-centered discussion and inquiry to help students learn to think critically, listen analytically, and interact respectfully. Depending upon student interest and experience, this course may be offered in conjunction with AAH 269 by instructor permission only. Prerequisites: AAH 131, 269. *Also offered as Art and Art History 369.*

404. French Film.

This course combines an historical view of the French cinema, an introduction to the techniques of film analysis and an examination of the major issues in film theory. Topics include the pioneers of cinema, the “classical” films of the 1930s and ’40s, the films of the “nouvelle vague” in the ’50s and ’60s and recent trends in film production. The work of filmmakers such as Renoir, Clouzot, Truffaut, Beineix, Godard and Resnais is studied. *Also offered through Film and Representation Studies and European Studies and as French 404.*

439. Literature, Film and Popular Culture in Contemporary Spain.

After the Franco regime (1939-1975), Spaniards began to explore and question cultural, historical and sexual identity. This course examines post-totalitarian Spanish literature, arts and popular culture made possible by the political transition to democracy. The aim is to use the theoretical framework of cultural studies as a means of understanding contemporary Spanish culture. Materials analyzed include films, television programs and commercials, novels, short stories, magazines and popular songs. *Also offered as Spanish 439.*

Gender and Sexuality Studies

Minor offered

Professors Egan (coordinator), Lehr

(government); **Associate Professor** DeGroat (history); **Visiting Instructor** Zhaf; **Lecturer** MacGregor. **Advisory Board:** **Professor** Stoddard (global studies); **Associate Professors** Bass (English), Llorente (modern languages), Denaci (fine arts).

Visit the gender and sexuality studies webpage by linking directly to it from the Majors and Programs page at www.stlawu.edu/gender-and-sexuality-studies.

Masculinity and femininity vary as a result of cultural, historical, political and institutional forces. The gender and sexuality studies program helps students understand the multiple ways gender and gender relations are socially constructed, and how these understandings of gender in turn shape political institutions, law, the economy, education, work, art, music, literature, religion, sexuality and the family. As an interdisciplinary program that encourages students to explore gender from multiple perspectives, gender and sexuality studies can help students broaden their understanding of other disciplines while facilitating recognition of gender dynamics in students' lives. Each course is designed to do the following:

1. Acquaint students with the scholarly analysis of gender and gender relations.
2. Promote an understanding of the social construction of gender in society.
3. Help students become aware of the impact of gender in their own lives and in society.
4. Enable students to analyze gender relationships through the use of feminist theories and methodologies.
5. Encourage reassessment of the gendered social distribution of power.
6. Recognize how gender inequality is related to other social hierarchies such as race, ethnicity, class and sexuality.
7. Foster a classroom climate that encourages student participation and helps students to develop the tools with which to connect the content of the course to their own lives.

Minor Requirements

The minor in gender and sexuality studies consists of six courses.

Core Courses

1. **Students are required to take at least one of the following courses:** GNDR 103 (Gender and Society) **or** GNDR 201 (Gender in a Global Perspective) **or** GNDR 280 (Sexuality, Society and Culture)
2. **As well as:**
GNDR 290 (Gender and Feminist Theory)
3. **And a methods course or an additional upper-division theory course:**
GNDR 326 (Gender Research and Embodied Research) **or** GNDR 301 (Masculinities) **or** GNDR 367 (Feminist Post-Colonial Theory) **or** GNDR 334 (Feminist Philosophy) **or** GNDR 369 (Making Sexualities).
4. **In addition, students must engage in two praxis projects wherein they use what they have learned in the minor to foster social change:**

One project can be met on campus through a course, but the other must be met off campus.

A. On Campus Options

Courses that will meet the on-campus requirement are: GNDR 280 (Sexuality, Society and Culture) or GNDR 335 (Sex Talk) or GNDR 352 (Transnational Feminist Activism).

Students may also petition to have a Community-Based Learning course count: work in the community must focus on issues of gender and sexuality.

Students can also meet this requirement with activist work on campus by organizing or co-organizing at least three events for any of the following theme houses and community groups: the Women's Resource Center, Pink Triangle House, La Casa Latina or the Black Women's Resource Center, or for the Advocates Program. Students who choose to meet the requirement through direct action must include a two-page typed statement chronicling their work on campus and how it speaks to the minor.

B. Off Campus Options

Research fellowships, internships or externships, off-campus study, community-based learning or community organizing. Students must include a one-page typed statement chronicling their experience and how it speaks to the minor.

5. Electives:

In addition, minors must take two gender and sexuality studies or cross-listed electives, at least one of which should be at the 300 or 400 level (these courses may also count toward the praxis requirement if they meet the criteria listed above).

No more than one of these elective courses may be taken in any single department other than gender and sexuality studies.

**Elective courses are approved for cross-listing by the gender and sexuality studies advisory board, and are listed in the Class Schedule with both gender and sexuality studies and the relevant department or program (i.e., anthropology, art and art history, Canadian studies, English, global studies, government, history, modern languages and literatures, performance and communication arts, philosophy, psychology, religious studies and sociology).*

Special Events and Activities

The program regularly sponsors or co-sponsors speakers and performers on campus; we encourage students to learn about gender through these events. Each spring the program also awards the Don Makosky Award, named after one of the founding faculty members of the program, to a senior student who has worked to transform the campus in relation to gender and sexuality issues.

Courses

Because gender and sexuality studies is interdisciplinary, many of its courses are taught in several academic departments. These courses are approved by the advisory board and are listed in the *Class Schedule* with both gender and sexuality studies and the relevant department(s). Since approximately 15 departmental courses count toward the minor, students are advised to consult each semester's *Class Schedule* and secure the listing of gender and sexuality studies cross-listed elective courses from the program coordinator for complete course descriptions.

103. Gender and Society.

This interdisciplinary course examines how being male or female is translated into the social relationships of gender. It explores the ways gender roles, identities and institutions are constructed in relation to

race, ethnicity, class and sexuality.

201. Gender in Global Perspective.

Gender constructs cultural, political and socio-economic relations across class and racial lines in the Western world and throughout the rest of the world, although the concepts and structures that define gender roles can and do differ significantly. This course examines the global constructions of gender through examples chosen from indigenous and diasporic communities in Asia, Africa and the Americas; discusses the variable impacts that these constructions have had particularly on women's lives; and introduces theories of transnational feminism. *Also offered through Global Studies and Peace Studies.*

270. Dreams, Desire and Madness in Film and Literature.

Literary representations of the alienated mind interrogate the relationship between social definitions of normality and seeing otherwise, whether that is manifested as vision, rebellion, disease or fantasy. Seeing otherwise is often thought of as a symptom (e.g., mental illness), but it can also be symptomatic—a reaction to a cultural condition that is repressive, oppressive or quite literally maddening. To deal with the unsustainable societal demands, we often repress our desires, but this does not make them disappear—instead they make themselves felt through expressions of the unconscious in our dreams, fantasies, slips of the tongue and somatic symptoms. Art and artistic expression have often represented or explored such mechanisms. In this course we will read fiction and analyze films that represent the encoded and diseased ways that repressed desires express themselves through madness and hysteria, and connect the personal (experience, dreams and affect) with the materials we are reading and watching over the course of the semester. *Also offered through English and Film and Representation Studies.*

272. Coming-Out Stories: African-American Lesbians Speak.

Among the many questions this course addresses: Are identity politics in contemporary North American culture passé, boring and irrelevant? How do African-American lesbians choose the oppression to which they hold allegiance? How does the critical literature help us better engage the autobiographical pieces that lesbians write? How do lesbians negotiate the rugged terrain of feminism? The purpose is not simply to compare and consider the profundity (and often trauma) of the experience of "coming out" for Black women, but also to define terms we think we understand or know. We also look at social mores and taboos often shaped and molded by the Black church. *Also offered through African-American Studies.*

280. Sexuality, Society and Culture.

An exploration of the cultural facets of our sexuality and how we come to understand sexuality in our everyday lives. Are sexual feelings biological, or do they emerge from particular historical and social formations? How does sexuality come to operate as something that is just natural? What does love have to do with it? How has the concept of sexuality shifted from sex acts to sexual identities? How is sexuality linked to race, class and gender? How is sexuality linked to the political? The answers to these questions provide a broad understanding of gender and sexuality studies. We rigorously examine the concept of sexuality through theoretical, empirical and creative frameworks.

290. Gender and Feminist Theory.

This course examines theoretical explanations of gender, gender

difference and gender inequality in society. The course includes introductions to some of the questions that shape contemporary feminist theory, feminist writings in multiple disciplines and feminist movements inside and outside the academy. The course focuses on how an awareness of intersections of race, class, sexuality, gender and ethnicity is vital for disciplinary and interdisciplinary study in feminist theory. Theoretical works are drawn from the humanities, arts and literature and the social sciences. Prerequisite: Gender Studies 103. *Also offered as Philosophy 290.*

301. Studies in Masculinities.

This course calls on students to investigate their own lives in relation to historically and locally dominant prescriptions of what men and women “should” be. Combining readings of “great books” with a wide range of material from the burgeoning field of critical studies of masculinity, the course also includes a field research methods component that enables students to design and carry out creative research projects into the local gender systems in which they attempt to forge their own identities. *Also offered through African-American Studies.*

315. Gender and Science.

This course concerns the relationships between gender issues and science. Many questions can be asked about gender and science: questions regarding the social context of science with respect to gender issues; questions regarding the historical development of science and how the changing roles of women in society have affected science; and questions regarding the epistemological and ethical implications of these changing relationships. If there has been gender bias in scientific practice, how has this affected the content of scientific knowledge? And are there important ethical problems resulting from this bias? Prerequisite: Philosophy 100, 103, 202, or Gender Studies 103, or permission of instructor.

334. Feminist Philosophy.

An introduction to some of the questions that shape feminist philosophy today. What connections are there between feminist philosophy and feminist writing in other disciplines and feminist movements inside and outside the academy? Does feminist philosophy transform traditional philosophical discourse and the academy? The course focuses on how an awareness of intersections of race, class, sexuality, gender and ethnicity is vital for disciplinary and interdisciplinary study in feminist philosophy. *Also offered as Philosophy 334.*

335. Sex Talk.

For a description, contact the program coordinator.

352. Transnational Feminist Activism.

This course examines social, economic, political and cultural projects throughout the world organized by women to address the concerns of women. We investigate specific groups that identify themselves as feminist as well as the various feminisms that define them. Equally important are those groups that reject or challenge the label of feminism as a Western and therefore imperialist or neo-imperialist ideology and present alternatives for women's collective action. Finally, we explore the possibilities and practices of transnational or women's global activism by participating in a community-based learning project with a local organization engaged in feminist activism.

367. Feminist Post-Colonial Theory.

Postcolonial theory addresses issues of identity, culture, literature and history arising from the social context of colonization, resistance to

colonization, liberation from colonization and the formation of new nations. It crosses the boundaries of the social sciences and humanities in its approach to theory and analysis of the discourses used to constitute colonial and postcolonial subjects. We begin with some classic texts of postcolonial theory before moving to a focus on specifically feminist debates and texts within postcolonial studies. Literature and film are used in dialog with theoretical texts to examine questions about gender and women's issues in various societies. *Also offered as Global Studies 367, English 367 and Philosophy 367.*

369. Making Sexualities.

Sexuality culturally operates as a central trope by which we come to “know” ourselves as sexed people (that is, female or male) and how we come to understand our desire. In this course we unpack sexuality from a cultural and gendered perspective — we discuss how we have come to know sexuality culturally, materially and in our everyday lives. In doing so, we explore topics such as the invention of modern notions of sexualities, queer identity, love, pornography and sex work through reading, writing, artistic expression and research. This course is reading and writing-intensive.

479,480. SYE: Internships.

Students are required to spend eight hours per week in an internship at an agency that deals with gender-related issues and problems, such as sexual identity, domestic violence, sexual assault, the feminization of poverty, and conceptions of masculinity and femininity among students. Students reflect on their experiences in a journal that applies gender studies concepts to the experiences, attend bi-monthly service learning workshops with other campus interns, and prepare a research paper related to issues relevant to the internship. Prerequisite: Gender Studies 103 and permission of the instructor.

489,490. SYE: Independent Study.

Individual study of a topic, which must be approved by the gender and sexuality studies advisory board in the semester prior to be undertaken. Independent study may be used to satisfy the sixth course research requirement. Prerequisite: Gender Studies 103 and permission of the instructor.

Geology

Major and minor offered

Professors Chiarenzelli, Erickson (emeritus);
Associate Professors Bursnall (emeritus),
 Husinec (chair), Shrady, Stewart; **Assistant
 Professor** Nagel-Myers; **Visiting Professor**
 Toraman.

Visit the geology department webpage at
www.stlawu.edu/geology.

Geology is the study of the Earth and its 4.6-billion-year history. As such, it unites and enhances the utility of the other natural sciences (biology, chemistry, physics) in our quest to understand life, the planet and the universe. Only through the systematic geological study of our planet can we hope to understand and predict the major

events that influence our lives, including climate change, nutrient availability, rapid extinctions, seismicity and volcanism. Geology also guides the unending quest for natural resources including ores, fossil fuels, energy and water, and constrains the distribution, fate and remediation of natural and man-made contaminants. Our program prepares its graduates for graduate school, careers in academia, research, teaching and consulting, and, as informed citizens, capable of critically analyzing scientific issues and related policies.

Advising

Each faculty member recognizes the need for close consultation about course scheduling, choice of advanced course options and curricula in allied disciplines, and each accepts responsibility for advising geology students. It is the responsibility of each student majoring in geology to make certain he or she meets regularly with the advisor. In cases where geology is part of a student's interdisciplinary major, or off-campus study is anticipated, thorough discussion with a geology advisor is especially important.

Major Requirements

Core Courses

Students entering the geology major take the following courses to meet minimum department requirements for graduation with the Bachelor of Science degree in geology:

- 103. The Dynamic Earth. **or**
- 110. Environmental Geology. **and**
- 115. Oceanography.
- 104. The Evolving Earth.
- 203. Mineralogy.
- 206. Invertebrate Paleontology.
- 211. Geomorphology.
- 216. Sedimentology. **or**
- 316. Carbonate Sedimentology. **and**
- 320. Regional Field Studies: Geology of the Caribbean.
- 302. Igneous and Metamorphic Petrology.
- 350. Structural Geology.
- Elective (1) at the 200 or 300 level

None of these required core courses will be accepted toward the major if taken pass/fail. Certain courses are designated as Major Credit

Restricted (MCR). Only one such course can count toward the geology, geology-physics or environmental studies–geology combined major as an elective. Normally, 200-level courses are appropriate for sophomores, 300-level for juniors and 400-level for seniors.

Students should consult the course descriptions in this *Catalog* for information on prerequisites and sequencing of both required and advanced courses.

Combined Major in Environmental Studies–Geology

Students with an interest in combining the integrative approaches of environmental studies with the focused scientific study of geology may wish to pursue the combined major of environmental studies–geology. The combined major includes six geology courses, two cognates, and 7 units in environmental studies (15.25 units total) as follows:

Environmental Studies Core 7 units

For specifics on the Environmental Studies core, see the Environmental Studies section of this *Catalog*.

Geology

- 103. Dynamic Earth.
- 211. Geomorphology.
- 216. Sedimentology.
- 319. Hydrology and Hydrogeology.
- 362. Geochemistry.
- Elective (1) at the 200 or 300 level 6 units

Required Cognates

Majors are required to take at least one semester of the following courses:

Chemistry

- 103. General Chemistry. **and**

Mathematics

- 135. Calculus. **and**

Physics

- 151. University Physics. **or**

Biology

- 101. General Biology.

It is highly recommended that the two-semester sequence of each be completed by both geology and environmental studies–geology majors.

Career and graduate school options may be limited otherwise.

Suggested Courses

No student is permitted to take more than 14 units in any one department. A general introduction to geology is available to all students through 103, *The Dynamic Earth*. All those who elect a concentration in geology must take Geology 103 as a prerequisite for courses required for the major.

It is possible to begin also by taking 110, *Environmental Geology* and 115, *Oceanography*. First year as well as upper-level students will find these courses enjoyable and practical. Elective courses in the major areas of a student's interests provide depth in particular subject areas and should be taken as part of a program that students have discussed with their advisor.

Directed studies and senior honors thesis options are available to seniors on an arranged basis with geology faculty members. Directed studies and senior honors thesis are not counted toward the major but are counted for SYE credit.

It is strongly recommended that students who anticipate graduate study or a professional career in geology also take statistics and geographic information systems (GIS), and attend one of the many summer field camps.

Certification to Teach Earth Science

Students seeking initial certification as a 7-12 earth science teacher must complete a major in geology and the educational studies minor. The following coursework must be completed as a part of, or in addition to, the major:

Geology

- 110. *Environmental Geology*. **or**
- 319. *Hydrology and Hydrogeology*.
- 112. *Global Climate*.
- 415. *Tectonics*. **and**

Physics

- 102. *Introduction to Astronomy*.

Geology majors intending to complete student teaching after graduation in the University's

Post-Baccalaureate Teacher Certification Program must complete the educational studies minor in education (or its equivalent) as undergraduates and all of the earth science requirements listed above (or their equivalents).

Consult the education section of this *Catalog* and/or speak to the coordinator of the teacher education program in the education department as early as possible.

Honors and Senior Thesis

Senior thesis study is undertaken voluntarily by students who wish to conduct original research in a close working relationship with one or more geology faculty members. (See also Honors in the Curriculum section of this *Catalog*). A 3.5 average upon completion of all courses in the major and the completed senior thesis chaired by a member of the geology faculty are both needed for the distinction of honors. The senior thesis course (Geology 489, 490) may be taken regardless of a student's average in the major if permission of a faculty member is obtained. Thesis work is expected to lead to a finished written product (thesis) for appropriate credit. The department encourages its students to consider a senior thesis as part of a capstone experience; this should be undertaken only after careful discussion with faculty advisors. Guidelines for the thesis are available from the department chair.

Minor Requirements

Students with a general interest and who wish to have a basic understanding of the Earth and its processes, or who have a strong interest in a particular aspect of geology or earth science teaching and want to learn more about the subject, may minor in geology. A minor in geology can expand a student's background in support of a major in an allied science, environmental studies or economics, or in a major supporting interest in archaeology or global studies.

There are several areas of potential concentration; the minor is designed so that it may serve the needs of the widest range of students. It can be designed to reflect general geology, or the courses may be grouped to focus on the history of life or on surficial, bedrock or environmental geology. Com-

binations of the student's own choosing, in consideration with the faculty, are encouraged. Several electives are available as options. Geology 103, 104 and at least four additional one-credit courses at the 200 level or above are required in all cases.

Courses

103. The Dynamic Earth.

An introduction to the study of the Earth intended for students with little or no previous exposure to geology or other science. The course examines the materials from which the Earth is made and the forces that govern their distribution; it explores the formation, abundance and distribution of economically useful earth materials (oil, natural gas, coal, strategic metals, precious minerals, water resources) and examines natural hazards such as volcanoes, earthquakes, radiation exposure and floods. Laboratory work gives students hands-on and field experience with rocks, minerals and many kinds of maps.

104. The Evolving Earth.

An introduction to stratigraphic principles and the methods by which we can reconstruct geological events that have shaped the modern Earth. Where have modern ideas about the Earth come from? How do geologists unravel the history of the Earth? What has happened in the Earth's history? The course examines fundamental controversies that have faced geology throughout its history as a science, reviews in detail the methods that geologists use to determine past events, and examines evidence recorded in rocks and fossils during the past 4.6 billion years to build an understanding of Earth's history. Prerequisite: Geology 103 or permission of instructor.

110. Environmental Geology. (MCR)

Environmental geology is a multidisciplinary field of applied science that involves the study of the interaction of humans with the geologic environment including the biosphere, the lithosphere, the hydrosphere, and the atmosphere. The field of environmental geology includes, but is in no way restricted to: 1) the study of the structure and processes of the earth, mineral, and rocks, especially those that are near-surface or have some significant effect upon humans, 2) the study of natural hazards and disasters, including defining and mitigation (or adaptation) of human exposure and threat, 3) managing industrial and domestic waste disposal and minimizing or eliminating effects of pollution, and 4) managing safe and environmentally responsible stewardship of geological resources, including minerals, fossil fuels, and water and land use. This course is designed to give the student basic understanding of the processes and materials of the earth and relate these concepts/products to human activities. *Also offered as Environmental Studies 110.*

112. Global Climate. (MCR)

Climate is perhaps the single most important and pervasive factor controlling global ecosystems and human well-being. This interdisciplinary course examines global climate from a historical perspective, beginning with the formation of the solar system and continuing through geologic time to the present. Topics include the development of the atmosphere; the workings of the global "heat engine" of atmosphere, oceans and continents; evidence for past climate change; causes of global climate change; the effects of climate change on human evolution; and the effects of human evolution on the global climate system. *Also offered as Environmental Studies 112 and Physics 112.*

115. Oceanography.

This broad introductory course explores the oceans of the world, the living organisms of the ocean and the vast mineral wealth of the ocean floor. The course explores oceanography through discussion of elementary scientific concepts in the context of geology, biology, chemistry and physics. Topics include the origin of oceans; the composition and history of seawater; oceanic currents, tides, waves and beaches; the sea floor; plant and animal life in the sea; oceanic resources and food; and marine pollution.

117. Dynamic Ocean Online. (Summer only; online only)

This online course is an introduction to geological and physical oceanography which provides students with an understanding of the marine environment and natural and human impacts on it. Topics include ocean in Earth system, plate tectonics, marine sediments, atmosphere and ocean, currents, waves and tides, coastal ocean and shoreline processes. It also includes study of oceans and climate change, ocean's role in global warming, and ocean acidification.

120. Roadslides and Rivercuts: North Country Landscapes through Geological Field Trips.

(Special Summer Program) (2 units)

This special, field-intensive geology course will help you understand and appreciate the geological background of northern New York, from Lake Ontario to Lake Champlain, including the Adirondacks through a synergistic combination of in-class lectures and field-oriented lectures and laboratories. In-class lecture periods will be 3 hours/day/twice weekly (M&W) and cover topics germane to the following day's field-oriented lectures/labs. The twice-weekly (9 hours/day, T&H) field trips will focus on various components of this landscape: landforms, rock outcrops, settlement (including industrial development and mines), energy supply systems, etc. You will learn to collect, record and identify the minerals, rocks and glacial materials that form the basis of this environment and the processes that cause them.

203. Mineralogy.

An introduction to the nature of the crystalline state as displayed by the common rock-forming minerals through their physical and chemical properties. Topics include symmetry and its graphical representation; the relationship between crystal morphology and internal structure; hand-specimen description and recognition; mineral phase equilibria and mineral origins; economic uses; and an introduction to petrology and such analytical tools as the petrographic microscope and x-ray diffractometer. Prerequisite: Geology 103.

206. Invertebrate Paleontology.

This course focuses on principles of invertebrate paleobiology, morphology and taxonomy as they are applied to the study of fossils. All macro-invertebrate groups having a significant fossil record are examined. Laboratory work centers on techniques employed in fossil preparation, on recognition of taxa from fossil material, and on the stratigraphic and evolutionary significance of invertebrate fossils. Oral and written presentations on paleontological issues are expected of each student as an introduction to the literature of the discipline. Participation in a field trip is expected. Prerequisite: Geology 103.

207. Paleocology.

The challenge of understanding the organizing principles, the evolution of and the functioning of ecosystems of the Earth is the essence of this course. Earth is entering a time of massive extinction, which happens first to species and then to communities and ecosystems. In paleocology one aim is to understand how, why and when ecosystems collapse by

studying the geologic record of such collapse events in the past. Such understanding may reveal our future. Techniques employed in these studies blend theory with application. The course is appropriate for students who have some paleontology or biology experience. Offered every other year. Prerequisite: Geology 206 or permission of instructor.

210. Optical Mineralogy.

This course involves a study of the nature of light in its interaction with crystalline material. Specifically, it studies the optical characteristics and properties of minerals and how minerals may be identified using the petrographic microscope. Participants gain experience in microscopic mineral identification and in the preparation of rock thin sections. Offered occasionally. Prerequisite: Geology 103.

211. Geomorphology.

Geomorphology, literally "earth-shape-study," is the study of the landscape, its evolution and the processes that sculpt it. The purpose of this course is to enhance the student's ability to read geologic information from the record preserved in the landscape. This is achieved through understanding the relationship between the form of the Earth's surface and the processes that shape that form. Students combine quantitative description of the landscape with study of landscape-shaping processes into a comprehensive investigation of the dynamic landscape system including glaciation, hills, rivers, mountains and plains. Prerequisite: Geology 103. *Also offered as Environmental Studies 211.*

216. Sedimentology.

This course explores the processes of sedimentation and their products in different depositional environments. It covers characteristics and origins of sedimentary rock types; processes that erode, transport and deposit sediments; and postdepositional modification. Emphasis is on modern depositional environments and how their study can help us better understand ancient depositional environments. The course also covers the principles of stratigraphy and reconstruction methods of sea level and paleoclimate. Field and laboratory analyses, including petrography, focus on description and classification of sedimentary rocks, and on the interpretation of their origin. Field trips required. Prerequisite: Geology 103.

217. Dinosaurs. (MCR)

Few groups of animals are more recognized than the Dinosauria; likewise, there are few groups about which more misinformation (pseudoscience) has been circulated. (Was Jurassic Park actually Jurassic?) In the setting of vertebrate evolution, this course presents the science of Dinosauria, explains the history of their study, and investigates the origins of the group, its paleoecology, collection techniques, morphology and taxonomy. We consider cutting-edge issues of dinosaur research (are birds simply dinosaurs with feathers?), and confront all manner of misinformation, anachronism and illusion based on dinosaur myths.

241. Field Methods for Environmental Scientists.

This interdisciplinary course is intended for students interested in environmental science (e.g., environmental studies, biology, geology or chemistry majors or minors). Familiarization with experimental design and statistics and training in field techniques includes map and compass work, basic surveying, and water, soil, vegetation and faunal sampling. Introduces students to the use of Geographic Information Systems (GIS) for research in environmental science. Students acquire a working knowledge of ArcView GIS software and gain experience creating and managing GIS projects. Students interested in developing highly marketable GIS and field skills in the context of environmental research should consider taking this course. *Also offered as Biology 241.*

280,281. Directed Studies in Geology. (MCR)

Semester-long studies in appropriate areas of the earth sciences may be designed in consultation with an individual instructor in the geology department. May use seminar format when appropriate. Prerequisite: Geology 103 and permission of instructor and sophomore standing are required.

3000-3999. Special Topics. (MCR)

Numerous special topics course are offered annually and generally involve a field component and travel. These courses are designed to provide students with the field experience needed to be competitive for graduate and professional positions. The content of each course or section of these 200-level special topics courses varies and will be announced each semester.

302. Igneous and Metamorphic Petrology.

Petrology is the study of the origin of rocks, based on detailed observation of rock characteristics (petrography) together with theoretical/experimental approaches. This course provides a review of the occurrence, characteristics and origins of the common igneous and metamorphic rocks. Areas of study include the origin and differentiation of primary magmas, common rock associations, metamorphic zones and facies, the nature of the deep crust, and use of phase diagrams in the understanding of igneous and metamorphic petrogenesis. The relationship of plate tectonics to the formation of these generally holocrystalline rocks is emphasized. Prerequisite: Geology 103 and 203 or permission of instructor.

314. Glacial and Quaternary Geology.

This seminar examines the details of at least two million years of Earth history. During this period, extreme fluctuation in the climate caused great ice sheets to form and melt many times, working profound changes on the environment. The course examines the causes, mechanics and effects of glaciation in the context of long-term climatic and environmental change. Prerequisite: Geology 103 and 211 or permission of instructor.

316. Carbonate Sedimentology.

Carbonate Sedimentology is an advanced course that examines carbonate sedimentology and depositional environments. The course includes field trips to several classic localities in the country. The course focuses on the temporal and spatial makeup and controls on mineralogy and constituent composition of sedimentary carbonates, and introduces students to carbonate facies, carbonate platform models, sequence stratigraphy, carbonate cycles, orbital (Milankovitch climate) forcing and porosity in carbonates as well as field and lab methods. It will provide an understanding of why no other rock type is as economically important as carbonates, major reservoirs for petroleum, base metals and potable water. Prerequisite: Geology 103, and two 200-level geology courses.

317. Micropaleontology.

Micropaleontology is the branch of the earth sciences that deals with fossil organisms too small to resolve in detail with the unaided eye. This course introduces students to the broad range of micropaleontological techniques and to the numerous groups of fossils on which these are practiced. Microfossils are the basis for most synthesis of global climate change, biostratigraphy of ocean basins and regional and global rock correlation. The modern time scale is built on them. Both light and scanning electron microscopy are employed by students in the course. Offered every other year. Prerequisite: Geology 103 and 206 or permission of the instructor.

318. Geotechnical Writing. (MCR)

A major responsibility of all scientists, regardless of their employment, is

to convey the technical results of their work to any of several audiences in a factual, informative and accurate manner. Most of this process requires particular writing skills. In geology these are combined with a wide range of graphics techniques around which text is often formed, with unique methods of reference citation and the need for careful attention to the ethics of ideas and their attribution.

319. Hydrology and Hydrogeology.

This course provides an introduction to the movement and storage of water on the Earth's surface (hydrology) and in the subsurface (hydrogeology). We discuss the fundamentals of the water cycle and hydrologic processes at the surface, the transfer of water in and out of the subsurface and the processes of groundwater flow. Human impacts upon water are also examined, including water resources, contamination, changing land use and climate change. Prerequisite: Geology 103. *Also offered as Environmental Studies 319.*

320. Regional Field Studies.

Field-based studies form the core of geological inquiry. The purpose of this course is to enrich students' understanding of the process of conducting geological research in the field. The course consists of on-campus trip preparation and data analysis and reporting, and a field trip lasting approximately two weeks. Field trip locations and topics vary. Students may be responsible for some costs. Prerequisite: Geology 103 or permission of instructor.

350. Structural Geology.

The deformation of rocks through brittle and ductile processes is the focus of structural geology. This course examines how forces such as those associated with plate tectonics and mountain-building are recorded in rocks on the regional, outcrop and microscopic scale. The genesis, recognition and classification of structures such as folds, faults, joints and microstructures, as well as the mechanical behavior of rocks and stress and strain are studied as important components in deciphering the tectonic and deformational history of an area. The laboratory emphasizes application of theory to field problems. Prerequisite or co-requisite: Geology 103 and 203 or permission of instructor. *Also offered through Outdoor Studies.*

362. Geochemistry.

Geochemistry is the study of the distribution, concentration and cycling of the elements in Earth materials. The course explores the composition and origin of the solar system and Earth's lithosphere, hydrosphere and atmosphere. It focuses on the tools utilized by geochemists, including major, trace and rare earth element analyses, stable and radiogenic isotopes, geochronology, and sampling methods and retrospective studies, and introduces new and emerging concerns in environmental geochemistry. The use, misuse and presentation of chemical analyses are explored in detail. Prerequisites: Geology 103 and 203, Chemistry 103 and 104 or 105, or the permission of the instructor.

380, 381. Directed Studies in Geology. (MCR)

Semester-long studies in appropriate areas of the earth sciences may be designed in consultation with an individual instructor in the geology department. May use seminar format when appropriate. Permission of instructor and junior standing are required.

391. Research Methods in Scanning Electron Microscopy. (5 unit)

Detailed instruction in the use of a scanning electron microscope (SEM) and support techniques such as critical point drying, specimen coating (standard vacuum and sputter coating), specimen fixation, black and

white photographic techniques and computer image acquisition and analysis. The theory and practice of energy-dispersive x-ray analysis (EDAX) for determining atomic element makeup and element mapping is also learned. Prerequisite: any 200 or 300-level science course, or permission of the instructor. *Also offered as Biology 391.*

4000-4999. Special Topics. (MCR)

Numerous special topics course are offered annually and generally involve a field component and travel. These courses are designed to provide students with the field experience needed to be competitive for graduate and professional positions. The content of each course or section of these 300-level special topics courses varies and will be announced each semester.

415. Tectonics.

A comprehensive overview of the theory of plate tectonics. The historical development of the theory is reviewed, considering in detail the contributions of continental drift, geosynclines, apparent polar wandering, sea floor spreading and geomagnetic reversals. Current interpretations of the plate tectonic theory are discussed in relation to rock assemblages, geophysics and paleogeographic reconstructions. There is significant emphasis on the nature and origin of orogenic belts. Offered occasionally. Prerequisite: Geology 103.

489, 490. SYE: Directed Studies in Geology. (MCR)

Semester-long studies in appropriate areas of the earth sciences may be designed in consultation with an individual instructor in the geology department. May use seminar format when appropriate. Permission of instructor and senior standing are required. Counts for SYE credit. Prerequisite: permission of instructor.

498, 499. SYE: Senior Thesis. (MCR)

The senior thesis is an extended application of a student's geological background toward research of an original nature. It involves posing questions, developing hypotheses, conducting field and/or laboratory work, applying scholarship and library research, interpreting results and compiling those results into a finished thesis for submission to the department. Completion of Senior Thesis may lead to graduation with honors (see Honors in the Curriculum section of this *Catalog*). Guidelines and deadlines for thesis preparation should be obtained from the department chair. Counts for SYE credit. Prerequisite: permission of instructor.

Geology-Physics

Interdisciplinary major offered

More information on this interdisciplinary major can be found at www.stlawu.edu/physics/geology-physics.

Students with an interest in geophysics may prepare for graduate study in that field by choosing the interdisciplinary major in geology and physics. The requirements of this major include advanced work in both physics and geology, but there is some flexibility in the choice of courses to meet the specific needs of the student.

Major Requirements

- Five units of geology; must include 203, 350 and Geology Senior Seminar.
- Four and one half units of physics; must include 151, 152, 307, 317 and 333.
- Two additional units chosen from appropriate courses in geology or physics at the 200 level or above.
- A senior research project in some area of geophysics, with advisors from both geology and physics departments.

Recommended Courses

Mathematics

205. Multivariable Calculus.
230. Differential Equations.

Advising is provided through both the geology and physics departments. Since this major is expected to serve students with a wide range of interests, anyone considering it is encouraged to consult with these departments about appropriate scheduling of courses, including interdepartmental offerings.

Students contemplating this major should also be aware of possibilities for advanced placement in chemistry, mathematics and physics courses that could provide added flexibility to their programs. Students should register for Physics 151, 152 and not Physics 103, 104.

Global Studies

Major and minor offered

Professors Collins, Stoddard; **Associate Professors** Chew Sánchez, Wong (chair); **Assistant Professor** Jayman; **Visiting Assistant Professor** Ganapathy.

Visit the global studies department webpage at www.stlawu.edu/global-studies.

Global studies is an interdisciplinary major designed to prepare students with new analytical frameworks for understanding globalization and for evaluating it critically. In the eight core courses, students encounter key concepts and debates over global processes, political economy and cultural studies. These teach new models of knowledge that focus on the rapid circulation

and movements of capital, people, knowledge, cultural forms, commodities, environmental pollution, communications, finance and other aspects of 21st-century life. Students learn to view states, cultures, communities, economies and ecologies as embedded in larger global structural and historical contexts. In addition, students learn to locate themselves as active members of the global community and to consider the ethical responsibilities that derive from their particular social locations.

Working closely with an academic advisor, students design their major around specific geographic and/or thematic concentrations, which become the basis for an independent project (SYE) in the senior year. The major balances these concentrations with a set of core frames of analysis. Global studies majors are thus well prepared to enter career fields or graduate programs requiring multiple perspectives, self directed projects and a global viewpoint.

It is strongly recommended that global studies majors spend at least a semester in off-campus study, gaining field experience. They are also required to study a second language. The courses taken off campus typically count toward the relevant area of concentration and often allow students to do field research toward the senior project.

It is also recommended that global studies majors take at least one (if not two) Geographic Information Systems (GIS) courses. Employers increasingly seek graduates with knowledge of GIS and critical geospatial and cartographic skills sets.

Major Requirements

The Global Studies major requires 15 units, including second language study. Students are expected to complete the core courses in the department; some or all other courses can be taken outside the department depending upon choices students make for their concentrations.

- I. **Core Courses** (8 units)
 101. Introduction to Global Studies: Political Economy.
 102. Introduction to Global Studies: Race, Culture and Identity.

290. Research Methods in Global Studies.
 301. Theories of Global Political Economy.
 302. Theories of Global Cultural Studies.
 Two (2) Global Studies electives (GS designation), one at the 200 level and one at the 300 level, and should normally fit in with the student's choice of concentration (*below*).
 489 or 490. SYE: Senior Project. **or**
 498,499. SYE: Honors Project.

II. Choice of Concentrations (7 units, *including study of a second language*).

Students have three tracks they can choose from to mold their concentration, which can be satisfied with department courses, other on-campus courses, general education requirements courses, and off-campus courses. These are:

- A. *Comparative area studies*: complete three (3) courses in each of two geographic or cultural areas; and one semester of a second language; **or**
 B. *One-area intense study*: complete four (4) courses in one geographic or cultural area and three semesters of a second language related to their area concentration; **or**
 C. *Area and thematic study*: complete three (3) courses in one geographic or cultural area, and three (3) courses in one thematic area; and one semester of a second language.
Programs available for students' geographic or cultural area concentrations include:

- Arabic Studies
- African Studies
- African-American Studies
- Asian Studies
- Canadian Studies
- Caribbean and Latin American Studies
- Other areas (e.g., Middle Eastern or Islamic Studies) with approval of the department chair.

Programs available for students' thematic area concentrations include:

- Environmental Studies
- Gender and Sexuality Studies
- Peace Studies
- Media and Communications Studies
- Migration Studies
- Health Studies
- Development Studies

- Other areas with the approval of the department chair.

Minor Requirements

The global studies minor consists of six courses: Global Studies 101, 102, either 301 **or** 302, two (2) electives in global studies, normally one at the 200 level and one at the 300 level, and a semester of second language study.

Honors

To receive honors in global studies, students must achieve a minimum GPA of 3.5 in the major and 3.2 overall and submit for evaluation a project of substantial length. Further details may be obtained in the department office.

Certification to Teach Social Studies

Students seeking initial certification as a 7-12 social studies teacher in New York can major in global studies. In addition to completing the certification minor in education, students majoring in global studies must also take one economics course (Economics 100, Introduction to Economics, is recommended if only one course is taken); one course in government (Government 103, Introduction to American Politics, is recommended if only one course is taken); History 103 (Development of the United States, 1607-1877); History 104 (Development of the United States, 1877-Present); and at least one specified course in the major that illuminates U.S. and/or world history and geography. Students are also encouraged to take other courses in other social sciences and area studies to round out their preparation for teaching social studies.

Global studies majors intending to complete student teaching after graduation in the University's Post-Baccalaureate Teacher Certification Program must complete the pre-certification minor in education (or its equivalent) as undergraduates. Consult the Education section of this *Catalog* and/or speak to the coordinator of the teacher education program in the education department as early as possible.

Courses

101. Introduction to Global Studies I:

Political Economy.

An introduction to the reasons for the emergence of a global political economy. Using case studies, students examine the basic concepts and vocabulary in the political-economic analysis of globalization, such as free trade, capital accumulation, international division of labor, neo-liberalism, privatization, structural adjustment and sustainable development. The course explores the consequences of changing patterns of transnational economic and governance structures for nation-states, ecosystems and people's lives, and examines the repercussions of economic globalization. Discussion of the opposition movements that have formed to contest globalization, such as those emerging from labor movements, environmentalism and feminism. Also required for the major in Conservation Biology and may be counted toward the minor in Peace Studies.

102. Introduction to Global Studies II:

Race, Culture, Identity.

Examination of their own identities and social locations leads students to an understanding of how those identities exist in a global matrix of cultural, economic and political relationships. Students are introduced to various theoretical and political positions on identity, with a focus on gender, race, ethnicity, class, spirituality and sexuality. While much of the material is drawn from the contemporary era, the historical context of European conquest and expansion and the Middle Passage frame a critical examination of the evolving ideas of "America" and the "West." *Also offered occasionally as CLAS 102 and may be counted toward the minors in African-American Studies, Native American Studies and Peace Studies.*

218. Cities and Globalization.

Cities reflect and embody the myriad and complex processes of globalization, challenging the nation-state's role in circumscribing people's life and activities. A few "global cities" are the control points for the organization of new forms of economic, political and social geographies associated with global processes. Other large "world" cities in both the developed and the developing world are incorporated into the global urban system through the economic, cultural and political power they exercise at different scales — local, national, transnational, regional, and global. The objective of this course is to critically understand the relationship between cities and globalization, and to appreciate cities as sites of struggle associated with globalization. When possible, the course includes a field trip to Toronto, Canada.

222. Asian Political Economy in the Global Age.

This course covers the geographical and historical rise of East Asian economies in the context of "quasi-states" in the world economy, the spectacular economic growth of China, and the social and economic crisis gripping South Asia in the context of contemporary debates about neo-liberalism, gender, identity, community and communalism. What are the prospects for East and South Asia in the new global millennium? Topics include regional perspectives on global capital accumulation, global inequalities, human rights discourse, fundamentalism and social movements. Also may be counted toward the minor in Asian Studies.

230. Secrets and Lies: Nationalism,

Violence and Memory.

This course explores the complex and difficult processes through which nations confront—or fail to confront—their histories of colonization, genocide and other types of mass violence. Through a comparative look at case studies such as South Africa, Israel/Palestine and the United States, the course examines a variety of collective responses to mass violence, including denial, truth commissions, war crimes trials and

reparations. Also may be counted toward the minor in Peace Studies.

233. GIS. (with lab)

Geographic Information Systems (GIS) is the use of computers to manage, display and analyze spatial or geographical information. This course introduces students to the basic concepts, functions, and applications of GIS. We discuss maps, data sources and management, and geographic techniques, including global positioning systems, aerial photography and satellite imagery. Through a series of lab exercises students explore the analytical functions of GIS, such as proximity, overlay and three dimensional modeling. To further understand GIS practices and applications, each student develops a GIS project with data appropriate to his or her area of interest. *Also offered as Geology 233.*

238. Global Christianities.

This course explores Christianity outside the United States and Europe. Catholic and Protestant Christianities in addition to newer forms of Christianity are included, and case studies are drawn from Africa, Asia and Latin America. Pentecostal Christianity (also called Charismatic Christianity) is a particular focus. The course considers the conflict and interplay of older forms of Christianity, often part of the inheritance of colonialism, with more recent arrivals; probes the relationship between religion and the processes of globalization; and questions whether any of these forms of Christianity can be described as globalized, and, if so, whether global Christianity resists or supports globalization. *Also offered as Religious Studies 238.*

250. La Frontera: Cultural Identities on the Mexican–U.S. Borderland.

This course investigates the cultural expressions derived from the interactions among people on both sides of the Mexico–U.S. border. The goal is to understand the different ways in which immigration, drug smuggling and transnational industries affect the everyday lives of borderlanders through historical and critical approaches to the cultural expressions (music, images or other forms of discourse) that have served as mechanisms to mediate the contradictions arising out of the border. *Also offered as CLAS 250 and may be counted toward the minors in Native American Studies and Peace Studies.*

255. Popular Culture.

This course introduces students to key themes in the study of popular media and to debates about the role of media in contemporary societies. It also introduces methodologies used to study culture and asks students to apply them to case studies from music, sports, comics, fashion, television, cybiculture, film or advertising. Emphasis is on various cultural expressions of ethnic subcultures in the United States and their complex negotiations with the dominant culture and their co-resisters in a global/local struggle over meaning. *Also offered as CLAS 255.*

259. Global-Local Environmentalisms.

This course explores the ways environmental social movements and environmental conflicts are experienced across multiple scales: global and local. We will examine the role that broad-based and influential environmental or development efforts play in defining contested landscapes and concepts of "nature" more broadly. In addition, we will consider how they engage with variously positioned local communities that often have deeply rooted and socially and culturally rich connections to those same landscapes. We will focus on particular case studies addressing wilderness preservation, fortress conservation and environmental justice efforts in the global North and South.

260. Transnational Migration.

Students acquire a global perspective on the nature of migration movements, why they take place and how they affect migrating peoples, as well as the societies receiving them. Themes include transnationalism and new approaches to national identity and citizenship; migration as a social network-driven process; gendered migration; migration and the formation of ethnic minorities. The course analyzes how transnational movements of people, goods and services affect and transform the relationships between cities and nations and explores the political meaning of contemporary nationalism and the possibilities of new forms of citizenship. Emphasis is on the (trans)formations of Latino identities in the U.S. *Also offered occasionally as CLAS 260 and may be counted toward the minor in Native American Studies.*

262. Africa and Globalization.

In an increasingly interconnected and interdependent world, Africa appears marginalized or absent from contemporary imaginations and discourses of globalization. Often, we hear about crises, failures and problems. Yet, Africa, a heterogeneous continent differentiated along geographical, historical, social, cultural, religious, economic and political lines among others, has been and continues to be integral to the global economy. This course seeks to examine and understand how particular global processes intersect with and manifest differently in specific places and social realities in Africa. We explore Africa and the global economy; globalization and technology; African youth experiences; African women's experiences; and contemporary African diasporas and their transnational activities. *Also offered as African Studies 262.*

273. A Literary Harvest.

While environmental writers and activists such as Wendell Berry, Bill McKibben and the Indian physicist Vandana Shiva have alerted us to the ecological, ethical, and health problems associated with factory farming, the North Country has long been a haven for sustainable, small-scale organic agriculture. This is a creative writing course in literary nonfiction that focuses on food, food security, and farming. It has both a CBL component and a cross-cultural, comparative focus (India). The community-based learning takes place in the course's required lab component. Students will draw from nonfiction readings, their CBL work, and past experience, including travel, to examine the themes from both a local and global perspective. *Also offered as English 293.*

290. Global Studies Research Methods.

An introduction to research approaches that take into account the economic and political context of the production of culture, textual analysis and people's perceptions. Objectives are to examine the philosophy and epistemology of qualitative methods, to understand various approaches to qualitative research, to develop the skills to design a qualitative research project, to gather and analyze qualitative data, and to present the preliminary findings. For their final project, students produce a research design for their SYE and apply learned research strategies to their own research questions. The course emphasizes the importance of critical awareness of the practical, social and ethical issues that arise in doing cultural and social analysis and research in everyday settings.

301. Theories of Global Political Economy.

This course explores the complex relationship between states and economies at the global level. Its primary purpose is to provide a critical understanding of the major theoretical and analytical issues that constitute the crucial challenge to the study of global political

economy today. It moves beyond the traditional agenda of international political economy, namely trade and investment, to address a wide range of alternative theories, concepts and themes, including the origins, functions and impacts of transnational corporations, international financial institutions, regional and global trade organizations and non-governmental organizations involved in social movements. Prerequisite: GS 101.

302. Theories of Global Cultural Studies.

An introduction to the growing field of cultural studies through examination of its major theoretical paradigms, particularly as these bear on the question of unequal global power relations. These may include Marxism, critical theory, post-structuralism, feminist theory and emerging work in postmodernism and post-colonial studies. Students explore strategies for "reading" cultural practices and texts not simply as reflections of reality, but as political interventions, expressions of desire, attempts to persuade and producers of power. Through a combination of theoretical criticism and analysis of specific materials, students prepare to undertake independent research with an informed understanding of how cultural studies challenge and enrich traditional social science and humanities approaches. Prerequisite: Global Studies 101 or 102. *Also may be counted toward the minors in Native American Studies and Peace Studies.*

324. Global Public Goods: Exploring Solutions for the 21st Century.

This course addresses attempts to initiate, coordinate and execute solutions to problems that many understand as being not solely local in origin and implication, but rather connected with other sites, across the world (e.g., cultural destruction, disease and health care, financial crises, ecological destruction, aging and social security challenges, state and non-state actor violence, migration). Framing issues in the language of global interests, the metaphor of "public goods" invites an approach that seeks commonalities with an eye toward action that allow forms of cooperation to be imagined and achieved. Students produce a major paper on one theme written over the semester as part of their course obligations. *Also may be counted toward the minor in Peace Studies.*

333. Ethics of Global Citizenship.

This research seminar is designed to address, from a philosophical perspective, some of the difficult ethical questions arising from the global organization of the world. Readings include classical, non-western and alternative theories of justice and peace. The course interrogates the discourses surrounding patriotism and cosmopolitanism, peace and violence, terrorism and war, justice and retribution, and the debates surrounding relativism versus universalism, especially with regard to the claims for human rights. Students undertake research projects dealing with the ways these issues are being negotiated in countries where they studied abroad, and develop ethical positions on their own responsibilities toward global citizenship. *Also offered as Philosophy 333 and may be counted toward the minor in Peace Studies.*

340. Blogging the Globe: News Analysis and Investigative Journalism.

This course fosters the tools necessary to be critical readers and viewers of the news in a complex, globalized media environment while also giving students the opportunity to become investigative journalists themselves. In addition to examining patterns in how global events are covered in mainstream and independent/alternative media outlets in the U.S. and elsewhere, the course explores deeper structural issues concerning discourse, ideology and the representation of "other" cultures; the relationship between media, corporate and state power; and the role of institutions in defining the bounds of "legitimate"

knowledge. Students in the course contribute to The Weave, an online public Intellectual project, by researching and blogging about underreported stories. Prerequisite: Global Studies 101 or 102. Also offered as FILM 340 and PCA 312.

350. Global Palestine.

This course explores the global significance of the modern colonization of Palestine and the resulting Palestinian struggle for national liberation. Moving beyond conventional interpretations of the conflict between Israel/Zionism and the Palestinians, the course emphasizes Palestine's location within a set of broader global structures and processes including settler colonialism, militarization, social acceleration, solidarity movements, and the relationship between state and non-state forms of terrorism. Students develop familiarity with important theoretical concepts within global studies while also furthering their understanding of why Palestine, despite its small size, continues to matter so much to so many. Also may be counted toward the minors in *Arabic Studies and Peace Studies*.

352. Clinic: The Effects of Globalization on Human Rights.

The particular cases and themes of the clinic vary from semester to semester, however, the commonality among them is the exploration of the ways in which drastic global economic and social restructuring policies are shaping the living conditions and have infringed on human rights in different parts of the world. Students will consider the drug trafficking and the War on Drugs from historical, comparative and contemporary angles, and the way that international drug policy has shaped drug trade and civil society. We will also analyze the effect that the Drug War has had on human rights, migration, trade, poverty, political power, feminicide, militarization and the environment. Also offered as CLAS 352 and may be counted towards the minors in *Native American Studies and Peace Studies*.

357. Postcolonial Literature and Theory.

This course introduces a distinct way of organizing literary study, substituting for the study of national traditions the notion of post-coloniality as a global condition affecting not only literature but also categories we use to think about human experience: relations between colonizers and colonized and between culture and power; identity, authenticity and hybridity; roots, motherland, mother tongue; nationality. Readings include contemporary literature produced in the Indian subcontinent, Australia, New Zealand and the Pacific, Africa, Canada and the Caribbean, as well as important theoretical texts about post-coloniality. Also offered as *English 357 and Philosophy 357*.

365. Rethinking Population and Environment.

This course addresses population issues and challenges facing an increasingly interdependent world. The aim is to provide a grounded understanding of the historical and contemporary evolution of various population issues and patterns, including population growth, aging, the AIDS epidemic, immigration and human trafficking, urban development and environmental implications of population change, and how these are shaped by and engender economic, political, cultural, social and environmental change across multiple scales (local to global). Through specific case studies, the course also explores existing and alternative population policies around family planning and health reforms, environment and development, and migration. This course may be counted toward the major in Conservation Biology.

367. Feminist Postcolonial Theory.

Postcolonial theory addresses issues of identity, culture, literature and history arising from the social context of colonization, resistance to colonization, liberation from colonization and the formation of new

nations. It crosses the boundaries of the social sciences and humanities in its approach to theory and analysis of the discourses used to constitute colonial and postcolonial subjects. We begin with some classic texts of postcolonial theory before moving to a focus on specifically feminist debates and texts within post-colonial studies. Literature and film are used in dialog with theoretical texts to examine questions about gender and women's issues in various societies. Also offered as *English 367, Gender 367 and Philosophy 367*.

390. Independent Study.

409. Internship: The Weave.

This project-based internship course is designed for students who are interested in independent media and the promotion of public dialogue about important global issues. Students in the course serve as one-semester interns for The Weave (www.weavenews.org), an independent media project focused on stories that are not receiving sufficient attention from the mainstream news media. Through working on collaborative projects, students develop practical skills in a number of areas such as formal presentations, fundraising, community outreach, public relations, media production, event planning, grant writing, and organizational development.

412. Cross Cultural Perspectives of Healing.

This class uses healing traditions as the lens with which to examine culture. During the semester students will have the opportunity to meet healers from around the world. In a typical semester presenters include a Traditional Chinese Medical practitioner, an Ayurvedic physician (from India), a shaman from Peru, an exorcist, a native American healer, an allopathic physician, new age healers, a Christian Scientist and others. Also offered as *Religious Studies 412 and Biology 412*.

489, 490. SYE: Senior Project.

498, 499. SYE: Honors Project.

Government

Major and minor offered

Professors Draper, Exoo, Lehr, **Associate Professors** Buck (chair), Huang, Olesker; **Assistant Professors** McConnell, McKie, Sieja; **Visiting Assistant Professor** King.

Visit the government department webpage at www.stlawu.edu/government.

The government department at St. Lawrence University introduces students to a broad range of political values, theories, practices and institutions. Its focus is on issues of power and justice, and how these two elements complement and confront each other. The department engages students with these issues by encouraging them to examine their own political attitudes and beliefs, and to take an active interest in political life. Courses in the department develop students' ability to express themselves clearly and concisely; to formulate and interrogate an argument; to reflect

critically on the soundness of their own and others' points of view; to appreciate the variety of approaches that inform the discipline; and to acquire expertise and research literacy in its study. Ultimately, the department seeks to promote in students the habits of intellectual curiosity, self-reflection and openmindedness that are the hallmarks of lifelong learning.

A major in government provides career opportunities in public service, law, business, international development and international affairs, human rights work, non-governmental organizations, teaching, journalism, elective office and many other fields.

The curriculum of the department is designed to educate students to be informed and inquisitive citizens and to be conscious of their rights and responsibilities within local, national and global communities. To accomplish these goals, students take courses in four sub-fields: American politics, comparative politics, political theory and international politics. Qualified students who wish to deepen and expand their government experience may undertake internships, community-based learning programs, experiential learning courses and in self-directed study. The department encourages close student-faculty relationships through independent study projects and the honors program. Government majors are also strongly encouraged to participate in one of St. Lawrence's semester abroad or off-campus programs. For further information on these and related off-campus programs, visit www.stlawu.edu/ciis/programs.

Students may complete the stand-alone government major or elect a major that combines government courses with courses in African studies, Asian studies, Canadian studies or environmental studies. Students may also choose to combine government courses with a minor program in African studies, Asian studies, Canadian studies, Caribbean and Latin American studies, European studies or gender studies. For further information on these programs, visit their respective web sites.

Major Requirements

Students entering St. Lawrence with an interest

in government and politics are strongly advised to enroll in two of the 100-level core courses (103, 105, 108) during their first year, one of which should be taken as a writing intensive version (103W, 105W, 108W). Students should also seek early advising from a government department faculty member.

The major in government requires the completion of nine units distributed as follows:

1. **Core Courses (4):** Government majors must complete the introductory course for each of the four disciplinary subfields: American Politics (103), Comparative Politics (105), International Politics (108) and Political Theory (206). One of these four courses must be designated writing-intensive and should be completed before the end of the sophomore year. These four introductory courses must be taken in residence on the St. Lawrence campus.
2. **Research Seminar (1):** During the sophomore or junior year, ideally after completion of the writing-intensive course, majors must take one of the government Research Seminars (290, 291, 292, 293). Students may take only one research seminar.
3. **Elective Courses (4):** The remaining four units may be earned through a selection of elective courses. Students may count up to one unit of internship coursework and one unit of independent study toward the elective requirements. Students who complete the two-course SYE: Honors Thesis may not also use an internship or an independent study course to meet the major requirements, although such courses do count toward the units required for graduation. No more than two of the elective courses may be taken off campus.

A major may elect no more than four out of nine units for the major in any one sub-field of the discipline. The academic work of transfer students in political science is evaluated upon entry into the department for determination of credit. In no case may a transfer student majoring in government take fewer than five government courses at St. Lawrence.

Minor Requirements

The minor in government requires the completion of five units distributed as follows:

1. Core Courses (2)

Government minors must complete two of the following introductory courses: American Politics (103), Comparative Politics (105), International Politics (108) and Political Theory (206). These courses must be taken in residence on the St. Lawrence campus.

2. Research Seminar (1)

During the sophomore or junior year, minors must take the government Research Seminar (290).

3. Elective Courses (2)

The remaining two units may be earned through a selection of elective courses at the 300 or 400 level. The department will credit one upper-level government course taken in a St. Lawrence-sponsored off-campus program. Internships in government do not count as courses toward the minor.

Honors

Departmental honors are awarded at graduation to majors who have achieved a minimum grade point average of 3.5 in government courses and who have also received an “honors” designation on the senior thesis. Additional information regarding the senior honors thesis can be found on the departmental website. (See Honors in the Curriculum chapter of this *Catalog*.)

Certification to Teach Social Studies

Students seeking initial certification as a 7-12 social studies teacher in New York can major in government. In addition to completing the certification minor in education, students majoring in government must also take one economics course (Economics 100, Introduction to Economics, is recommended if only one course is taken); History 103 (Development of the United States, 1607-1877) and 104 (Development of the United States, 1877-Present); Global Studies 102 (Introduction to Global Studies II: Race, Culture, Identity); and at least one specified course in the major that illuminates U.S. and/or world history

and geography. Students are also encouraged to take courses in other social sciences and area studies to round out their preparation for teaching social studies.

Government majors intending to complete student teaching in the University's Post-Baccalaureate Teacher Certification Program after graduation must complete the educational studies minor in education (or its equivalent) as undergraduates and all the social science requirements listed above (or their equivalents). Consult the education section of this *Catalog* and/or speak to the coordinator of the teacher education program in the education department as early as possible.

Courses Introductory

103. Introduction to American Politics.

Who gets what and how? This course answers that question by introducing the major institutions and actors of the American political system, including the Constitution, parties, interest groups and the legislative, executive and judicial branches of government. The course also examines the cultural, ideological and economic contexts in which American politics occurs, as well as the mechanisms and possibilities of political change.

105. Introduction to Comparative Politics.

Comparative politics analyzes how demands emerge, power is exercised and benefits are distributed in different countries. It uses both historical and contemporary evidence to examine how societies respond to these challenges in order to appreciate and learn from the differences among them. Developing societies, communist and formerly communist regimes, as well as industrialized democracies, are analyzed and compared as a basis for evaluation and judgment.

108. Introduction to International Politics.

An analysis of international relations as a political process with particular emphasis on patterns of conflict and cooperation. Major areas of study include theories concerning the nature of the international system, nationalism, balance of power, collective security, alliance systems, international law and organization, political economy, war, deterrence, arms control and disarmament, the emerging international order, human rights and the environment. *Also offered through Peace Studies.*

206. Introduction to Political Theory.

A study of the answers that philosophers from Plato to Marx have given to the question, “How should political life be organized?” This question leads us to consider the related problems of justice, power, equality, freedom and human nature. The course includes discussion of the strengths and weaknesses of liberal democracy. *Also offered as Philosophy 206 and through European Studies and Peace Studies.*

Research Seminars

290, 291, 292, 293. Research Seminars.

Research seminars cover topics related to American Politics (290), Comparative Politics (291), Political Theory (292), and International Politics (293). The specific topics of these seminars vary depending on

the interests of faculty and students. Recent topics have included China's Rise, Israeli-Palestinian Conflict, Presidential Elections, Comparative Environmental Politics and the Politics of Inequality. The seminars are designed to acquaint students with research problems, strategies and techniques relevant to the field. This course is required for all government majors and should be completed in the sophomore or junior year. Students may take only one research seminar.

American Politics

302. The American Legal System.

This course explores the workings of the courts at all levels of the U.S. legal system. The primary goal is to increase and broaden our understanding of what happens in courts, why it happens, and how courts fit into the larger political system. Much of our attention will focus on actors in the legal system (lawyers, juries, interest groups and especially judges) as we consider how their behavior is shaped by and in turn shapes our legal and political institutions and environments. Students will be asked to weigh in on contemporary debates surrounding the legal process and to grapple with some of the difficult normative questions associated with American courts. Required as preparation for Government 307. Prerequisite: Junior or senior standing.

303. Political Parties, Interest Groups and Voting Behavior.

Two mechanisms try to organize ordinary citizens so that government may be responsive to people's needs: parties and interest groups. One of their aims has been to organize citizens into rational, effective voting blocs. This course looks at how parties and interest groups work and at whether or not they are fulfilling their purpose. Prerequisite: Government 103.

307. Constitutional Law.

This course examines the constitutional jurisprudence of the United States Supreme Court and how its decisions have shaped the contours of the relationship among political institutions and between the individual and the state. Among the areas of law explored are presidential powers; the powers of Congress; freedom of speech, press and religion; equal protection; federalism; and the rights to privacy, to bear arms and to vote. While working toward a fuller understanding of Supreme Court jurisprudence, the course also aims to develop students' capacity for logical and legal reasoning. Prerequisites: Government 302 and junior or senior standing.

309. Congress.

An institutional and behavioral examination of the legislative process in Congress, with attention to current policy issues. Prerequisite: Government 103 and junior or senior standing.

310. The U.S. Presidency.

An examination of the functions of the presidency, with stress on the development of the executive branch in response to political needs and opportunities. Prerequisite: Government 103 and junior or senior standing.

314. Politics and the Media.

Most Americans learn most of what they know about politics from the media. But critics charge that the media's picture of politics is distorted. This course explains how the picture is distorted and why. In addition to news media, the course will look at the political and social messages of primetime television, Hollywood film and the advertising industry.

316. Ethics in Business and the Professions.

This seminar looks at the relation between public policy and ethical dilemmas in the arenas of corporate life and professional service. The course asks students to examine the sorts of moral dilemmas they

can expect to encounter in their chosen fields of work and takes a case-study approach to such topics as employee rights, information disclosure, Affirmative Action, sexual harassment and whistleblowing, and the roles that public policy should — or should not — play in relation to these issues.

Comparative Politics

320. African Politics.

This course explores the evolution of power and authority across Sub-Saharan Africa. The first part of the course traces the changing dynamics of African states through pre-colonial history, colonialism and conquest, the rise of nationalism and independence, and democratization and authoritarian backsliding in order to provide a foundation for understanding both region-wide and country-specific trends in politics and development. Building on this foundation, the second part of the course analyzes contemporary prospects and challenges facing today's African states as they attempt to manage the interests of ethnically diverse societies, reform political institutions, spur development and decrease inequality, adapt to climate change, grapple with human rights, counteract political violence, and compete in the global economy. Especially recommended for students who plan to participate in the Kenya Semester Program or the Global Francophone Cultures Program and students returning from these programs. *Also offered through African Studies.*

221. Latin American Politics.

This course introduces students to the politics of Latin America. Tracing the roots of current political conflict to the colonial era, the primary focus of the course is on underdevelopment and political change in Latin America today. The course examines the roles of key political actors, including the military, indigenous peoples and the church. It explores patterns of development, introducing theories that seek to explain persistent poverty and inequality as well as the periodic swings between authoritarianism and democracy in the region. The course material emphasizes current pressures for political inclusion, tracking social movements and human rights. Themes are illustrated with case studies. *Also offered as CLAS 221.*

322. Chinese Politics.

An introductory survey of China from four perspectives: China as China, China as a Communist party state, China as a developing country, and China as a rising power. Through these lenses, the course examines the historical factors that have shaped contemporary Chinese institutions and the Chinese Communist Party. It also examines China's influence and security concerns within the international community. Especially recommended for students who plan to participate in an off-campus program in China and for students returning from the program. *Also offered as ASIA 322 and through Peace Studies.*

325. Canadian Politics.

An introductory survey of the formal institutions and the processes of Canadian politics. Emphasis is on the federal government and on federal-provincial relations. Topics covered include the parliamentary process, parties and voting.

328. Political Institutions in the Developing World.

Can the choice of certain political institutions promote better representation, political stability, more government accountability, less corruption, or improved economic performance in developing countries across sub-Saharan Africa, Latin America, the Middle East, and Asia? This course tackles these questions by introducing students to the main approaches in comparative institutional analysis and exploring the design and consequences of a wide range of political

institutions (or “rules of the political game”) such as state structures, electoral systems, executive powers, the legislature, the judiciary, and sub-national structures. Discussions center on debates about the trade-offs between representation and efficiency, whether political behavior can be shaped by incentives, the impact of historical legacies, and the unique challenge of implementing formal institutional rules in societies where informal practices shape much of the political life. Prerequisite: Any 100-level Government course or permission of the instructor.

330. European Politics.

This course focuses on West European governments, political parties and social movements. It seeks to provide students with essential information about West European politics, as well as contemporary theories about advanced capitalist democracies. Comparisons between European and American politics are frequent so that students may better see the distinctiveness of each. Issues examined include the European welfare state, the significance of the European Union, the changing contours of political conflict and the emergence of multiculturalism in Europe. Especially recommended for students who plan to participate in an off-campus program in Europe and for students returning from those programs. Prerequisite: Government 290–3 or permission of the instructor. *Also offered through European Studies.*

331. Middle East Politics.

This course examines the political development of the Arab and non-Arab states in the Middle East since the fall of the Ottoman Empire. The course adopts both a thematic approach, comparing history, culture, religion and the role of foreign intervention, as well as a country-based approach, examining the politics and policies of specific Arab and Non-Arab countries. The objective of the course is to provide students with an understanding of the challenges facing the region and those studying it. Students participating in this course will be involved in an elaborate simulation game in which they represent regional state and non-state actors. Prerequisite: 105. Introduction to Comparative Politics. *Also offered through Peace Studies.*

337. Torture, Truth and Memory

Authoritarian regimes have often committed massive human rights abuses that included murder, torture, disappearances, involuntary exile and forced adoptions. As a condition for transitioning to democratic governance outgoing military leaders insisted on amnesty for those crimes, but societies have sought to come to terms with their human rights history through other means such as truth commissions, forensic anthropology, investigative journalism, international prosecution, collective memory projects and popular culture. Drawing on memoirs, torturers’ confessions, declassified documents, films, literature and analytical texts this course explores the ongoing struggle over who will interpret the political past, and what roles justice and reconciliation may play in securing democracy for the future. Course readings will center on Latin American cases, and students can apply those lessons in other world regions through their research papers. *Also offered as CLAS 337 and through Peace Studies.*

365. Human Rights In the Context of Global Politics.

Is it possible to achieve a world where human rights are recognized and respected by all societies, and guaranteed to all peoples? A utopian notion, surely. But even to begin to move towards such a world, there are a number of questions we must first address. What are the historical roots of the concept of human rights? Can there be such a thing as universal human rights, that is, rights that are recognized as valid for all states, societies, and cultures? Or is a relativistic notion of human rights more compatible with global justice? What has been the impact of globalization on the development of human rights? Through what

sorts of associations and institutions are people working to bring about an international society where respect for human rights is a regulative norm? Are their struggles illusory? These are just some of the questions this course will address.

Political Theory

343. Ecology and Political Thought.

Ecology reminds us that our activities are embedded within natural systems. What is the significance of this fact for politics? This course examines how various actors, such as citizens, consumers, social movements, scientific experts and governmental agencies, conceptualize the relationship between humanity and the natural world. We evaluate the merits and shortcomings of a variety of approaches to environmental politics, including survivalism, sustainable development, deep ecology, ecofeminism and the environmental justice movement. Does not satisfy the department’s major requirement in political theory. Prerequisite: Government 206 or permission of instructor. *Also offered as Environmental Studies 343.*

345. Political Theories of Violence and Nonviolence.

Carl von Clausewitz famously remarked that “war is a continuation of politics by other means,” which suggests that politics is intimately connected with violence even as it seeks to avoid it. In this discussion-based seminar we will examine how key figures throughout the history of political thought have conceptualized the relationship between politics, violence, and non-violence. Topics covered in the course include just war theory, the role of violence in the state, non-violent civil disobedience, and revolutionary violence associated with working class and anti-colonial struggles. *Also offered as Philosophy 343 and through European Studies and Peace Studies.*

347. Marxist and Critical Theory.

A survey of the basic elements of Marxist political theory and of the major streams of contemporary thought that have emerged in response to it. Some of the theorists whose work we might examine include Gramsci, Horkheimer and Adorno, Marcuse, Habermas and Foucault. Feminist, African-American and Caribbean interpreters of Marx may also be studied. *Also offered through European Studies.*

349. American Political Thought:

Eighteenth and Nineteenth Centuries.

An examination of the main currents of political thinking from the Colonial period to the end of the 19th century. The course begins with the Puritan Divines and continues through the start of the Progressive era. Thinkers considered might include Paine, the Federalists, Jefferson, Emerson, Margaret Fuller, Thoreau, Frederick Douglass and Charlotte Perkins Gilman.

350. American Political Thought: Twentieth Century.

An examination of the main currents of political thinking in the United States from the Progressive Era through the end of the 1960s. Thinkers considered include the Social Darwinists, Thorstein Veblen, W.E.B. DuBois, Jane Addams and John Dewey. We also look at both the resurgence of conservative thought in the 1950s and some of the sociological critiques of the post-war era out of which the New Left, civil rights, Black Power, feminist and ecological movements grew.

368. Democracy and Its Critics.

Most countries in the world today are democratic, but there is no single model of democracy and no consensus on what the term means. This applied political theory course reviews models of democracy across the centuries, including classical democracy, competitive elitism, participatory democracy and deliberative democracy. The course

focuses on the democratic principles behind the models, drawing on the work of major Western thinkers from ancient Greece, the Italian Renaissance city-states, 18th- and 19th-century France and England, as well as the United States. It centers discussion around themes such as representation, participation, majority rule and the transformative potential of modern technology for democratic practice. *Also listed as Philosophy 368.*

International Politics

281. U.S Foreign Policy toward Latin America.

This course examines U.S. foreign policy toward Latin America from the issuance of the Monroe Doctrine to the present. We will track the development of the inter-American system in a context of U.S. hegemony and show how asymmetric power relations have influenced resolution of key problems in regional relations. The course will review changing U.S. policies toward the region, such as dollar diplomacy, the Good Neighbor policy, and the Alliance for Progress, as well as formative events such as U.S. military occupation of countries in the Caribbean Basin as well as Cold War covert operations. Students will consider how the United States and Latin America see shared policy problems differently, including the debt crisis, immigration, illicit drug flows, and environmental problems, and how states nonetheless sometimes cooperate in the resolution of them. *Also offered as CLAS 281.*

360. International Relations Theory.

An advanced seminar on the theories of international relations. The principal contending theories of international relations are investigated and critiqued. Although the nation-state system remains the primary focus of scholars of international relations, other major non-state actors of the international system are examined. Prerequisite: Government 108 or permission of instructor. *Also offered through Peace Studies.*

361. American Foreign Policy.

A study of the formulation, conduct and administration of United States foreign policy, particularly since 1945. The course examines the directions of U.S. foreign policy since 1989 and the goals and values that have guided foreign policy in the new environment. What directions should American policy take in contemporary foreign relations and what goals and values should guide that policy direction? Prerequisites: Government 108 or permission of instructor; junior or senior standing.

363. International Organization and Global Governance.

This course introduces students the structure, actors and processes of global governance. Students will consider the role of formal interstate institutions (United Nations, NATO, EU, etc.) as well as the emergence of global governance processes and applications that go beyond these formal institutional arrangements. It investigates the global transformations that influence changing forms of global governance, including debates on successful humanitarian intervention, traditional and non-traditional security, climate change and the roles played by both state and non-state actors in such contexts. Prerequisite: Government 108 or permission of instructor. *Also offered through Peace Studies.*

364. Terrorism and Human Rights.

This course examines the challenges facing democracies combating terrorism in the post 9/11 setting. States tend to become less democratic when combating terrorism, however, the goal of this course is to examine alternative strategies to the “war” on terror; strategies that lean even more towards human rights observance rather than democratic deficit. This course is interdisciplinary and interactive, largely based on class discussion rather than lectures. We tackle questions of law, policy, and the psychology of fear. Prerequisite: Government 108. *Also*

offered through Peace Studies.

372. Canada in World Affairs.

A broad survey of the Canadian experience in international politics. Ultimately it is an inquiry into the relationship among the international system, the elusive Canadian national interest and the limited set of foreign policy tools at the disposal of the Canadian government. Prerequisite: Government 108 or permission of instructor.

Special Topics Courses

3000 Series (200-Level Courses)

4000 Series (300-Level Courses)

In addition to the courses listed above, each semester the Government Department offers a number of courses covering special topics in the fields of American politics, comparative politics, international politics and political theory. Courses at the 200 level are given a course number in the 3000 series. Courses at the 300 level are given a designation in the 4000 series. The content of each course or section of these 300-level or 400-level special topics courses varies and will be announced each semester.

Advanced Studies

479, 480. SYE: Internships.

Kwame Nkrumah once said, “Thought without practice is empty; practice without thought is blind.” This course brings the two together. Students are required to spend at least eight hours per week in an internship at a local community service agency, dealing with such problems as poverty, crime, illiteracy, environmental degradation, domestic violence and so on. Students reflect on the field experience by writing a research paper related to the internship, keeping a journal that reflects on the field experience in a scholarly way and attending a series of workshops designed to help them conceptualize their experiences. Prerequisites: Government 103 and 290, an overall GPA of 2.8 or better and permission of instructor.

489, 490. SYE: Independent Projects.

Individual study of a topic approved by the department under the direction of a faculty member. Prerequisites: Government 103, 290, an upper-level course on a topic related to the project and an overall GPA of 2.8.

497, 498. SYE: Senior Thesis.

The senior thesis offers the qualified student an opportunity for more intensive work in the field. Minimum criteria for admission to the program are a 3.5 average in government courses, a satisfactory overall academic record, completion of Government 290 with a grade of 3.0 or better and the presentation of an acceptable research proposal. Interested students are required to submit a research proposal to the department by the end of the spring semester of the junior year.

History

Major and minor offered

Professor Jennings, Regosin; **Associate Professors** Alvah, Carotenuto, Csete, DeGroat, Gabriel (chair), Schrems, Smith; **Visiting Assistant Professor** Feinstein; **Senior Lecturer** Fox.

Visit the history department webpage at www.stlawu.edu/history.

History is more than a catalog of events and actors; it is an ongoing process of discovery and interpretation. All facets of human experience have a historical dimension—the power struggles of monarchs and presidents; the working lives of farmers, sailors and seamstresses; the spiritual lives of slaves; the cultural assumptions of colonizers; the intimate relationships of families, to name only a few. Even the telling of history has a historical dimension, since historians often disagree about exactly how things happened and why.

The variety of sources through which we understand history can encompass the full range of human expression as well—written documents, clothing, household items, artwork, advertisements, songs, buildings and public monuments, among others. By studying primary materials and divergent interpretations of history, students acquire and develop analytical and expository skills: they learn to critique and interpret sources, sift through and organize information, formulate persuasive arguments, and express themselves with clarity and elegance. In addition to graduate study, these skills are indispensable for work in law, journalism, education, government, non-governmental organizations and business.

The study of history affords many additional benefits. It expands and enriches our understanding of the diversity of human lives over time across such boundaries as gender, culture, class, race, region, and religion. It helps us think about how and why the world we know came to be and about our own places in it.

The history department offers courses in African, Asian, European, Middle Eastern, Latin American/Caribbean, and North American history. Additional opportunities are available to students for independent study in areas not directly covered by the curriculum. History majors can build on their interests through off-campus study, by participation in local internships, semester or year-abroad programs, summer travel courses, and fellowships. In addition to working in and teaching languages other than English, many faculty are actively involved in area studies, gender studies, and global studies, which offer minor concentrations for history majors.

Major Requirements

The requirements for the major in history are flexible enough to enable a student to pursue personal interests and goals and at the same time foster an appreciation for the diversity of the human experience. To qualify for a major in history the following minimum requirements must be met:

1. **A minimum of 10 history courses** must be completed.
2. **At least four courses (at any level)** must be drawn from four of the following broad categories into which the history curriculum is divided: a) Europe, b) North America, c) Africa, d) Asia, e) Middle East, f) Latin America and the Caribbean, g) Transnational.
3. **At least one course must be a 299 Historical Research Methods seminar**, which must be taken before the senior year.
4. **At least one course must be at the 300 level.**
5. **At least one course must be a Senior-Year Experience (SYE)**, which may be fulfilled by a 400-level research seminar involving a substantial research project, by the two-semester Honors Project, or by a 400-level independent study (see below).
6. No more than three courses at the 100 level may be credited toward the major.
7. Students must maintain a minimum 2.0 GPA in the major.

Minor Requirements

A minor in history provides students with an opportunity to select courses that satisfy their interest in the field while learning the tools of the historian's craft. To qualify for a minor in history the following minimum requirements must be met:

1. **A minimum of six (6) history courses** must be completed.
2. **At least one course must be a 299 Historical Research Methods seminar**, which must be taken before the senior year.
3. **At least one course must be an SYE course.**
4. **No more than one course at the 100 level** may be credited toward the minor.
5. **Among the minimum of six courses**, not more than one may be an independent study (489, 490) or an internship (481, 482).

6. **Students must maintain a minimum 2.0 GPA** in the minor.

Honors

The honors program in history enables qualified students to engage in intensive original work in the senior year. Admission to the program, at the discretion of the department, requires a GPA of at least 3.5 in the major. Students seeking admission must apply to the chair of the department by no later than May 1 of the junior year. Honors are granted upon the successful completion of an honors thesis written under the direction of a faculty advisor. Completion of the honors thesis earns two credits toward the major (History 498 and 499) and fulfills the SYE requirement. Completion of a written historiography and other requirements by the end of the fall semester (History 498) is required for admission to History 499 in the spring.

Certification to Teach Social Studies

Students seeking initial certification as a 7-12 social studies teacher can major in history. In addition to completing the certification minor in education, students majoring in history must also take one economics course (Economics 100, Introduction to Economics, is recommended if only one economics course is taken) and one government course (Government 103, Introduction to American Politics, is recommended if only one government course is taken).

Students must concentrate their studies in the major on courses that illuminate U.S. and/or world history and geography. Students are also encouraged to take courses in other social sciences and area studies to broaden their preparation for teaching social studies.

History majors intending to complete student teaching after graduation in the University's Post-Baccalaureate Teacher Certification Program must complete the educational studies minor in education as undergraduates (or its equivalent) and all of the social science requirements listed above (or their equivalents). Consult the Education section of this *Catalog* and/or speak to the coordinator of the teacher education program in

the education department as early as possible.

Courses

100-Level Courses

Courses at the 100 level, designed specifically for first-year students and sophomores, provide a broad introduction to African, American, Asian, Middle Eastern, Caribbean and Latin American, and European history.

103. Development of the United States, 1607-1877.

This course surveys the creation and development of American society from the European invasions and settlement of North America to the Reconstruction period at the close of the Civil War. While the course follows the chronological development of and changes in American society, it also considers, in some depth, the major ideas and social movements that gave shape to the nation through primary and secondary sources. Topics include Puritans, the American Revolution, slavery, the Great Awakening, federalism, sectionalism, the Civil War, and Reconstruction drawing on the racial and ethnic diversity of the American experience. *Also offered through Native American Studies and Peace Studies.*

104. Development of the United States, 1877-Present.

The development of American society from the end of Reconstruction to the present. Emphasis is on the institutions, ideas, and movements that have shaped modern American society. Using both primary and secondary material, the course discusses the chronological development of and changes in American society as well as such topics as industrialization, urbanization, consumption and popular culture, the United States as a world power, the civil rights and women's movements, the Vietnam War, Watergate, and the end of the Cold War. *Also offered through Peace Studies.*

105. Early Asian Civilizations.

An introduction to the history of Asia to 1800 CE. The course focuses on several themes, all turning around how cultures and societies evolve and develop in interaction with each other. We explore cultural encounters through trade, war and diplomacy, personal encounters between individuals of different cultures and the processes of cultural diffusion, and pay attention to geography and the critical use of primary documents. *Also offered through Asian Studies and Peace Studies.*

106. Modern Asia.

This course examines the Asian region from 1650 to the present. We discuss the creation, dismantling, and continuing remnants of colonialism, World Wars I and II in the Asian context, the Cold War, the Korean and Vietnam Wars, and recent economic development. The course begins with an overview of Asian geography, culture, and history. It is designed to introduce students to major events and issues of modern Asia and also to improve students' skills in critical reading, writing, use of primary and secondary sources, and oral communication. *Also offered through Asian Studies and Peace Studies.*

108. Introduction to African Studies.

This course serves as a broad, interdisciplinary introduction to the study of Africa. Course materials and readings are designed to give special emphasis to African initiatives and perspectives in shaping their own history. African interactions in a global context are emphasized to highlight issues such as the Atlantic slave trade and colonization. Other topics include cultural diversity, geography and environment, religious

expression, and development. At the end of the course students will be able to see how Africans have participated in world historical events and explain the many forces that have shaped African societies over the past 500 years. *Also offered as African Studies 101.*

109. Introduction to European Studies.

This course is an introduction to the histories and cultures of what we now call Europe, with particular focus on the different ways inhabitants of the region have defined their identities, especially in relation to other groups (from the Greco-Roman idea of “civilization” and “barbarians” to the medieval vision of “Christendom” to the Cold War division between Eastern and Western Europe to the current European Union). We explore the geographical, social, and cultural worlds of Europeans in several historical moments and in the present, but do not survey the entire history of “western civilization.” The course will also consider how European culture and history relate to the history of the rest of the world. *Also offered through European Studies.*

110. The Scientific Revolution.

This course covers the development of scientific thought in the period 1500 to 1725. It examines changing views of nature in the fields of anatomy and physiology, astronomy, and physics. Although the primary focus is on specific scientific developments, they are discussed in the context of concurrent social, economic, and religious changes. *Also offered as Physics 110 and through European Studies.*

115. Introduction to Caribbean and Latin American Studies.

This course is an introduction to the richness of Caribbean and Latin American cultures, the region’s turbulent history of conquest and colonization, the diversity of its peoples and history, and the challenges of its development. An important objective of the course is to examine our individual places in the histories of the Americas in comparative perspective. The course provides a framework for study on St. Lawrence’s Costa Rica or Trinidad programs. *Also offered as Caribbean and Latin American Studies 104.*

160. The Islamic World.

This course is designed as an introduction to the history of the Middle East and to some of the ways in which historians have approached that history. Topics to be considered include the development of classical Islamic culture, the nature of the Sunni–Shii split, the role of non-Muslims in Islamicate societies, jihad, gender and sexuality, and the relationship of the Middle Eastern history to wider historical changes. No previous knowledge or background in Islam or Middle Eastern history is required or expected. *Also offered through Peace Studies.*

200-Level Courses

Courses at the 200 level are primarily intended for sophomores and upper-class students, but are open to interested first-year students as well. These courses generally combine lectures and classroom discussions. They are more advanced than the introductory surveys, but broader in their treatment than most courses at the 300 or 400 level.

203. Early Canada, 1534-1867.

After laying eyes upon the eastern coast of Canada in May 1534, the French explorer Jacques Cartier remarked that it resembled the “land that God gave to Cain.” Despite Cartier’s initial misgivings, Canada presented numerous opportunities to Europeans, as it had for the First Nations. For three centuries, the northern half of North

America was an imperial domain of the French, and then of the British. In 1867, the Dominion of Canada was created, and the first steps toward the Canada that we know today were taken. This course explores the political, economic, social, and cultural life of Early Canada, from the age of European contact to Confederation. *Also offered through Canadian Studies.*

204. Modern Canada.

On July 1, 1867, the three British North American colonies of Nova Scotia, New Brunswick, and the United Province of Canada (early Québec and Ontario) joined to create the Dominion of Canada. From the time of Confederation to the end of the Great War, Canada remained in the shadow of Great Britain. In the period following the war, the dominion moved toward closer relations with the United States. It is between these two empires, one across the Atlantic Ocean, the other on the North American continent, that Canada’s evolution as a nation might be understood in the broadest sense. Yet, such an approach masks the internal forces that moved Canada from dominion status to one of the world’s most prolific international actors of the twentieth century. In this course, we will examine the “making” of modern Canada from Confederation to the end of the twentieth century by focusing upon the imperial and continental contexts, as well as domestic political, economic, social, and cultural factors.

205. Nineteenth-Century Europe.

An overview of the political, social, cultural, and intellectual history of Europe in the 19th century, from the French Revolution to the outbreak of the First World War. This era saw the disintegration of previous ways of understanding the world and the rise of new visions of cultural, social, and political organization. Movements including liberalism, nationalism, socialism, feminism, and imperialism sought to reshape the European landscape, while economic and scientific transformations altered Europeans’ experience and perception of the world. We consider a variety of texts, including novels, poetry, speeches, manifestos, visual art, and music. *Also offered through European Studies.*

206. Twentieth-Century Europe.

An overview of the political, social, cultural, and intellectual history of Europe in the 20th century. Wars, economic upheavals, revolutions, and genocidal atrocities reshaped Europe in the first half of the century, radically altering the physical and psychic landscape. Feminism, socialism, communism, and fascism challenged the political system, while the intellectual and artistic avant-garde questioned basic assumptions of European culture. The Cold War, decolonization, and attempts to express a new European identity defined the second half of the century. We consider a variety of texts, including novels, poetry, speeches, art, and films. *Also offered through European Studies.*

207. Civil War and Reconstruction.

This course addresses the social, political, and cultural issues surrounding the Civil War and the efforts to resolve them before, during, and after the war. While attention is paid to the military nature of the conflict, special emphasis is on social and political developments that shaped the Civil War and Reconstruction eras. Topics of study include the road to disunion; the dismantling of slavery; race relations before, during, and after the conflict; amendments to the constitution; and the construction of citizenship in the post-war era.

208. Ottoman Empire and Early Modern Europe.

This course examines the rise and development of the Ottoman Empire from its origins in early 14th-century Anatolia to the end of the 18th century. In addition to tracing the development of political and military institutions, the course explores changing social relations,

with particular attention to the role of women and non-Muslim populations in Ottoman society. A particular emphasis is the relation of the Ottoman Empire to wider global trends and its diplomatic, military, and cultural interactions with Europe.

211. Women in Modern Europe, 1750 to the Present.

This course surveys the roles of women in the political, economic, and social history of modern Europe. Beginning with the 18th century, the course traces the public and private activities of women and the changing cultural definitions of those activities up to the present. Topics include the Enlightenment, industrialization, revolutionary and wartime activities, feminist movements, and the rise of the welfare state. *Also offered through European Studies.*

213. Global Environmental History.

This course explores the new field of environmental history, which examines how plants, animals, and microbiota as well as humans have interacted in the history of the world. We will begin with a survey of twentieth-century environmental history, discussing the themes of the impact of the industrial revolution and use of fossil fuels, the economic and political forces involved in environmental destruction, as well as efforts to understand environmental problems and fix them. We then study the global expansion of Europe between the 10th and 20th centuries, focusing on the effects of the movement of pathogens, human migration, climate, geography, flora, and fauna. Students will work on their own research projects, and present their findings to the class. The course provides practice in critical reading, writing, research, discussion-leading, and oral presentation.

229. Introduction to Native American History.

This course introduces students to key themes in the study of the history of indigenous peoples, focusing primarily on those peoples theme of Native peoples' reative adaptations to historical change. *Also offered through Native American Studies and Peace Studies.*

230. The Middle East in the Nineteenth Century.

This course examines the "long 19th Century" in the Middle East, from the end of the eighteenth century to ca. 1920. In doing so, it will center on the chief questions of the era: European imperial intervention, nationalism, and the challenges of modernization. Key questions will include integration into world markets, the development of Islamic modernism, sectarianism and communal violence, and the changing status of women and non-Muslims. No previous knowledge of the Middle East is required or expected for this course.

231. The Modern Middle East.

This course examines the history of the Middle East from the end of World War I to the present. The class addresses issues such as the development of national states, the rise of political Islam, changing understandings of gender and sexuality, the Arab-Israeli Conflict, oil, growing US involvement in the Middle East. A central focus of the class is understanding the contemporary Middle East in its historical context.

233. Colonial Latin America.

This course surveys the formation and historical development of colonial Latin America. We begin with initial encounters between indigenous peoples of the Americas and Iberians in the 15th century and end with Portugal and Spain's loss of their mainland colonies in the Americas in the 1820s. Part of our task is to understand the dynamics of race, class, and gender in the colonial societies that developed from the violent collision of cultures during the conquest. *Also offered through Caribbean and Latin American Studies and Peace Studies.*

234. Modern Latin America.

This course surveys the history and development of modern Latin America. We begin with a brief overview of the colonial and early national periods, but the main focus of the course is from 1870 to the present. Some of the issues that concern us include the historical roots of the human and cultural diversity of modern Latin America, the region's relationships to a changing world economy, politics and human rights, and migration and diasporic cultures. *Also offered through Caribbean and Latin American Studies and Peace Studies.*

239. Imperial Spain.

This course considers Spain as both an agent and an object of colonization. Its chronological sweep is broad, from ancient times through the 19th century. The central portion of the course focuses on Spain at the height of its imperial power, from the mid-16th to the mid-17th centuries, with Miguel de Cervantes' *Don Quijote* (in a modern English translation) as an important source. Themes include religious, cultural and racial diversity in Spain and its empire, and the price of empire for Spanish development.

243. Origins of American Foreign Policy (Colonial Era to 1900).

Since its creation, the United States has been connected with the wider world through trade, immigration, territorial expansion, and war. This course examines the roots and characteristics of American foreign policy and foreign relations from colonial times through the nineteenth century, while giving attention to how domestic politics, public opinion, society, and culture responded to and shaped government policies and international relations. We also consider how ideas about race and gender influenced policies and relations with other nations; how the territorial expansion of the United States affected Native Americans; and how the peoples of other nations responded to U.S. policies. *Also offered through Peace Studies.*

244. U.S. Foreign Relations 1900-1950.

A history of the development of U.S. foreign policy and relations, beginning with the war in the Philippines at the turn of the century, and continuing through the Second World War and the emergence of the Cold War. In addition to examining traditional diplomacy and economic relations, we consider how public opinion and assumptions about race, ethnicity, and gender influenced U.S. foreign policy and actions. We also examine international responses to U.S. government policies and actions and to the expansion of American culture abroad. *Also offered through Peace Studies.*

246. The Cold War.

The United States and the Soviet Union were the rival superpowers in the Cold War, but European, African, Asian, and Latin American and Caribbean nations also were enmeshed in the conflict, sometimes in "hot" wars that killed hundreds of thousands of people and devastated communities and natural environments. In class lectures, discussions, and research-based presentations, this course explores answers to such questions as: What caused the Cold War, and could it have been avoided? How did the Cold War affect international and domestic politics, everyday life, and culture in various nations? Why did it finally end (or did it)? What are the legacies of the Cold War?

252. Conflict in Africa.

From discussions of Darfur, to genocide in Rwanda, conflict is often the center of contemporary discourse about Africa. But what do we mean by conflict in Africa? Is it as violent and widespread as the media portrays? This course uses case studies throughout the last two centuries of African history to examine broad social and political dimensions of

conflict. Cases examine issues such as colonialism, ethnicity, generational tensions, and genocide from diverse perspectives. The course is primarily discussion based and will challenge students to develop their thoughts on issues through oral debates and writing assignments. No prerequisites are required. *Also offered as African Studies 252 and through Peace Studies.*

253. Colonial British America.

In this course we examine the lives of the Native American, European, and African inhabitants of Colonial British America. The history of colonial British America includes more than stereotypes of Puritans, Plymouth Rock, Thanksgiving, and witches. By focusing on the social, economic, and intellectual factors that comprised the colonial world, we come to understand the influences that reach beyond this era into the present day.

254. History of Modern France, 1815 to the Present.

This course provides an upper-level survey of French history from the Restoration through the Fifth Republic. The legacy of the 1789 Revolution, the origins of the Dreyfus Affair, the Vichy Regime and the Resistance, de Beauvoir's feminism, de Gaulle's and Mitterand's presidencies, the rise of the National Front, and the confrontation between Islam and republicanism are among many topics explored. The course includes cultural and social history as well as politics and foreign policy. *Also offered through European Studies.*

256. Slavery and Freedom in the Americas.

This course surveys the genesis and dissolution of the transatlantic slave trade and the slave societies that created the demand for this trade in both North and South America and the Caribbean. The perspective is Atlantic in scope, trying to understand the impact of this forced migration on Africa and Africans and on American societies, defined as all of the Americas, not just the U.S. We also discuss some of the movements to abolish the slave trade and slavery itself, examining how the people involved defined freedom. *Also offered through African-American Studies, Caribbean and Latin American Studies and Peace Studies.*

263. African-American History to 1865.

A survey of the social, political, cultural, and economic history of African Americans from the 1600s to the end of the Civil War. Topics include the Atlantic slave trade, colonial and antebellum slavery, family life, resistance to slavery and African-Americans' participation in the Civil War, and contributions to the building of the nation. *Also offered through African-American Studies.*

264. African-American History, 1865-Present.

A survey of the social, political, cultural, and economic history of African-Americans from 1865 to the present day. Topics include Reconstruction, the implementation of segregation, the Harlem Renaissance, African-Americans' participation in both World Wars and Vietnam, the civil rights movement, the black power movement, and activism in the 1980s and 1990s. *Also offered through African-American Studies.*

267. The Holocaust.

This course focuses on the development of the Holocaust from 1933 to 1945, with attention to the motives of its perpetrators and the experience of victims and bystanders. Topics include historical Christian anti-Judaism and the creation of modern anti-Semitism, legal exclusion of Jews from German life under the Nazis, ghettoization of Eastern European Jews, and the development of Nazi policy from ethnic cleansing to genocide. The course also explores the relationship between the genocide perpetrated against the Jews and Nazi persecution of other groups such as Slavs, Roma, and the disabled. Finally, we consider the Holocaust's legacies for Jewish and German identity, and for understanding genocide broadly. *Also offered as Religious Studies 267*

and through European Studies and Peace Studies.

272. The New South.

A survey of the history of the Southern United States from Reconstruction to the present. The primary focus is on the political, economic, and social history of the South, although attention is paid to its cultural history, especially through an examination of stereotypes about the South. A major theme is the interrogation of the notion of Southern "distinctiveness," how that notion has served the needs of the nation outside the South, and whether the South is still a culturally distinct region. *Also offered through African-American Studies.*

273. Civil Rights Movement.

This course examines the civil rights movement from Brown v. Board of Education to the battles over Affirmative Action at the nation's most prestigious colleges and universities today. The course traces the ideological developments and struggles in the movement, especially as major protest activities spread outside the South to the North and West; it focuses on the events of the movement and on the disagreements over strategies, tactics, and goals among various civil rights organizations and leaders. The course uses a variety of texts to explore the movement, including memoirs, scholarly articles and monographs, Hollywood feature films, and documentaries. *Also offered through African-American Studies and Peace Studies.*

280. History of Women in America.

This course examines the history of women in the United States in the context of broad social changes between 1600 and 1990. Political, social, legal, demographic, and economic changes all shaped and informed the experiences of women in the colonies and the United States; the course examines how women responded to these changes and how they worked to bring about changes that improved the circumstances of their lives. Gender relations, race relations, industrialization, immigration, and family structure provide focal points throughout the course.

282. Modern Japan.

This course covers Japanese history from the Tokugawa to the present. Treatment is thematic, including the rise and fall of the Tokugawa, Japan's encounter with the imperialist powers, Taisho democracy, World War II, and social/economic trends since that war. We will read novels, memoirs, and biographies, and use film as well. Students will write response papers on the readings, give oral presentations on research projects, and take turns leading discussion.

286. Modern Iran.

This course examines the history of Iran in the modern era. After an overview of Iran under Safavid rule and the early Qajars, this course will focus on social, political, and cultural transformations in Iran from the late 19th century to the present. Topics of particular interest will include the question of "modernity," the role of the ulema, the Constitutional and Islamic revolutions, the rise of political Islam, the role of Iran in regional politics, and issues of gender and sexuality. Classes will alternate between formal lectures and seminar-style discussions. The instructor assumes motivated students willing to work and to be challenged.

289. Independent Study.

Designed for the exploration in depth of a topic not covered by an existing course, an independent project requires a proposal designed with the faculty sponsor that is approved by the department chair the semester prior to its undertaking. Only one such course may count toward the major or minor.

292. Modern China.

This course covers three revolutions in modern Chinese history: 1)

the rise of the Communist Party; 2) the Cultural Revolution of 1966-1976, using memoirs of Chinese who lived through that decade; 3) the “economic revolution” of the 1980s and 1990s in the context of the Pacific Rim region. *Also offered through Asian Studies and Peace Studies.*

293. Public History.

History is an active process and much of historians’ research takes place in archives and libraries. In this course we explore the field of public history, which includes the collection, cataloging and dissemination of histories that takes place through public sites such as libraries, historical societies and museums. We also practice in the field with an examination of the histories of Canton, St. Lawrence County, and the North Country. The course introduces and utilizes various tools of the discipline of history, such as document analysis, critical reviews, and an understanding of historiography as we research and write local history. Part of the research into this second element of the course will take place through an internship at a local institution such as a historical society or museum.

299. Seminar on Historical Research Methods.

This course, required for the major and the minor in history, is designed to offer students an opportunity to learn about and practice the tools of the historian’s craft while examining a particular topic in detail. The main focus is the “history of the history” of the particular topic, also known as historiography. While topics vary, the course proceeds in seminar fashion and entails extensive reading and writing assignments. Prerequisite: a 100- or 200-level history course.

3000-3999. Special Topics in History.

The content of each course or section of these 200-level special topics courses varies and will be announced each semester.

300-Level Courses

Courses at the 300 level are discussion-based seminars that explore a focused topic in depth, utilizing a variety of tools of historical analysis. They generally include an expectation of student research. Students registering for 300-level courses must have at least one 100- or 200-level history course or permission of the instructor.

308. European Imperialisms.

The development, transformations, and decline of European imperialism with an emphasis on the 19th and 20th centuries. We focus on the ways that European constructions of gender and race influenced and were influenced by the encounters between colonizer and colonized. A partial list of topics includes the French in North and West Africa and Southeast Asia, the Dutch in the East Indies and Southern Africa, and the British in Ireland and India. *Also offered through African Studies, European Studies, and Peace Studies.*

311. Nineteenth and Twentieth-Century Science.

This course examines a few of the major developments of the 19th and 20th centuries in some detail. Topics include evolution, genetics, and a synthesis of the two; the wave theory of light and special relativity; the discovery of the atomic and nuclear structure of matter; and the Manhattan Project. Also considered are the various ways historians of science go about constructing the stories they write as well as some of the historiographic issues they face. *Also offered as Physics 311 and through European Studies.*

325. The United States and the Vietnam War.

This seminar examines the United States’ relationship with Vietnam between World War II and the present, concentrating on the period of the U.S. political and military commitment to the South Vietnamese government in its war against the communist nationalists (1955-1975). We consider a variety of perspectives—those of Vietnamese communists, anti-communists, and “the people in the middle”; of American supporters and opponents of the war—including policymakers, soldiers, and demonstrators; and of other nations’ participants and onlookers. We also study how the war influenced American domestic politics, society, and culture (and continues to do so). *Also offered through Peace Studies.*

331. Imagining the South.

“You should need a passport to come down here.” In 2002, a character in the movie *Sweet Home Alabama* used these words to characterize the South as a region so unlike the rest of the nation that it is better thought of as a foreign country. This course explores the various ways in which the South has been depicted by non-Southerners and Southerners alike. A variety of genres—historical texts, memoir, fiction, film, music—are used to interrogate the images of the South and to ask what national purposes these images have served and continue to serve. *Also offered through African-American Studies.*

333. The Age of the American Revolution.

An in-depth examination of the causes, progress, and consequences of the American Revolution, including a summary of the constitutional, economic, and social development of the colonies to 1763; the alteration of British colonial policy after 1763 and the American response; internal unrest within the colonies; the development of a revolutionary movement culminating in the Declaration of Independence; the war to secure independence; and the Constitution of 1787. *Also offered through Native American Studies and Peace Studies.*

340. Race, Ethnicity, and Baseball.

This course takes a historical and philosophical look at race and ethnic relations in the United States since the Civil War as reflected in the history of professional baseball both on and off the field. Throughout the course, we will devote our attention to epistemological and moral questions related to race and ethnicity. What is race or ethnicity? Do we have a moral obligation to eradicate discrimination based on race or ethnicity?

352. Playing Indian: Native American Stereotypes in American History and Imagination.

When are Indians not Native Americans? When they are the stereotypes created as expressions of the cultural and historical hegemony of a predominantly non-Native society that obscures the diverse realities of the real people. Since the 15th century, when Native peoples were named “Indians” by a very confused explorer, Natives have been regarded as more historical objects than agents. We discuss the historical construction and use of “Indians” by colonists, modern (non-Native) Americans, and Native Americans themselves, and examine Indian stereotypes in the construction of the American ideal in history, art, film, literature, television, and music. *Also offered through Native American Studies.*

362. Topics in American Economic History.

This course offers an overview of the economic development of the United States. The specific topics covered will vary by instructor, but have included the economic causes of the American Revolution, the evolution of financial markets, the economics of slavery and Reconstruction, the Populist movement, the growth of government in the Progressive Era, the effects of war and other crises on the U.S.

economy, and the Great Depression. Emphasis is placed on the role economic theory can play in understanding pivotal events of U.S. history and their relevance for current events. Prerequisites: Economics 251 and 252. *Also offered as Economics 362.*

365. Colloquium in American History.
Topics vary. Consult the semester course schedule for current offerings.

368. Palestine and the Arab-Israeli Conflict.
This class explores the development of two competing nationalism movements, Israeli and Palestinian, from their roots in the 19th century to the present day. Beyond gaining an understanding of the development of “the conflict,” this course pays particular attention to the development of both Israeli and Palestinian identities and societies. Other key considerations are the interaction between politics and history and an examination of some of the key historiographical debates in the field, including the wars of 1948 and 1967, the peace process, and the “authenticity” of national constructions and nationalist claims. Texts include secondary and primary source readings, novels, and films.

371. Eighteenth-Century Europe and the French Revolution.

This course examines the origins of the French Revolution in 18th-century Europe and the revolution itself. Topics include social, economic, and cultural as well as political questions; the consequences of the revolution for France, Europe, and the world up to 1815 are considered. The ever-changing historiography of the revolution provides the organizing principle for the course. *Also offered through European Studies and Peace Studies.*

372. European Identities, 1700-2000.
This seminar examines the construction and transformation of European identity in the 19th and 20th centuries. The impact of the encounters between Europeans and non-Europeans on the culture and society of both old and new Europe is a particular focus. Beginning with the debates on national identity in the early 19th century and continuing with inter-European migration and colonial expansion, the course examines the developing relationship between European and colonial peoples that led to the establishment of significant immigrant communities in the West. The course concludes with an assessment of topics relevant to current European social and political concerns. *Also offered through European Studies.*

373. Japan and the United States in World War II, 1931-1952.

In this course we examine the relationship between Japan and the United States in the 1930s, 1940s and 1950s. We discuss anti-war political activism in the U.S. and Japan, the internment of Japanese-Americans, the role of propaganda in both countries, the bombing of Hiroshima and Nagasaki, and the Allied occupation of Japan after the war. We work on writing and oral communication skills and discuss such concerns as how cultures understand and misunderstand each other. *Also offered through Peace Studies.*

375. Colloquium in European History.
Topics vary; consult the semester course schedule for current offerings. *Also offered through European Studies.*

376. Colloquium in African History.
Topics vary; consult the semester course schedule for current offerings.

377. Colloquium in Asian History.
Topics vary; consult the semester course schedule for current offerings. *Also offered through Asian Studies.*

378. Colloquium in Caribbean and Latin American History.
Topics vary; consult the semester course schedule for current offerings. *Also offered through Caribbean and Latin American Studies.*

379. Colloquium in Middle Eastern History.
Topics vary; consult the semester course schedule for current offerings.

382. Genocide in the Modern World.
The last two centuries have seen mass violence on a scale unprecedented in human history. Among the most horrifying forms this violence took was the attempt to systematically exterminate whole religious/ethnic/national groups, which Raphael Lemkin coined the term “genocide” to describe. In this course, we examine individual historical cases of genocide (including the colonial killings of indigenous peoples, the Armenian genocide, the Holocaust, Khmer Rouge Cambodia, and the Rwandan genocide) and also consider theoretical approaches that seek to explain its causes and dynamics. We also survey the history of attempts to prevent genocide. *Also offered through Peace Studies.*

471-480. SYE: Senior Seminars.
Senior seminars, restricted to senior majors and minors, are normally limited to 10 students and require the production of a substantial research paper that includes original research. Successful completion of an SYE seminar course, an independent-study SYE, or honors thesis is required for the major. Topics vary; consult the semester course schedule for current offerings. Prerequisite: HIST 299.

471-472. SYE: Seminars in European History.
Also offered through European Studies.

473-474. SYE: Seminars in American History.
475-476. SYE: Seminars in Asian History.
Also offered through Asian Studies.

477-478. SYE: Seminars in Comparative History.
480. SYE: Seminar in African History.

From political strife to economic and social challenges, contemporary African issues current are often described as primordial conditions or products of recent political failures. However to understand Africa today, one must move beyond these simplistic explanations. This course will challenge students to use an interdisciplinary approach to examine how contemporary issues must be examined within a complex historical framework. As a research seminar a substantial portion of class time and assignments are devoted to producing a significant research paper. A background in history and African studies is strongly recommended. *Also offered as African Studies 480.*

481,482. Internships.
These courses provide an opportunity for qualified juniors and seniors to obtain credit for work at local, state, or national historical agencies, archives, or museums. Supervision is provided by the host agency.

Responsibility for evaluating the experience rests with the history department faculty coordinator. The internship must be set up in the prior semester at the initiative of the student, in consultation with one faculty member and the chair. Prerequisite: permission of instructor and chair of the department.

489, 490. SYE: Independent Study.

To qualify, students must have a 3.2 GPA in the history department. Normally, students should have senior standing, with a major or minor in history. Applicants must demonstrate that the study they wish to pursue has serious intellectual merit and that their objectives cannot be accomplished within the framework of existing course offerings. This course must be set up in the prior semester. Prerequisite: permission of instructor and chair of the department.

498, 499. SYE: Honors Thesis.

History and Modern Languages

Four majors offered: History and French, History and Spanish, History and German, and History and Multi-Languages

The interdisciplinary history and modern languages majors allow students to deepen their understanding of the non-English-speaking world by learning about the historical development of the areas in which languages are utilized and exploring historical topics with a much broader range of historical sources than would be possible with only a knowledge of English. The combined majors afford students enhanced opportunities to excel in ways that make them stronger applicants for graduate study as well as for jobs in fields in which language and cultural competency as well as research and analysis skills are required (such as diplomacy, international business or law, and public history).

Graduation with honors may be recommended upon the basis of grades, the completion of an honors project approved and supervised by a faculty member, and an oral presentation on the thesis. Students who expect to undertake such a program should consult with the chairs of the History and Modern Languages departments in the last term of their junior year. Such projects must have the approval of both departments. Although not required, participation in an abroad program related to one's language specialization is strongly recommended.

Requirements in History

for all History-Language interdisciplinary majors

SEVEN units in History.

299. Seminar on Historical Research Methods
- 471-480. SYE: Senior Seminars (in which the student conducts research related to her or his language focus)
- FIVE one-unit electives selected from the appropriate list below.
 - One of these electives must be at the 300 level
 - Any other four electives, no more than two at the 100 level
 - A minimum of three courses must be drawn from the list of electives related to the student's language focus or approved by the department chair as involving substantial coursework related to the student's language focus.

Requirements for the History and French major

SEVEN units in History as described above.

SEVEN units at the 103 or higher level in French.

Students already proficient at the intermediate level will receive credit for 103 and 104 upon completion of a higher level course in this language and will need only 5 units of this language to complete the major.

Total 14 units

Requirements for the History and Spanish Major

SEVEN units in History as described above.

SEVEN units at the 103 or higher level in Spanish.

Students already proficient at the intermediate level will receive credit for 103 and 104 upon completion of a higher level course in this language and will need only 5 units of this language to complete the major.

Total 14 units

Requirements for the History and German Major

SEVEN units in History as described above.

SEVEN units at the 101 or higher level in German.

Students already proficient at the beginning level will receive credit for 101 and 102 upon completion of a higher level course in this language and will need only 5 units of this language to complete the major.

Total 14 units

Requirements for the History and Multilanguage Major

SEVEN units in History as described above.

THREE courses at the 100-level or above in one of the following languages: Arabic, Chinese, Italian, German, or Swahili.

THREE courses at the 200-level or above in either French or Spanish

Total 13 units

HISTORY-FRENCH History electives

- HIST 109 Introduction to European Studies
- HIST 203 Early Canada
- HIST 204 Modern Canada
- HIST 205 19th c. Europe
- HIST 206 20th c. Europe
- HIST 211 Women in Modern Europe
- HIST 221 Senegal in the World
- HIST 254 Modern France
- HIST 299 The French Revolution; European Sexualities; World War I
- HIST 308 European Imperialisms
- HIST 371 18th c. Europe and the French Revolution
- HIST 372 European Identities, 1700-2000

Additional special topics courses offered in European history, African history, and North American history

France program:

- Various courses at the University of Rouen (Spring semester)

HISTORY-SPANISH History electives

- HIST 109 Introduction to European Studies
- HIST 115 Introduction to Caribbean and Latin American Studies
- HIST 205 19th c. Europe
- HIST 206 20th c. Europe
- HIST 211 Women in Modern Europe
- HIST 233 Colonial Latin America
- HIST 234 Modern Latin America

- HIST 239 Imperial Spain
- HIST 256 Slavery and Freedom in the Americas
- HIST 299 The US & Cuba
- HIST 372 European Identities, 1700-2000

Additional special topics courses offered in Caribbean & Latin American history, European history, and North American history

Spain program:

- HIST/GNDR/SPAN 383S History of an Emancipation: Women in Spain, 1750-1995

Costa Rica program:

- Various courses at the University of Costa Rica

Trinidad program:

- Various courses at the University of the West Indies

HISTORY-GERMAN History electives

- HIST 109 Introduction to European Studies
- HIST 205 19th c. Europe
- HIST 206 20th c. Europe
- HIST 246 The Cold War
- HIST 267 The Holocaust
- HIST 299 World War I
- HIST 372 European Identities, 1700-2000
- HIST 375 The Weimar Republic & the Rise of the Nazis
- HIST 382 Genocide in the Modern World
- HIST 472 Weimar & Nazi Germany

Additional special topics courses offered in European history

Austria program:

- HIST 277V The Formation of Europe: The Habsburg Empire

HISTORY-MULTILANGUAGE History electives

In addition to the above-listed electives for French, Spanish, and German, the following electives are also appropriate, depending on the student's language of secondary focus.

Arabic:

- HIST 160 The Islamic World
- HIST 208 Ottoman Empire and Early Modern Europe
- HIST 286 Modern Iran
- HIST 368 Palestine and the Arab-Israeli Conflict

Additional special topics courses offered in Middle Eastern history

Chinese:

- HIST 105 Early Asian Civilizations
- HIST 106 Modern Asia
- HIST 292 Modern China

Additional special topics courses offered in Asian history

Swahili:

- HIST 108 Introduction to African Studies
- HIST 252 Conflict in Africa

Additional special topics courses offered in African history

Intercollegiate Athletics and Recreation

Minor offered in Sports Studies and Exercise Science

Associate Professor Robert Durocher (chair),
Coordinator of Academic Programs Canfield.

Visit the intercollegiate athletics and recreation webpage at www.saintsathletics.com, or, for information on the academic minor, go to www.stlawu.edu/sport-studies-and-exercise-science.

In addition to intercollegiate athletics and recreation, department programming includes academic instruction; intramural and recreation programs; and fitness and wellness programs.

Descriptions of courses offered in fulfillment of the minor can be found under Sports Studies and Exercise Science. Course concentrations include the study of physical activity and sport through sociological, psychological and philosophical perspectives; sports medicine; fitness/wellness; and coaching certification for public school athletics.

Non-credit instruction focuses on health-related topics of fitness/wellness such as nutrition, cardiac risk assessment and stress management. These provide the essential educational dimension for the St. Lawrence Fitness and Wellness Program.

Physical activity instruction features lifetime physical activities including golf, tennis, squash, dance, martial arts and yoga. Certification

programs in Red Cross CPR, First Aid and Life-guarding are also offered.

International Economics and Modern Languages

Four majors offered

Visit the program's webpage at

www.stlawu.edu/economics/international-economics-modern-languages-combined-major.

The interdisciplinary international economics and modern languages majors build on existing majors in economics and modern languages and literatures. The economics major helps students develop interests and skills that go beyond the U.S. economy; modern languages and literatures emphasize the rich culture and heritage that other nations bring to our increasingly global economy. The combined majors afford students enhanced opportunities to develop careers in the profit (e.g., multi-national companies), not-for-profit (e.g., the Red Cross and Peace Corps as well as public policy organizations) and government (e.g., the U.S. State Department) sectors of the economy.

It is essential that the student work closely with advisors in both departments in planning his or her program. One can major in international economics combined with French, German, Spanish or multi-language.

Requirements in International Economics for All Majors

Economics

100. Introduction to Economics.	1 unit
200. Quantitative Methods in Economics.	1.5 unit
251. Intermediate Microeconomics Theory.	1 unit
252. Intermediate Macroeconomics Theory.	1 unit
THREE electives in Economics	<u>3 units</u>

At least two of these electives at the 300/400 level.

At least two of these electives must include:

- 236. Globalization Issues.
- 322. International Economics.
- 336. Economic Development.

Total 7.5 units

Requirements for the International Economics and French Major

Economics
Requirements from above 7.5 units

Modern Languages – French
SEVEN units at the 103 or higher level 7 units
Total 14.5 units

**Students already proficient at the intermediate level will receive credit for 103 and 104 upon completion of a higher level course in French and will need only 5 units of French to complete the major.*

Requirements for the International Economics and German Major

Economics
Requirements from above 7.5 units

Modern Languages – German
SEVEN units at the 102 or higher level 7 units
Total 14.5 units

**Students already proficient at the intermediate level will receive credit for 103 and 104 upon completion of a higher level course in German and will need only 5 units of German to complete the major.*

Requirements for the International Economics and Spanish Major

Economics
Requirements from above 7.5 units

Modern Languages – Spanish
SEVEN units at the 103 or higher level 7 units
Total 14.5 units

**Students already proficient at the intermediate level will receive credit for 103 and 104 upon completion of a higher level course in Spanish and will need only 5 units of Spanish to complete the major.*

Requirements for the International Economics and Multilanguage Major

Economics
Requirements from above 7.5 units

Modern Languages
THREE courses in one of the following languages:

Arabic, Chinese, Italian, Swahili 3 units

plus

THREE courses in French at/above 200 level,

or

THREE courses in German at/above 103 level,

or

THREE courses in Spanish at/above 200 level 3 units

Total 13.5 units

Although not required, participation in an abroad program related to one's language specialization is strongly recommended.

All majors must maintain a grade point average of at least 2.0 in economics and in modern languages and literatures.

Economics 200 is a research methods course required of all majors. It is recommended that this course be taken as early as possible, preferably before Economics 251 and 252. Statistics 113 (Applied Statistics) is a prerequisite for Economics 200. Students who have taken Statistics 113 and either Mathematics 135 or 136 and earned at least a 3.0 in both, or who have completed Mathematics 213, may choose an additional economics elective (at the 200 or higher level) in lieu of Economics 200.

Graduation with honors may be recommended upon the basis of grades, the completion of an honors project approved and supervised by a faculty member, and an oral presentation on the thesis. Students who expect to undertake such a program should consult with the chairs of the Economics and Modern Languages departments in the last term of their junior year. Such projects must have the approval of both departments.

Mathematics

Major and minor offered

Professors DeFranza, P. Lock, Melville; **Associate Professors** Bos, Chapman, Giarrusso, Look (chair); **Assistant Professor** Komarov.

Visit the mathematics, computer science and statistics department webpage at www.stlawu.edu/math-computer-science-and-statistics.

The department offers a wide variety of courses available to both majors and non-majors. We

encourage all students to take advantage of the many opportunities to explore mathematical thought. For the mathematics major, there are courses in pure mathematics, applied mathematics and statistics. These courses prepare students for the many careers in which mathematics plays a major role. Many majors pursue advanced degrees after graduation in the mathematical sciences as well as in such diverse fields as medicine, law and business administration.

There are numerous opportunities for majors to conduct independent research, either in an independent study course or as a paid summer research intern. In addition, opportunities exist for student employment in the department during the academic year. We encourage our majors to be active learners and to become active participants in department life.

We are also committed to educating students who are not mathematics majors. For science and social science majors, there are courses in calculus, statistics, computer science and linear algebra. For non-science majors, there are courses that contain the significant ideas and methods of mathematics. We believe we offer something for everyone and we encourage all students to investigate these offerings. Any member of the department is available to advise students in making an appropriate choice.

While maintaining our strong commitment to teaching in a liberal arts setting, all members of the department maintain active research programs in their field. The work of department members involves study in the areas of applied mathematics, pure mathematics, applied statistics and computer science.

The following sentence has appeared in every St. Lawrence *Catalog* since 1896: “Instruction in this department is intended to aid in the development of exact, concise and independent reasoning, to cultivate the imagination and to inspire habits of original and independent thought.” In the years since 1896, mathematical knowledge has expanded and courses have been drastically changed, yet these words remain appropriate.

Major Requirements

The requirements for a major in mathematics are a total of 11 units of mathematics and statistics,

including:

- 135. Calculus I.
- 136. Calculus II.
- 205. Multivariable Calculus.
- 280. A Bridge to Higher Mathematics.
- 305. Real Analysis, **or** 306. Complex Analysis.
- 315. Group Theory, **or** 316. Ring Theory.

At least four of the eleven units must be at the 300 level or above. Math 110, 123 and 134 may not be counted toward the major in mathematics. CS 140 may count as an elective toward the major in mathematics, as does any statistics course.

Note: By their very nature, the disciplines of mathematics and statistics are closely connected, and several of the courses offered within the department can be used towards a major or minor in both. However, to ensure that the students who wish to double major (or major and minor) in the two fields have sufficient depth of knowledge within each field, there are some limitations on the number of courses that can count towards both. Details can be found at the Mathematics, Computer Science, and Statistics department webpage.

Students must fulfill a Senior-Year Experience (SYE) requirement either in mathematics/statistics as one of the eleven courses in the major or by completing an SYE outside the department.

Students planning to major in mathematics are encouraged to complete Mathematics 280 before the end of the sophomore year, because this course is a prerequisite for many courses at the 300 level and above.

Students considering graduate work in mathematics are strongly encouraged to take Math 217 (Linear Algebra) and Math 305, 306 and 315, 316 (a full year each of analysis and algebra). Students considering graduate work in statistics are strongly encouraged to take Math 217, Math 305, and CS 140 in addition to minoring in statistics.

Students planning to participate in an off-campus program should seek early advice from the department on the best way to plan their major program.

Honors

Honors work in mathematics provides the student

with an opportunity for more independent and creative work in pure or applied mathematics. A minimum GPA of 3.5 in all mathematics/statistics courses is required to receive honors in mathematics. In addition, each student applying for honors must complete a departmentally approved honors project. This work is completed as a senior year experience project. Interested students should consult the department chair.

Minor Requirements

The requirements for a minor in mathematics are Mathematics 135, 136, 205 and four additional mathematics/statistics courses, at least three of which must be at the 200 level or above. Math 110, 123 and 134 may not be counted toward the minor in mathematics. Computer Science 140 may count as an elective toward the minor in mathematics. Statistics courses may also count, although there are rules if one chooses to major/minor in both mathematics and statistics. Details can be found on the department webpage.

Related Programs

The department teams with economics and environmental studies to offer interdisciplinary majors in economics–mathematics and environmental studies–mathematics. The department also supports the major and minor in computer science as well as a minor in statistics that incorporates courses from mathematics and several other departments. The requirements for these programs are described elsewhere in this *Catalog*.

Certification to Teach Mathematics

Students seeking initial certification as a 7-12 mathematics teacher in New York must major in mathematics and also complete the education studies minor. Strongly recommended for the teaching certificate in mathematics are courses in geometry, statistics, computer science and physics. Mathematics majors intending to complete student teaching after graduation in the University's Post-Baccalaureate Teacher Certification Program must complete the mathematics major and the educational studies

minor in education (or its equivalent) as undergraduates. Consult the Education section of this *Catalog* and/or speak to the coordinator of the teacher education program in the education department as early as possible. Students should also consult early with a member of the mathematics, computer science and statistics department to schedule required courses around the professional semester.

Advanced Placement in Calculus

Students who have seen some calculus before are encouraged to register for Math 136, Calculus II, or Math 205, Multivariable Calculus. Students starting in Math 136 who receive a grade of 2.0 or higher will receive credit for Math 135. Students starting in Math 205 who receive a grade of 2.0 or higher will receive credit for Math 135 and Math 136. This is true for all students who have taken any calculus course before college. For those students who have taken the AP course, students receiving a grade of 4 or 5 on the AB exam receive credit for Math 135, and students receiving a grade of 4 or 5 on the BC exam receive credit for Math 135 and Math 136. Students unsure of placement within the calculus sequence should talk to any member of the department.

Courses

110. Concepts of Mathematics.

An introduction to significant ideas of mathematics, intended for students who will not specialize in mathematics or science. Topics are chosen to display historical perspective, mathematics as a universal language and as an art, and the logical structure of mathematics. This course is intended for non-majors; it does not count toward either the major or minor in mathematics; students who have passed a calculus course (Mathematics 135, 136 or 205) may not receive course credit for Mathematics 110.

123. Mathematics of Art.

This course explores the connections between mathematics and art: how mathematics can provide a vocabulary for describing and explaining art; how artists have used mathematics to achieve artistic goals; and how art has been used to explain mathematical ideas. This course is intended for non-majors; it does not count toward either the major or minor in mathematics. Offered in alternate years.

134. Precalculus.

A development of skills and concepts necessary for the study of calculus. Topics include the algebraic, logarithmic, exponential and trigonometric functions; Cartesian coordinates; and the interplay between algebraic and geometric problems. This course is intended for students whose background in high school was not strong enough to prepare them for calculus; it does not count toward the major or minor in mathematics. Students who have passed a calculus course (Mathematics 135, 136 or

205) may not receive course credit for Mathematics 134.

135. Calculus I.

The study of differential calculus. The focus is on understanding derivatives as a rate of change. Students also develop a deeper understanding of functions and how they are used in modeling natural phenomena. Topics include limits; continuity and differentiability; derivatives; graphing and optimization problems; and a wide variety of applications.

136. Calculus II.

The study of integral calculus. Topics include understanding Riemann sums and the definition of the definite integral; techniques of integration; approximation techniques; improper integrals; a wide variety of applications; and related topics. Prerequisite: Mathematics 135 or the equivalent.

205. Multivariable Calculus.

This course extends the fundamental concepts and applications of calculus, such as differentiation, integration, graphical analysis and optimization, to functions of several variables. Additional topics include the gradient vector, parametric equations and series. Prerequisite: Mathematics 136 or the equivalent.

206. Vector Calculus.

A direct continuation of Mathematics 205, the main focus of this course is the study of smooth vector fields on Euclidean spaces and their associated line and flux integrals over parameterized paths and surfaces. The main objective is to develop and prove the three fundamental integral theorems of vector calculus: the Fundamental Theorem of Calculus for Line Integrals, Stokes' Theorem and the Divergence Theorem. Prerequisite: Mathematics 205. Offered as interest warrants.

217. Linear Algebra.

A study of finite dimensional linear spaces, systems of linear equations, matrices, determinants, bases, linear transformations, change of bases and eigenvalues.

230. Differential Equations.

An introduction to the various methods of solving differential equations. Types of equations considered include first order ordinary equations and second order linear ordinary equations. Topics may include the Laplace transform, numerical methods, power series methods, systems of equations and an introduction to partial differential equations. Applications are presented. Prerequisite: Mathematics 136. Offered in spring semester.

250. Mathematical Problem-Solving.

Students meet once a week to tackle a wide variety of appealing math problems, learn effective techniques for making progress on any problem, and spend time writing and presenting their solutions. Participation in the Putnam mathematics competition in early December is encouraged but not required. This course is worth 0.25 credit, meets once per week, and is graded pass/fail. Since topics vary from semester to semester, students may repeat this course for credit.

280. A Bridge to Higher Mathematics.

This course is designed to introduce students to the concepts and methods of higher mathematics. Techniques of mathematical proof are emphasized. Topics include logic, set theory, relations, functions, induction, cardinality, and others selected by the instructor.

302. Symbolic Logic

A study of elementary symbolic logic. Topics include sentential and predicate logic. Prerequisite Math 280 or Computer Science 220 or Philosophy 202. *Also offered as Philosophy 302 and Computer Science 302.*

305. Real Analysis.

A rigorous introduction to fundamental concepts of real analysis. Topics may include sequences and series, power series, Taylor series and the calculus of power series; metric spaces, continuous functions on metric spaces, completeness, compactness, connectedness; sequences of functions, pointwise and uniform convergence of functions. Prerequisites: Mathematics 205 and 280. Offered in fall semester.

306. Complex Analysis.

Topics include algebra, geometry and topology of the complex number field, differential and integral calculus of functions of a complex variable. Taylor and Laurent series, integral theorems and applications. Prerequisites: Mathematics 205 and 280. Offered in spring semester.

315. Group Theory.

An introduction to the abstract theory of groups. Topics include the structure of groups, permutation groups, subgroups and quotient groups. Prerequisite: Mathematics 280. Offered in spring semester.

316. Ring Theory.

An introduction to the abstract theory of algebraic structures including rings and fields. Topics may include ideals, quotients, the structure of fields, Galois theory. Prerequisite: Mathematics 280. Offered in fall semester.

318. Graph Theory.

Graph theory deals with the study of a finite set of points connected by lines. Problems in such diverse areas as transportation networks, social networks and chemical bonds can be formulated and solved by the use of graph theory. The course includes theory, algorithms, applications and history. Prerequisite: Mathematics 217 or 280. Offered every other year. *Also offered as Computer Science 318.*

319. Geometry.

This course presents a selection of nice results from Euclidean geometry, such as the Euler line, the nine-point circle and inversion. Students explore these topics dynamically using geometric construction software. A portion of the course is also devoted to non-Euclidean geometry, such as spherical, projective or hyperbolic geometry. This course is especially recommended for prospective secondary school teachers. Prerequisite: Mathematics 217 or Mathematics 280. Offered as interest warrants.

321. Financial Mathematics.

An introduction to the modern mathematics of finance. This course develops the mathematics necessary in an arbitrage-free model to understand the connections and pricing of stocks, bonds, futures, forwards and a variety of derivatives and options. The course derives the Capital Asset Pricing Model for portfolio optimization, and covers the theory behind the Black-Scholes model for pricing options.

323. History of Mathematics.

This seminar is primarily for juniors and seniors, and covers topics in the history of mathematics. Offered every other year.

325. Probability.

This course covers the theory of probability and random variables, counting methods, discrete and continuous distributions, mathematical expectation, multivariate random variables, functions of random variables and limit theorems. Prerequisite: Mathematics 205. Offered in the fall semester. *Also offered through Statistics.*

333. Mathematical Methods of Physics.

Important problems in the physical sciences and engineering often require powerful mathematical methods for their solution. This course provides an introduction to the formalism of these methods and emphasizes their application to problems drawn from diverse areas of classical and modern physics. Representative topics include the integral theorems of Gauss and Stokes, Fourier series, matrix methods, selected techniques from the theory of partial differential equations and the calculus of variations with applications to Lagrangian mechanics. The course also introduces students to the computer algebra system Mathematica as an aid in visualization and problem-solving. Prerequisites: Mathematics 205 and Physics 152. Offered in fall semester. *Also offered as Physics 333.*

341. Number Theory.

The theory of numbers addresses questions concerning the integers, such as “Is there a formula for prime numbers?” This course covers the Euclidean algorithm, congruences, Diophantine equations and continued fractions. Further topics may include magic squares, quadratic fields or quadratic reciprocity. Prerequisite: Mathematics 217 or Mathematics 280 or permission of the instructor. Offered every other year.

370. Topology.

An introduction to topology. Topics may include the general notion of a topological space, subspaces, metrics, continuous maps, connectedness, compactness, deformation of curves (homotopy) and the fundamental group of a space. Prerequisite: Mathematics 280. Offered as interest warrants.

380. Theory of Computation.

The basic theoretical underpinnings of computer organization and programming. Topics include the Chomsky hierarchy of languages and how to design various classes of automata to recognize computer languages. Application of mathematical proof techniques to the study of automata and grammars enhances understanding of both proof and language. Prerequisites: Mathematics 280. Offered in spring semester. *Also offered as Computer Science 380.*

389, 390. Independent Projects.

Permission required.

450. SYE: Senior Seminar.

Permission required.

489. SYE: Senior Project for Majors.

Permission required.

498. SYE: Senior Honors Project for Majors.

Permission required.

Modern Languages and English

Two majors offered: English and French and English and Spanish.

The interdisciplinary English and modern languages majors allow students to deepen their knowledge of world literature, to explore connections between authors of the two

languages, and to develop their creative writing skills. The combined major affords students enhanced opportunities to excel in ways that would show competency in at least one other language making them stronger applicants for graduate study as well as employment in fields in which language, cultural competency, research and analysis skills are required (diplomacy, law, business).

Student work closely with advisors in both departments in planning his or her program. Students can major in English (Literature or Creative Writing) combined with French or Spanish. Although not required, participation in an abroad program related to one’s language specialization is strongly recommended. Graduation with honors may be recommended upon the basis of grades, the completion of an honors project approved and supervised by a faculty member, and an oral presentation on the thesis. Students who expect to undertake such a program should consult with the chairs of the English and modern languages departments early in the last term of their junior year. Such projects must have the approval of both departments.

Requirements in English for all majors: 6 units

English Literature

1. 250. Methods of Critical Analysis
2. 450. SYE: Senior Seminar
3. Two literature courses at the 200 or 3000 level
4. Two literature courses at the 300 or 4000 level

English Creative Writing

1. 250. Methods of Critical Analysis
2. 450. SYE: Senior Seminar
3. One literature course at the 200 or 3000 level
4. One literature course at the 300 or 4000 level
5. Two creative writing courses in the same genre, one at 200 level and one at 300 level

Requirements for the English and French major

English requirements from above: 6 units.

Modern Languages – French

1. 201. Advanced French
2. 202. Advanced French: Contemporary France
3. Two elective courses at the 200 or 300 level
4. Two elective courses at the 400 level
5. One unit senior project which would combine both fields

Total 13 units

Requirements for the English and Spanish major

English requirements from above: 6 units.

Modern Languages – Spanish

1. 201. Advanced Spanish
2. 202. Hispanic Cultural Studies
3. Two elective courses at the 200 or 300 level
4. Two elective courses at the 400 level
4. One unit senior project which would combine both fields

Total 13 units

Modern Languages and Literatures

Majors offered in Francophone Studies, Estudios Hispánicos (Spanish), and Multi-Language. Minors offered in Arabic Studies, Chinese Studies, Francophone Studies, German Studies, Italian Studies and Estudios Hispánicos (Spanish)

Professors Caldwell (co-chair), Llorente, White; **Associate Professors** Casanova-Marengo (co-chair), Salvi, Zhang; **Assistant Professors** Brezault, Díaz de León (visiting), Giardino, Henkel; **Instructors** El Khoury, Rhodes-Crowell (visiting).

Visit the modern languages and literatures webpage at www.stlawu.edu/modern-languages.

The study of a foreign language is an integral part of a liberal arts education. A degree of proficiency in one or more foreign languages opens the door to unfamiliar cultures with different traditions, histories and points of view. It makes exchange possible with speakers of other languages. In addition, the study of language develops awareness

that the expression of thought is invariably linked to considerations of history, geography, collective memory and cultural identity. Understood in this sense, language study is a foundation for intellectual inquiry and responsible global citizenship.

Learning goals for students in the department of modern languages and literatures are academically demanding, student-oriented and designed to have a favorable impact on graduates' lifelong globalized learning processes. These objectives fall into two general categories:

1. Students in beginning and intermediate courses (101-104) learn the skills necessary for communication in another language: reading, listening, writing and speaking. Beginning and intermediate courses also aim to introduce students to the different cultures in which these languages are employed. This sustained and systematic exploration of cultural difference jolts students out of their comfortable monoculturalism, exposes them to global diversity and encourages them to develop a critical perspective on their own cultural practices.
2. The goals for students majoring or minoring in one or more languages, and who often have studied their languages for several years before coming to St. Lawrence and thus begin at St. Lawrence with a fundamentally sound command of linguistic operations, overlap with many of the goals St. Lawrence has for all its graduates: to think critically; to analyze and interpret written, oral and visual texts; to conduct and present research in both oral and written formats; and to acquire a good background in global cultural and intellectual history.

We strongly recommend that our majors and minors study abroad, and almost all of them do so, most on St. Lawrence programs that are often directed by our staff. Abroad, students can immerse themselves in linguistic and cultural contexts other than their own. This experience has two important results:

1. It produces a sensitivity to other practices which, we hope, helps form minds forever open to the new and the different;
2. It improves language skills to the point of

functional proficiency.

At the most advanced level, students who major in modern languages and literatures do independent research with faculty members, present their work at professional conferences and publish their work in academic journals and online in electronic publications and sites maintained by St. Lawrence University. The department encourages all students with sufficient skills to participate in a St. Lawrence University program in Austria, China, Costa Rica, France, Japan, Kenya, Italy or Spain. Residence abroad enables students to achieve language fluency that leads to a solid understanding of the host culture and a deeper understanding of their own. For details on these programs, see the International and Intercultural Studies chapter of this *Catalog*.

The department of modern languages and literatures aims to help its students develop the general intellectual skills and cultural competencies consistent with a liberal arts education. Beyond that, however, it attempts to form graduates who are ready to embark upon careers where competence in another language is crucial. Our graduates have the opportunity to acquire an international awareness and intercultural skills.

The department offers the latest teaching technology, including sound systems, Internet access and video and computer data projection. Two fully equipped computer classrooms in the Language Resource Center double as teaching spaces and language laboratories where students conduct their oral comprehension practice via our VirtuaLab digital video/audio delivery system. The department also subscribes to foreign language television, which is available in all classrooms and student rooms on campus.

In an age when almost instant communication links the peoples of the world, when the relationships among nations are evolving rapidly and when Americans are increasingly aware of the riches of their diverse cultural heritage, the ability to use a second language acquires a new importance. Any level of proficiency in a foreign language supports both international understanding and basic contacts with various language groups in the United States. High-level ability promotes meaningful, accurate communication.

St. Lawrence graduates with foreign language skills have found positions in fields such as banking, education, government, law, retailing, industry and social service. Many now live abroad or have spent time working in other countries.

The department offers courses at several levels in Arabic, Chinese, French, German, Italian, Spanish and Swahili. Language courses are oriented toward achievement of oral and written proficiency. Classes are small to facilitate the acquisition of language skills. Study of the various literatures is also available; these classes are conducted wholly in the language. Some courses in foreign literatures are also taught in English. A seminar-discussion approach is commonly used. All beginning and intermediate courses fulfill the foreign language distribution requirement.

Advanced courses foster development of high-level language and analytical skills through study of literature, culture and film, and the media. These courses enable students to gain a deeper understanding of the written and oral expression of a foreign culture.

Entering students who continue language study begun elsewhere are assigned to the appropriate course on the basis of their high school record. A student who offers two years or more of foreign language study for entrance credit may not repeat these language courses for credit toward graduation.

The department employs students with advanced language skills as teaching assistants in the language laboratories and as tutors in the Spanish, French and German Writing Centers. Students with an interest in technology may work in the Language Resource Center as instructional technology interns.

The department sponsors foreign language films, guest lecturers and other activities. Chapters of the principal language honorary societies are also under departmental sponsorship.

Requirements for Majors and Minors

For details on specific study abroad programs, visit www.stlawu.edu/ciis.

Francophone Studies

(major and minor)

Francophone studies majors are strongly encouraged to spend a year, or at least a semester, studying in Rouen with the University's France program. The fall program is for students with a good command of French (at least one 200-level French course). At the Université de Rouen, students may take courses in art history, economics, French literature, government and African studies; all courses are taught in French. The spring program (Global Francophone Studies) is for students who do not yet possess a good command of French; it begins with two weeks of French immersion at Université Laval in Québec City, before moving to Rouen, where intensive language training continues, and other courses are taught in English.

Students in France traditionally take four courses (4.5 credits) each semester. Students in the fall may receive three credits toward the Francophone studies major or minor; those in the spring receive two credits. Students who remain for the year receive five credits for the major or minor.

A Francophone studies major consists of nine courses: five electives at the 103-104 level or above, two electives at the 300 level or above, and at least two electives at the 400 level. Courses at the 300 level are offered only in France. Students who do not participate in the France program must therefore take at least four courses at the 400 level.

A Francophone studies minor consists of six courses at the 103-104 level or beyond. French minors are encouraged to spend a semester or a year on the France program. Students on the France program may count two courses (semester program, spring), three courses (semester program, fall) or five courses (year program) toward the Francophone studies minor.

Estudios Hispánicos

(major and minor)

The Estudios Hispánicos major is designed to provide an understanding of the principal aspects of Hispanic culture as well as proficiency in the language at the advanced level according to American Council on the Teaching of Foreign Language guidelines. The major consists of 10 units beyond the 104 level: five electives at the

200 level or above, three electives at the 300 level or above, and two electives at the 400 level. Except for 350, courses at the 300 level are offered only in Spain and Costa Rica; 400-level courses, including Independent Study and Honors Project, are offered only on campus.

Students who begin Spanish at St. Lawrence at a level higher than 201, 202 are exempt from two major units. Introduction to Spanish Literature and Survey of Hispanic American Literature are required courses for the major.

Students wishing to major in Estudios Hispánicos are urged to participate in the Costa Rica (San José) or Spain (Madrid) programs. It is possible to earn four credits toward the major during a semester in Spain or Costa Rica; students who remain a year in Spain may earn seven credits toward the major.

A minor consists of six courses at the 201-202 level or beyond. Estudios Hispánicos minors are encouraged to spend a semester or a year on the Spain or Costa Rica programs. Students on the programs in Spain or Costa Rica may count three courses (semester program) or five courses (year program) toward the Spanish minor.

International Economics and Modern Languages

(four majors)

Students can construct a major by completing seven required courses in economics and specific requirements in either French, German, Spanish or multi-language. For details and further obligations, see the International Economics and Modern Languages section of this *Catalog*.

Multi-Language

(major)

To meet the requirements for the multi-language major, students must have four credits in each of three different languages. (Students may not choose Swahili as one of the three languages for this major.) In one of these languages, designated the language of concentration, the student must complete at least four units beyond the 202 course. To improve skills in the language of concentration and to deepen cultural understanding, multi-language majors are expected to study abroad. Students who major in multi-language may minor in Francophone studies or Estudios Hispánicos only when the minor language is not

one of the three languages of their multi-language major.

Arabic Studies (minor)

Students minoring in Arabic studies are required to complete a total of six courses, four of which are language courses, and two of which are from the list below. Special topics related to the Arabic culture and Arabic world taught in other disciplines count toward the minor.

Two of the four language classes must be taken on campus. If Arabic is also part of a multi-language major, students are required to take two additional classes for the minor in Arabic Studies.

Courses

All classes in Jordan can count toward the minor.

Arabic

- 101, 102. Elementary Arabic.
- 103, 104. Intermediate Arabic.
- 201. Advanced Arabic.
- 489, 490. SYE: Independent Study.

Global Studies

- 350. Global Palestine.

Government

- 290. Israeli-Palestinian Conflict.
- 331. Politics of the Middle East.

History

- 160. The Islamic World.
- 368. Palestine and the Arab-Israeli Conflict.
- 379. Colloquium in Middle Eastern History.

Religious Studies

- 224. Islamic Religious Traditions.

Chinese Studies (minor)

Students are required to take six courses, four of which are language courses, and two of which are from the list below. Special topics related to Chinese history and culture taught in other disciplines count toward the minor. Two of the four language courses must be taken on campus.

If Chinese is also part of a multi-language majors, students are required to take two additional classes for the minor in Chinese Studies.

Courses

All courses taken in the Shanghai program count toward the minor.

Chinese

- 101, 102. Elementary Chinese.
- 103, 104. Intermediate Chinese.
- 201, 202. Advanced Chinese.

489, 490. SYE: Independent Study.

Literature/Asia

- 232. Cultures of China.
- 234. Chinese Literature and Film.
- 236. Buddhism and Daoism through Literature and Film.

Government

- 293. *(when offered on topics about China)*
- 322. Chinese Politics.

History

- 105. Early Asian Civilizations.
- 106. Modern Asia.
- 292. Modern China.

Philosophy

- 223. Asian Philosophy.

Religious Studies

- 223. Religious Life of China.

Sociology

- 278. China's Market Transition.

German Studies (minor)

Students minoring in German Studies are required to complete six units beginning with German 101 through 202. In addition to completing four language courses, students may take two German Studies courses taught in the department in English, or when no German Studies course is offered by the department in a given semester, students may select a course from the list of approved courses attached below. Students studying in Vienna may earn up to three credits toward the completion of the minor, one for the German language course and two for general German Studies courses offered by the Vienna program. Those participating in an ISEP program may earn up to three credits toward the completion of the minor for courses approved by the department.

AP Credit: students who have earned a 4 on the AP exam will receive credit for GER101; those who have earned a 5 will receive credit for GER101 and GER102.

Italian Studies (minor)

Students minoring in Italian Studies are required to complete a total of six courses, four of which are language courses, and two of which are from the list below. Special topics related to the Italian history and culture taught in other disciplines count toward the minor. Two of the four language classes must be taken on campus.

If Italian is also part of a multi-language major, students are required to take two additional classes for the minor in Italian Studies.

Courses

All classes taken in the Lorenzo De' Medici program abroad will count towards the minor.

Italian

101, 102. Elementary Italian I & II.

103, 104. Intermediate Italian I & II.

489, 490. SYE: Independent Study.

Art and Art History

116. Survey of Art I.

117. Survey of Art History II.

202. Art of the Italian Renaissance.

204. Baroque and Rococo Art.

4401. Baroque and Modern Architecture.

Music

234. Music in Venice.

Performance and Communication Arts

312. The Public Sphere of Renaissance Venice.

Religious Studies

102. Religion and Science.

206. Introduction to The New Testament.

227. Religion in Ancient Greece and Rome.

Caribbean and Latin American Studies (minor)

Students who take Spanish or French may want to consider the interdisciplinary minor in Caribbean and Latin American studies, which consists of six courses and includes an introductory core course (CLAS 104) as well as five additional Caribbean and Latin American studies courses from at least three different departments. See the description under Caribbean and Latin American studies in this *Catalog*.

English for Speakers of Other Languages (ESOL)

(no major or minor)

All courses denoted with an ESOL designation provide instruction and support to students whose first language is not English (including both international students and first generation immigrants). Some students will be assessed prior to the start of their first year and will be notified if mandated to take one or more of the ESOL courses. Courses denoted with LANG/EDUC are for native or near native English speakers

interested in teaching English for speakers of other languages.

International Programs

St. Lawrence study abroad opportunities in Costa Rica, France, Italy, Japan and Spain support the work of the department and are designed for students with significant background in the language. The program in France is also open to students with elementary French. Students with strong German language skills may obtain information on study opportunities in Austria and Germany from the Center for International and Intercultural Studies (CIIS). Those with little or no prior knowledge of German can choose the St. Lawrence semester program in Vienna. Similarly, students with little or no Italian may choose the program in Florence. There is also a program in Kenya for students studying Swahili. For detailed descriptions, visit www.stlawu.edu/ciis.

Certification to Teach a Foreign Language

Students seeking initial certification as a 7-12 French or Spanish teacher in New York must major in the language and also complete the certification minor in education. Francophone studies and Spanish majors intending to complete student teaching after graduation in the University's Post-Baccalaureate Teacher Certification Program must complete the Francophone studies or Estudios Hispánicos major and the pre-certification minor in education (or its equivalent) as undergraduates. To qualify for the professional semester (student teaching), students must spend at least a semester studying abroad in a country where the student's major language is the primary language. Consult the Education section of this *Catalog* and/or speak to the coordinator of the teacher education program as early as possible.

Honors

Students who wish to be candidates for honors in the department should register for French, German, or Spanish 497 (fall) or 498 (spring). A proposal for the honors project should be submitted to the department prior to the final

examination period of the semester preceding the one in which the project is to be carried out. A grade point average of at least 3.5 in all major courses is required and a grade of 4.0 must be earned in the honors course for the student to be recommended for honors at graduation. The honors course carries one unit of academic credit and is taken in addition to the eight (German studies), nine or 10 (Francophone studies) or 10 (Spanish) units that constitute the basic major. (See also Honors in the Curriculum chapter of this *Catalog*.)

Courses

Arabic

101. Elementary Arabic. (*with lab*)

An introduction to Modern Standard Arabic and Arab culture, for students who have never studied Arabic. The course begins with an introduction to Arabic sounds and letters. The teaching and learning emphasizes the functional use of Arabic and communication in context by means of listening, speaking, reading and writing. The course also introduces students to aspects of Arabic culture and everyday life in the Middle East. At the end of the course, students will be able to read and write Arabic at a basic level. This course meets one of two Diversity (DIV13) requirements. *Also offered through African Studies.*

102. Elementary Arabic. (*with lab*)

This is a continuation of Arabic 101. Students learn to differentiate among verbs, nouns and adjectives and to conjugate verbs in the present and the past. Emphasis is on the four communication skills: reading, listening, writing and speaking. Understanding of more complex elements of Arabic culture and writing is stressed. Prerequisite: Arabic 101 or equivalent. This course meets one of two Diversity (DIV13) requirements. *Also offered through African Studies.*

103. Intermediate Arabic. (*with lab*)

This course is geared toward consolidating skills gained in Arabic 101 and 102 while enhancing the ability to converse and conduct oneself in Arabic. Reading skills are enhanced by exposure to more sophisticated examples of literature. Original written expression is encouraged through composition of short essays. Prerequisite: Arabic 102 or equivalent. *Also offered through African Studies.*

104. Intermediate Arabic. (*with lab*)

This course focuses on expressing yourself: telling about your experiences, expressing opinions and wishes, presenting persuasive speeches. Social roles are practiced and many cultural topics are discussed. Grammar is systematically reviewed. The course involves reading and discussing biographies, geographies, national and religious holidays, and traditions of the Arab World. Arabic media (movies, songs and online resources) supplement readings, expanding contexts and vocabulary for further interaction in Arabic. Prerequisite: Arabic 103 or equivalent. *Also offered through African Studies.*

201. Advanced Arabic.

In this course we focus on Arabic at the advanced level through in-depth examination of grammar, and reading of selected texts to develop the student's ability in the critical oral and written analysis of integral literary texts. The colloquial Arabic will be introduced (Lebanese).

Many cultural subjects will be covered as many films will be discussed and analyzed. Offered occasionally.

LANG 350. Teaching Languages.

Designed to help students develop competency in language instruction. **Teaching Languages is offered only for student teaching assistants in the department.** We explore what it means to be part of a communicative classroom; students learn to create pedagogically sound activities that complement the textbook and online materials. Students learn how to integrate available technology into their teaching and create original visual and auditory materials and exercises for use in their own lab sections. Teaching Languages is taught in English and cross-listed among all the languages.

Chinese

101, 102. Elementary Chinese. (*with lab*)

This is a two-semester sequence providing an introduction to the speaking, reading, writing and oral comprehension of modern Mandarin Chinese. Through this course students are expected to be able to communicate in Mandarin Chinese on a basic level. Class sessions plus lab. Open to students with no prior study of Chinese. *Also offered through Asian Studies.*

103, 104. Intermediate Chinese.

This is a two-semester sequence in intermediate Mandarin Chinese. The course content stresses all the basic language skills of reading, writing, listening and speaking. Emphasis is on active use of the students' vocabulary and grammar. The course includes material every week on Chinese geography, history, culture and society. *Also offered through Asian Studies.*

201, 202. Advanced Chinese.

This is a course in advanced Mandarin Chinese. While continuing to consolidate the foundation which students have built in their intermediate Chinese courses, this course seeks to further develop the student's ability in all four skills of the Chinese language to the point where he or she will be able to communicate effectively with native speakers of the language, and become better prepared to read all varieties of authentic modern-language texts, including newspapers and short stories. *Also offered through Asian Studies.*

232. Cultures of China.

This course is designed to introduce the history and culture of China from its earliest beginnings to the late 19th century, covering Chinese institutions, philosophical trends, religions, literature, arts, and special topics such as gender and family, love and friendship, dream and soul, among others. Materials include Confucian and Taoist classics, Buddhist scriptures, literary and artistic works and films, as well as modern scholarly publications. All readings are in English. No knowledge about China and Chinese language is required. *Also offered through Literature in (English) Translation, Asian Studies, and History.*

234. Chinese Literature and Film.

This course provides an overview of Chinese literature and film. The first half surveys traditional Chinese literature with a focus on masterpieces in the golden ages of various genres. The second half introduces modern Chinese literature with a focus on film, including representative works by well-known writers Lu Xun and Ba Jin, and famous film directors such as Zhang Yimou, Chen Kaige, Wang Xiaoshuai, and others. The aim is to enhance students' interests and skills in reading and analysis of Chinese literature and film, and improve students' understanding of the history, society and culture of China. All works are read in English translation. *Also offered through Literature in (English) Translation, Asian*

Studies, and Film and Representation Studies.

489, 490. SYE: Independent Study.

Independent study on advanced Chinese or a topic on Chinese literature and culture for seniors only.

English for Speakers of Other Languages (ESOL)

201. Introduction to American Culture.

In this course, students will focus on English for academic purposes through the study of American culture. This course will address language used in academic assignments and class discussions, expand academic vocabulary, and practice the authentic use of the English language. Students will have the opportunity for additional language support during individual meetings with a conversation partner tutor. Non-native English speakers only.

202. Advanced Stylistics.

In this course, students will refine skills related to academic English and will have an intensive study of academic vocabulary. Students will study the authentic use of the English language in reading and writing and will examine advanced concepts related to academic English. This course works as a support for other courses and will help prepare students to be successful in their academic career. Non-native English speakers only.

LANG 3003. ESL Conversation Partners.

In this course, native and near native English speakers will study methods to successfully work with non-native English-speaking students on campus. Students will become Conversation Partner Tutors (CPT) and will study intercultural dialogue and exchange and meet individually with an English language learner for conversational purposes. This seminar style course will include discussions of English language tutoring methods, cross-cultural exchange, and TESOL (Teaching English to Speakers of Other Languages) trends.

LANG 4001/EDUC 4002.

Critical Aspects of Teaching English for Speakers of Other Languages.

In this course, students will critically examine teaching English abroad through project-based learning. While not an ESOL teaching certification course, students will leave this course with a fundamental understanding of and practical applications for teaching ESOL (English for Speakers of Other Languages). The larger goal of this course is to examine trends and issues in the field, to practice writing lesson plans, and teaching those plans, and to highlight the importance of understanding culture, and learner characteristics in planning and teaching. Students will develop an understanding of the complexities of teaching ESOL/EFL and why being a native English speaker is not enough of a qualification for success.

French

101, 102. Elementary French.

This two-semester sequence provides an introduction to basic structures and develops skills in speaking, reading, writing and oral comprehension. In class and in the language laboratory, current materials from France and other French-speaking countries familiarize students with aspects of language and contemporary culture. Open to students with little or no prior study of the French language.

103, 104. Intermediate French.

This two-semester sequence provides a review of basic structures and practice in the skills needed for communication in speaking and writing. The basic text and literary and cultural readings are supplemented by

current material from France and other French-speaking countries in the language laboratory. Designed for students with two or more years of high school French who wish to improve their grasp of basic skills and enlarge their working vocabulary. Prerequisite: French 101, 102 or the equivalent.

201. Advanced French.

Review and expansion of the four skills with emphasis on the oral and written expression of ideas in French topics of current interest and cultural significance in the French-speaking world. Materials studied include films, journalistic texts, songs and literary texts. For students who have completed French 104, or who have had at least four years of French at the secondary level. *Also offered through European Studies.*

202. Advanced French: Contemporary France.

This course has a dual focus: linguistic and cultural. Students spend only a small part of their time reviewing important grammar points, but much more on areas of language such as vocabulary-building, idiomatic usage, oral expression and writing. The thematic focus is contemporary France. Students learn about the social and political institutions in France, and about current cultural practices. Films, radio, Web sites, cartoons, popular music, newspapers and magazines expand the study of French society and language. Students completing French 201 usually enroll in French 202 in the spring semester. *Also offered through European Studies.*

227. Current Francophone Writing and Culture.

This course provides a look at France and French-speaking countries today through works of literature and other art and media (film, music, television, etc.) created within the past seven to ten years. Open to students having completed French 202 or the equivalent. *Also offered through European Studies.*

235. Paris.

The subject of this course is culture and history of Paris. Students examine not only how the city appears in literature and film, but also how the urban space grew and changed across more than two millennia since the first inhabitants settled on the Ile de la Cité. Maps, paintings, sketches and other historical documents are consulted. Students work on a variety of other texts as well: prose fiction (a detective novel and novellas), lyrics (poetry and popular song), films and histories. All readings, films, writing and classroom discussions are in French.

263. School Days.

Through memoirs, fiction, children's literature and film, this course offers a glimpse of childhood and adolescent experience of school and an opportunity to study education in France and the French-speaking world. Open to students having completed French 202 or the equivalent. *Also offered through European Studies.*

3000-3999. Special Topics.

The content of each course or section of these 200-level special topics courses varies and will be announced each semester.

LANG 350. Teaching Languages.

Designed to help students develop competency in language instruction. **Teaching Languages is offered only for student teaching assistants in the department.** We explore what it means to be part of a communicative classroom; students learn to create pedagogically sound activities that complement the textbook and online materials. Students learn how to integrate available technology into their teaching and create original visual and auditory materials and exercises for use in their own lab sections. Teaching Languages is taught in English and cross-listed among all the languages.

403. Modern Prose Fiction in France.

This course examines the themes, techniques and sociopolitical contexts of the 20th-century novel. Choice of authors varies from year to year, but has included Mauriac, Gide, Proust, Sartre, Camus, Malraux, Robbe-Grillet, Tournier, Modiano, Duras and others. *Also offered through European Studies.*

404. French Film.

This course combines an historical view of the French cinema, an introduction to the techniques of film analysis and an examination of the major issues in film theory. Topics include the pioneers of cinema, the “classical” films of the 1930s and ’40s, the films of the “nouvelle vague” in the ’50s and ’60s and recent trends in film production. The work of filmmakers such as Renoir, Clouzot, Truffaut, Beineix, Godard and Resnais is studied. *Also offered through Film and Representation Studies and European Studies.*

413. The Theater of the Classical Age.

This course studies selected plays of Corneille, Moliere, Racine, Marivaux and Beaumarchais. It examines dramatic theory and the characteristics of Classical and Baroque theatre, as well as the cultural milieu and arts in 17th and 18th-century France. *Also offered through European Studies.*

425, 426. Seminar.

The topic changes and is announced prior to registration. *Also offered through European Studies.*

428. French Women Writers.

This course offers the opportunity to study and appreciate the contribution to literature and thought, including feminist theory, by women writers from France and French-speaking countries. Works by writers such as George Sand, Colette, Beauvoir, Weil, Djébar and Condé are considered, along with films by Varda, Denis and others. *Also offered through European Studies.*

489, 490. SYE: Independent Study.

For senior students specially qualified. Offered on demand. *Also offered through Caribbean and Latin American Studies.*

497, 498. SYE: Honors Project.

See Honors in the introductory section on departmental curriculum.

Study in France.

See the International and Intercultural Studies section of this *Catalog*.

German

101, 102. Elementary German. (*with lab*)

At the elementary level of the language courses sequence (GER 101 in the fall and 102 in the spring), students are gradually immersed into the German-speaking world through activities and assignments targeted at practicing the four language skills: speaking, listening, reading, and writing. The courses also provide a solid grammar basis on which the students build up to the higher levels. The elementary language courses introduce culture of the German-speaking countries both implicitly and explicitly. The former proceeds through grammar exercises with elements of cultural distinctions (e.g., distinction between formal/informal) and thorough vocabulary referring to specific cultural information and practices, such geography, family, school, etc. The cultural practices in the different German-speaking countries (Germany, Austria, Switzerland) are addressed explicitly in different types of assignments and so are the cultural differences between the American and the German-language cultures. Class sessions plus lab.

103, 104. Intermediate German. (*with lab*)

In the intermediate language courses sequence in German (GER 103 in the fall and 104 in the spring), the complexity of the assignments and activities in all four language skills increases significantly, requiring more intensive work from the students, which brings about greater proficiency in all four language skills. The students respond to more complex questions regarding more abstract concepts and use more sophisticated grammar structures. The texts at the intermediate levels help the students adjust to more complicated structures and vocabulary, greater language fluency, and more complex cultural input. The cultural nuances and differences within the German-language cultures are addressed and discussed explicitly and at a higher level than in the previous courses. The discussions deriving from the readings in the textbook and two films screened during the course, include politics, specific past and contemporaneous cultural production (plastic arts, music, literature), and history. Class sessions plus lab.

201, 202. Advanced German.

In the advanced level courses in German Studies (201 in the fall and 202 in the spring) we move beyond the traditional approach to language courses based on language textbooks and use other types of texts and media. At this level it is assumed that the students have well developed language skills. GER 201 teaches German language, culture, history, and politics of the German-speaking countries in the twentieth and the twenty-first centuries through film. Students practice comprehension of complex questions and film perception as well as use of more sophisticated and specific vocabulary and grammar structures. This course focuses very strongly on the writing skills and includes more complex writing assignments than the previous levels. GER 202 teaches German language, culture, history, and politics of the German-speaking countries in the twentieth and twenty-first centuries through the genres of short story and poetry. The course has a strong focus on reading comprehension, writing, and discussion. The students read original literary texts in German, which are carefully chosen to challenge them reasonably and enrich their vocabulary, and practice their reception of literary texts beyond mere language comprehension and towards understanding of the literary concepts and structures. In the writing assignments the students learn to analyze literary texts, structure and develop an argument, and improve their writing skills and styles in German.

German Studies (GER) (*taught in English*):

219. Turn of the Century Vienna:

City of Waltz and Psychoanalysis.

This course, offered either in the fall or in the spring, is an interdisciplinary course with focus on Austria's capital Vienna in the period between the last decades of the nineteenth and the first decades of the twentieth centuries. This course investigates the correlations between the intellectual, philosophical, artistic, and political ideas of the Vienna circle, i.e., psychoanalysis, scientific, artistic, and literary treatment of sexuality, crisis of language and personal and political identity as well as the reevaluation and deconstruction of the artistic, literary, and performative traditions—in other words the groundbreaking ideas that constituted the world of the famous Viennese Modernism. *Also offered through European Studies.*

GER/LTRN 3000-3999. Special Topics.

The content of each course or section of these 200-level special topics courses varies and will be announced each semester.

LANG 350. Teaching Languages.

Designed to help students develop competency in language instruction. **Teaching Languages is offered only for student teaching assistants in the department.** We explore what it means to be part of a communicative classroom; students learn to create pedagogically sound activities that complement the textbook and online materials. Students learn how to integrate available technology into their teaching and create original visual and auditory materials and exercises for use in their own lab sections. Teaching Languages is taught in English and cross-listed among all the languages.

489, 490. SYE: Independent Study.

Independent study is intended for exceptionally qualified students only. Permission of the instructor is required. See application procedure on the home page of the departmental Web site.

497, 498. SYE: Honors Project.

See Honors in the introductory section on department curriculum. See application procedure on the home page of the departmental Web site.

Study in Austria and Other Places through ISEP

See the International and Intercultural Studies section of this *Catalog*.

Departmental Listings

(approved for the German minor)

Art and Art History

- 117. Survey of Art History II.
- 203. Art of the Northern Renaissance.
- 204. Baroque and Rococo Art.
- 207. 19th Century European Art.
- 252. History of Modern European Art.

Government

- 206. Political Theory.
- 330. European Politics.
- 347. Marxist and Critical Theory.

History

- 205. Nineteenth-Century Europe.
- 206. Twentieth-Century Europe.
- 211. Women in Modern Europe, 1750 to the Present.
- 267. The Holocaust.
- 372. European Identities, 1700-2000.
- 375. Colloquium in European History.

Music

- 333. Mozart and the Classical Tradition.
- 335. The World of Clara and Robert Schumann.

Philosophy

- 100. Introduction to Philosophy.
- 203. Ethical Theory.
- 208. Modern Philosophy.

Italian (ITAL)

101, 102. Elementary Italian. (with lab)

This two-semester sequence provides an introduction to basic structures and develops skills in speaking, reading, writing and oral comprehension.

In class and in the language laboratory, current materials from Italy are used to familiarize students with aspects of language and contemporary culture. Italian 101 (offered in the fall semester) is open to students with little or no prior study of the Italian language; Italian 102 (offered in the spring semester) requires 101 or its equivalent.

103, 104. Intermediate Italian.

This two-semester sequence is an intermediate level four-skill course designed for students who have successfully completed Italian 102 at St. Lawrence or who enter with several years of high school Italian. The course provides a review of Italian grammar with a focus on oral communication and listening comprehension while exposing students to culturally authentic content. Students continue to practice reading skills by working with literary and non-literary texts, and writing skills through creating writing. Movies and visual arts material facilitate students' exposure to the various aspects of contemporary Italy and give them insight into its culture and social structures.

201. Language through Film and Visual Culture.

Designed for students who have previous knowledge of Italian at a 102 level or above, but wish to engage with Italian language and culture through film, creative writing and visual culture. The creative component allows students of different level to perfect their Italian regardless of starting level, while the visual and cinematic material enhances their awareness of the process of artistic production and exposes them to the history of Italian art and cinema.

LANG 350. Teaching Languages.

Designed to help students develop competency in language instruction. **Teaching Languages is offered only for student teaching assistants in the department.** We explore what it means to be part of a communicative classroom; students learn to create pedagogically sound activities that complement the textbook and online materials. Students learn how to integrate available technology into their teaching and create original visual and auditory materials and exercises for use in their own lab sections. Teaching Languages is taught in English and cross-listed among all the languages.

Spanish

101, 102. Elementary Spanish.

The principal goal is the acquisition of a basic level of communicative ability in Spanish. Video, film, audiotapes and the Internet provide current materials from Hispanic America, Spain and the United States Latino community to enhance language learning and knowledge of the culture. Language laboratory activities advance conversational skills and oral comprehension. Open to students with little or no prior study of the language.

103, 104. Intermediate Spanish.

Spoken and written Spanish are reinforced by a review of grammar and idiomatic strategies for self-expression. The course includes use of videos, music, literature, news broadcasts and the Internet as a means for understanding the contemporary culture of Hispanic America and Spain. Materials in the language laboratory facilitate conversation and increased oral comprehension. Prerequisite: Spanish 101, 102 or equivalent. *Also offered through Caribbean and Latin American Studies.*

201. Advanced Spanish.

Review and expansion of the four skills, with emphasis on the oral and written expression of ideas in Spanish on topics of current interest and cultural significance in the Spanish-speaking world. Materials studied include journalistic texts, videos, audiotapes, songs and literary works. For students who have completed Spanish 103, 104, or who have four

years or more of Spanish at the secondary level. *Also offered through Caribbean and Latin American Studies.*

202. Hispanic Cultural Studies.

A language course with the aim of acquainting students with current Hispanic culture through the analysis of literary texts, films, advertisements and other materials drawn from Spain, Hispanic America and the Latino community in the United States. Includes a research project on a cultural topic. This course fulfills the diversity distribution requirement. *Also offered through Caribbean and Latin American Studies.*

213. Introduction to the Cultures of Spain.

A study of the development of the cultures of Spain through history, art, music and literature. The course includes an analysis of Spanish cultural pluralism and its origins. Sources include literary works, texts on aspects of Spanish culture and history, videos and film, examples of Spanish art and music and material drawn from the Internet. Not open to students who have completed a more advanced course. Taught in Spanish, this course fulfills the diversity and humanities distribution requirement. *Also offered through European Studies.*

221. Latin America in Film.

This class examines how Latin America is represented in films by directors from Hispanic America, Brazil, Europe and the United States. The films form the basis of conversation and research on themes related to contemporary history, inter-ethnic conflict, traditional gender roles and immigration. The class is conducted entirely in Spanish, though some of the theoretical and technical readings on film are in English. This course fulfills the diversity and humanities distribution requirement. *Also offered through Caribbean and Latin American Studies.*

3000-3999. Special Topics.

The content of each course or section of these 200-level special topics courses varies and will be announced each semester.

LANG 350. Teaching Languages.

Designed to help students develop competency in language instruction.

Teaching Languages is offered only for student teaching assistants in the department. We explore what it means to be part of a communicative classroom; students learn to create pedagogically sound activities that complement the textbook and online materials. Students learn how to integrate available technology into their teaching and create original visual and auditory materials and exercises for use in their own lab sections. Teaching Languages is taught in English and cross-listed among all the languages.

4000-4999. Special Topics.

Designed for students who have completed Spanish 201, 202, special topics courses offer the opportunity to study specific topics in Hispanic culture. The content of each course or section of these 300- or 400-level special topics courses varies and will be announced each semester.

423. Introduction to Spanish Literature.

(equivalent to Spanish 323)

An overview of the literature of the Spanish people. Readings from the major periods, from the earliest literature to the present. Authors studied include Cervantes, Calderón, Federico García Lorca and Carmen Martín Gaité. The works are treated as representative, thematically and aesthetically, of their respective ages and the traditions of their genre. *Also offered through European Studies.*

439. Literature, Film and Popular Culture in Contemporary Spain.

After the Franco regime (1939-1975), Spaniards began to explore and

question cultural, historical and sexual identity. This course examines post-totalitarian Spanish literature, arts and popular culture made possible by the political transition to democracy. The aim is to use the theoretical framework of cultural studies as a means of understanding contemporary Spanish culture. Materials analyzed include films, television programs and commercials, novels, short stories, magazines and popular songs. *Also offered through Film and Representation Studies and European Studies.*

440. Poetry, Music and Ethics.

From the classic song “Guantanamera” to the recent “Los Hijos de las Piedras” (Marwan), intersections between poetry and music in Spain and Latin America have been enriching, stimulating and renovating for both arts. These innovative collaborations also represent powerful ethical commitments to ongoing social struggles. This course studies important works of social poetry and music in relation to the socio-historical moments in which they were produced. Students read and write poems or songs which they perform publicly, after practicing extensively in class or in the Poetry for Peace reading series on campus. *Also offered through Peace Studies.*

444. Survey of Latin American Literature.

(equivalent to Spanish 344)

Indigenous oral traditions and texts from the period prior to the arrival of the Europeans are examined, as are works from the colonial period to the present. Authors studied from the colonial period include Bernal Díaz del Castillo, Bartolomé de las Casas and Sor Juana Inés de la Cruz. Contemporary authors include Borges, García Márquez, Allende and Rigoberta Menchú. *Also offered through Caribbean and Latin American Studies.*

445. Literary Translation: Theory and Practice.

In this workshop, students use translation as a tool to learn how to express themselves more effectively in both English and Spanish. Theorists such as Octavio Paz, José Ortega y Gasset, Willis Barnstone, Carol Maier, Walter Benjamin, Tejaswini Niranjana, and others, help illuminate the practice of translation in a variety of genres that include poetry, autobiography, book reviews and subtitling of films. For students with considerable background in Spanish, including, preferably, residence in a Spanish-speaking country. *Also offered through Caribbean and Latin American Studies.*

446. Oral Expression in Spanish.

Analysis of contemporary oral usage through the study of film, video and audio materials as well as printed texts. Advanced pronunciation practice. Study of techniques of oral presentation. Assignments are designed to promote the development of persuasive skills and include formal debates on contemporary issues and other public speaking activities. *Also offered through Caribbean and Latin American Studies.*

449. Afro-Hispanic Culture and Literature.

This course explores the African legacy in the culture of the Hispanic Caribbean: Cuba, the Dominican Republic and Puerto Rico. While examining a variety of texts we will engage in conversation around topics that include slavery and resistance, cultural racism, class, identity construction and representation. The course also incorporates cuisine, music, dance and other sources as the basis for work that may bring in creative, disciplinary or career interests. *Cross-listed with Caribbean and Latin American Studies.* Taught in Spanish, and permission of the instructor is required.

489, 490. SYE: Independent Study.

Also offered through Caribbean and Latin American Studies.

497.498. SYE: Honors Project.

Working closely with a faculty member, the student develops a project related to Spanish-language literature or culture. Projects may include translations from Spanish to English and they may be interdisciplinary. Students are encouraged to use a variety of media in their projects and, if they participate in a St. Lawrence program in Costa Rica or Spain, to relate their projects to that experience. For additional information, see the description of Honors in the introductory section of the departmental curriculum.

Study in Spain

The following Spanish courses are offered in the Madrid program. Courses are also available in anthropology, economics, English, gender studies, global studies, government, history, fine arts and psychology, either as regular offerings or by special arrangement.

Fall

300S. Masters of the Spanish School: El Greco, Velázquez, Goya and Picasso.

A study of the work of four major Spanish painters, each of whom is considered the greatest painter of his period in Spain: El Greco (Renaissance), Velázquez (Baroque), Goya (Neoclassicism/Romanticism), Picasso (20th century). The course includes a weekly class in one of the museums in Madrid such as the Prado, the Reina Sofia and the Thyssen collection.

301S. Advanced Practical Spanish.

A unit course emphasizing spoken and written Spanish skills. The course is designed to help students achieve and maintain the linguistic skills needed for the program's other courses and for personal and professional activities. Required for program participants.

312S. Migrations and Cultural Diversity in Contemporary Spain.

Students become familiar with migration and cultural diversity in Spanish society from an anthropological and socio-cultural perspective. The course introduces basic notions of socio-cultural anthropology in order to understand contemporary migrations, describe characteristics and problems of Spanish society in the framework of cultural diversity and apply methodological tools of anthropology to present-day Spain. Field work includes visits to public organizations, neighborhoods, public spaces, commercial establishments and cultural institutions.

322S. International Economics.

The theory of international trade and finance and its application to current policy problems such as protection, intervention in foreign exchange markets, international debt and foreign investment. This course is accepted for major credit. Prerequisite: Economics, 251, 252.

323S. Introduction to Spanish Literature.

(equivalent to Spanish 423)

See description for Spanish 423.

335S. The Spanish Village.

Through readings, interviews and detailed personal observation, students investigate the economic, political and social structure of

rural Spain. Includes residence in a village and seminars in Segovia. Required for fall semester program participants.

358S. The Madrid Stage.

A study of the contemporary theater in Spain with a focus on the current season through readings, interviews, discussions and weekly theater attendance.

367S. Political Process in Contemporary Spain.

Focus is on the various political systems (absolute monarchy, republic, dictatorship, constitutional monarchy) that have characterized Spanish politics during the 20th century. The transition from dictatorship to democracy and the salient elements of the current system are emphasized. Arrangements can be made to take this as a history credit.

Spring

302S. Advanced Practical Spanish.

Continuation of Spanish 301S. Required for program participants.

303S. History of Spanish Art.

An overview of Spanish art from prehistoric cave painting to 20th century masters such as Picasso and Miro. Architectural monuments, sculptures and paintings are studied.

328S. Nature and Culture in Spain: Interpreting the Landscapes.

See the description under Fall, above.

330S. Politics and Governments of Western Democracies.

A study of the history and present structure of several European democracies and the United States. The class includes a segment on the European Union. This course is accepted for government majors.

338S. Introduction to Spain. (0.5 unit)

An introduction to Spain for students who join the program in the second semester. During the first two weeks of the month-long program, students live in small cities in La Mancha, where they investigate the economic, political and social structure of the area through readings, interviews and detailed personal observation. The second two weeks are spent in Madrid with daily language classes and sessions on Spanish art, culture and government.

342S. Spanish Novel of the 20th Century.

An investigation of narrative prose from the Generation of '98 (Unamuno) to the present (Cela, Martín Gaité, Llamazares) as representative of the principal aesthetic and historical movements of the century.

344S. Survey of Latin American Literature.

(equivalent to Spanish 444)

See description above for Spanish 444.

350. Teaching Languages.

Designed to help students develop competency in language instruction, Teaching Languages is mandatory for student teaching assistants in the department. We explore what it means to be part of a communicative classroom; students learn to create pedagogically sound activities that complement the textbook and VirtualLab materials. Students learn how to integrate available technology into their teaching and create original visual and auditory materials and exercises for use in their own lab sections. Teaching Languages is taught in English and cross-listed among all the languages.

365S. The Spanish Economy, the EU and the Latin American Challenge.

This course analyzes the possibilities for economic cooperation between the European Union and Spain, and Latin American economies. Study focuses on the challenges associated with and the important structural changes that are taking place in Europe as well as Latin America in the context of the growing integration of both regions in international markets. Prerequisite: Economics 100.

383S. History of an Emancipation: Women in Spain 1750-1995.

A study of women's issues—particularly labor, education and the right to vote—in Spain from the Spanish Enlightenment through Francoism to Democratic Spain.

ND 480. Internship.

For additional information on the program, see the International and Intercultural Studies chapter of this *Catalog*. Program brochures are available at the office of international and intercultural studies.

Swahili

101, 102. Elementary Swahili. (*with lab*)

The courses incorporate elements of Swahili language and East African culture. The focus is on acquiring basic Swahili grammar, writing, listening, reading and communication skills. The content addresses cultural and social aspects (music, media, etc.) of East African society. There will be student performances of cultural insights of the people in East Africa. This course is open to any student who wants to study a foreign language or Africa and who is interested in the Kenya program. Two one-hour language labs every week enhance oral practice and are also used for remedial work. *Also offered through African Studies.*

3000-3999. Special Topics.

The content of each course or section of these 200-level special topics courses varies and will be announced each semester.

489, 490. SYE: Independent Study.

490 also offered through African Studies.

Music

Major and minor offered

Associate Professors Henderson (chair), Farley, Watts, Yoo; **Sound Specialist and Production Manager** DuBray; **Instructional Specialist in Music Performance** Phillips-Farley; **Director of Music Ensembles** Torres.

Visit the music department webpage at www.stlawu.edu/music.

In keeping with the aims of a liberal education, the music department offers all students opportunities to expand their understanding of music and its place in society. Students actively engage diverse musical materials in a variety of contexts. In ensembles and private lessons, students mature as singers or instrumentalists,

better understanding music by performing it. In courses, students develop critical skills for experiencing, creating and using music effectively and intelligently. The department offers both a major and a minor in music, and provides all students with ways of participating in music.

We emphasize collaborative and interdisciplinary study. Many music classes include work in the Newell Center for Arts Technology, where students learn to use digital technology to compose and perform music, to design sound for theatrical productions and to create multimedia works. Special topics courses focus on particular composers, genres or regions of the world, and typically involve extensive study of scores and recordings from the music library.

Music department ensembles are open to all St. Lawrence students. We invite students, regardless of background, to audition for ensemble placement at the beginning of each semester. Performances, residencies and workshops by a wide array of guest artists additionally enrich musical life on campus.

Exemplary student participation in ensembles and coursework is recognized by induction into the Ives Society. Applications for membership in this departmental honor society are due each December. Individual awards in keyboard study, choral performance and other fields of study are given annually at Moving-Up Day.

Major Requirements

Students wishing to major in music must complete the following requirements:

- Music 200 or 201.
- Music 210.
- Music 220.
- At least five other full-unit courses in music, two of which must be 300-level courses.
- At least three semesters of participation in a music department ensemble.

Minor Requirements

Students wishing to minor in music must complete the following requirements:

- Music 200 or 201.
- Music 210.
- Music 220.
- At least two other full-unit courses in music, one of

which must be a 300-level course.

- At least two semesters of participation in a music department ensemble.

Advanced Standing

Students who have scored a 4 or 5 on the AP music theory test may register for Music 200 or 201 (Music Theory); students may also pass a qualifying exam to register for that class. Students without extensive prior experience in music should begin their coursework with Music 100 or 101 (Introduction to Music).

Honors

To receive honors in music, students must attain a minimum GPA of 3.5 in the major and submit for consideration a substantial senior-year project, which may include study in composition, performance, literature and/or analysis.

Ensembles

Students audition for ensembles at the beginning of each semester instead of registering for ensembles during the normal registration period. Go to www.stlawu.edu/music for information on auditions. Normally, students receive 0.25 unit of credit for taking an ensemble.

021. Laurentian Singers.

A select undergraduate vocal ensemble that performs both on and off campus through the year. Their far-ranging repertoire is drawn from traditional choral sources as well as world and popular idioms. The Laurentian Singers tour each Spring Break.

022. University Chorus.

A choir open to the entire University community. The ensemble performs major works from the choral and choral-orchestral repertoire from the 16th through the 20th centuries.

025. String Orchestra.

An ensemble that performs repertoire from the 17th century through the present. Recent concerts have included works by Antonio Vivaldi, Wolfgang Amadeus Mozart, Franz Schubert and Henry Cowell.

026. Wind Ensemble.

This ensemble explores a range of music covering over 200 years of repertoire in a variety of styles, and is open to wind, brass and percussion players.

027. Rhythm and Roots Ensemble.

This ensemble takes a particular strand of vernacular music as its focus each semester, and is open to guitarists, percussionists, pianists, vocalists, and woodwind and brass players. Recent topics of study include Hawaiian music, the music of Motown, and New Orleans rhythm and blues.

028. Improvisation Lab.

This ensemble provides opportunities for students to develop their interests and skills in a variety of American popular musics. Students research recordings outside of class and use them as the basis for further study in class. Rehearsals emphasize playing by ear in conjunction with using varying degrees of written notation.

029. SoundSandBox.

Do you catch yourself drumming incessantly on tabletops, singing along with the washing machine's beat, or making saxophones out of pizza boxes and broken straws? The SoundSandBox is for you, a place to explore ways of making sound together. Skilled musicians are welcome, but all students may audition for this ensemble. Recent projects include collaborating with NYC-based percussionist Susie Ibarra and accompanying a silent film on Halloween.

Individual Lessons

St. Lawrence students may elect to take individual lessons in voice or on an instrument, space permitting, for a fee of \$300 per semester. SLU students registered for department ensembles may take lessons for the reduced fee of \$150 per semester. Students enrolled in Music 101 (Introduction to Music), Music 201 (Music Theory), or Music 260 (Rehearsing) are exempt from the fee. Go to www.stlawu.edu/music to download the application form; the deadline for submission is typically the end of the first full week of classes.

Courses

100/101. Introduction to Music.

An introduction to the study of music, this course includes development of listening skills as well as an overview of the basic materials and techniques of musical organization. The music is chosen from a wide range of times and places. Students use the resources of the music library and the Newell Center for Arts Technology for listening, research and composition. As a complement to class work, students attend concerts and recitals on and sometimes off campus. Students may include individual lessons in voice or on an instrument as part of this course. Open to students with little or no prior study of music. Offered every semester.

3000-3999.

The content of each course or section of these 100-level or 200-level special topics courses varies and will be announced each semester.

200/201. Music Theory.

This course is meant to develop abilities in listening to, analyzing, performing and creating music. We engage in different kinds of

musical activities: studying the sight and sound of music, playing and singing snippets of music, composing short pieces. Throughout, the intent is to provide critical skills for deepening the understanding of music. Students may include individual lessons in voice or on an instrument as part of this course. Offered every semester. Prerequisite: Music 100/101, a score of 4 or 5 on the AP music theory test, or permission of the instructor.

210. Musics of the World.

This course explores selected musics from Asia, the Pacific, Africa, Europe and the Americas, by means of recordings, films, readings, concerts and hands-on experience. Broad topics for investigation include the development of popular musical styles, the preservation of traditional musical styles and the circulation of indigenous sounds in the world music market. *Also offered, at the discretion of the instructor, through African Studies, Global Studies and Peace Studies, and/or as Asian Studies 210.*

220. Music and Technology.

An in-depth look at the practical and artistic issues involved in making music with computers. This includes a study of some fundamental concepts and a practical application of these concepts using the resources of the Newell Center for Arts Technology. The course is divided into two broad sections — (1) the MIDI protocol: what it is, how it works and what you can do with it; (2) digital audio: a brief introduction to acoustics, a study of how audio is recorded and played back digitally and a consideration of the uses of digital signal processing. Offered every semester. Prerequisite: Music 100/101, 200/201, or permission of the instructor.

222. Sound for the Stage.

This course explores some of the artistic and practical aspects of using sound in support of theatrical production. The course employs concepts of design drawn from the theater and applies those concepts to the choice of music and sound effects for the stage. We explore the potential of sound and music for the reinforcement of dramatic content and production design concepts, and introduce the production organization common to most theater productions: the collaborative design process and the team approach to production assignments. Offered every year. *Also offered as Performance and Communication Arts 202.*

227. Recording Arts.

Recordings of audio materials are a growing part of our world, and making professional recordings is an art that is now within the reach of many. The technology of recording is a combination of listening and performance skills and electronics. Designed to hone skills in producing recorded materials, this course is a practical survey of materials and methods, with core principles applied to projects that will provide an understanding of how to achieve quality recordings by intelligent use of available equipment and spaces.

234. Music in Venice.

Focusing on the musical and artistic vitality of a city that has fascinated visitors for centuries, this course features two composers — Claudio Monteverdi and Antonio Vivaldi — whose lives and works straddle opposite ends of the Baroque period. We examine four works — two each by Monteverdi and Vivaldi. In support of their study of musical literature, students view works of art from Renaissance Italy and undertake readings about the special role of Venice in medieval and Renaissance Europe. The course includes a 10-day travel option at the end of the semester for students who want to visit Venice. Offered

occasionally. Prerequisite: Music 100/101, 200/201, or permission of the instructor. *Also offered through European Studies.*

244. Musics of South Asia.

South Asia is the subcontinent that lies south of the Himalayas and includes India, Nepal, Bangladesh, Pakistan, Afghanistan and Sri Lanka. There are also substantial South Asian populations elsewhere. Topics for study include devotional song, Bollywood film music, urban Nepali drumming, and electronic music in New York and London. The course begins with a grounding in the classical music traditions of India, moves on to explore selected musical practices around South Asia, and finishes with a consideration of music's place in the South Asian diaspora. Offered occasionally. *Also offered as Asian Studies 244.*

245. Musics of Eastern Europe.

In this course, we examine and analyze the music of a region where social and political life has changed dramatically and frequently during the last 150 years. From the revolutions of 1848 to the post-communist struggles of the 1990s, music and musicians often have been drawn into debates about national and regional identities. We proceed from the assumption that notions of identity and difference are evident not only in discourse about musical practices, but also in musical sound itself. Offered occasionally. Prerequisite: Music 100/101, 200/201. *Also offered through European Studies and Peace Studies.*

260. Rehearsing.

Satisfying performances come out of both understanding one's music thoroughly and rehearsing it efficiently. A weekly, individual lesson focuses on the skills appropriate to your instrument or voice. Class meetings concentrate on (1) reading rhythms and shaping musical phrases; (2) arranging and orchestrating music; and (3) organizing and leading practice sessions and rehearsals. Offered occasionally. Prerequisite: Music 100/101 or Music 200/201. May be repeated for credit.

270. Collaboration Across the Arts.

The direction of this course is determined largely by the unique combination of students who participate. Students form groups of two or three to work on a collaborative project of their own design reflecting their collective interests. For example, a pair of students may create a multimedia work that draws connections between image and sound. Students critique works in progress, study exemplary works, discuss relevant aesthetic issues, trace connections across media and consider strategies for collaborative work. Offered every year. Prerequisite: permission of the instructor. *Also offered as Art and Art History 270 and Performance and Communication Arts 270.*

281. Music Video.

Music television created new ways of visualizing music, new ways of seeing sound. This course looks at the rise of music video in the 1980s, its predecessors and its influences. While the focus is primarily on the history and criticism of music video, the course also contains a substantial production component that includes creating and editing sound and video files. Offered occasionally. *Also offered as Film and Representation Studies 281.*

4000-4999.

The content of each course or section of these 300-level or 400-level special topics courses varies and will be announced each semester.

300. Musical Structures.

This course is for students who have completed Music 200 or 201 and wish to continue their study of music analysis. It focuses on the study of musical events such as harmony, melody, rhythm, texture and form

in order to develop skills in understanding, analyzing, composing and listening to music. We study harmonic, melodic, rhythmic, textural and formal choices various composers have made and the ways those choices affect how music is perceived. Offered every year. Prerequisite: Music 200/201.

325. Computer Music Programming.

While the world of computer-generated music includes a wide array of genres, it also incorporates a wide variety of tools. In this course, students will learn to synthesize and process sound with software tools that make few assumptions about what electronic music should be. Class topics will include listening and analysis, techniques for synthesis and signal processing, and composing/performing with MaxMSP and, if time permits, Csound. No prior programming experience is required. Prerequisite: Music 220.

330. “Isn’t it Romantic?” Songs for Theatre, Songs for Salon.

This course explores songs from New York City’s “Tin Pan Alley,” selected from such songwriters as the Gershwins, Richard Rodgers and Irving Berlin, and songs from earlier times and places, such as Franz Schubert in early 19th-century Vienna or Thomas Campion in Elizabethan England. Primary focus is on the music and the lyrics, but we also study the social and cultural contexts of these songs. Some required concerts and video screenings outside of class time. Offered occasionally. Prerequisite: Music 100/101, 200/201, or permission of the instructor. *Also offered through European Studies.*

333. Mozart and the Classical Tradition.

A survey of the developments in Western vocal and instrumental art music during the years 1750 through 1825, with particular emphasis on the life and artistic contributions of Wolfgang Amadeus Mozart. The course seeks to establish ties between contemporary European society and the art it cultivated. Offered occasionally. Prerequisite: Music 200/201. *Also offered through European Studies and German Studies.*

335. The World of Clara and Robert Schumann.

It was quite possible for a woman musician to “make it” in 19th-century Europe. Clara Schumann achieved and sustained such a success for her entire professional life. By studying the lives and artistic accomplishments of “priestess of the piano” Clara Schumann (1819-1896) and her husband, the deeply imaginative composer Robert Schumann, we seek to understand Romantic music of the Western cultivated tradition. The course will feature works by both the Schumanns — piano compositions, songs and chamber works — and others of their time. Offered occasionally. Prerequisite: Music 200/201. *Also offered through European Studies and German Studies.*

337. Avant-garde and Underground Music.

This course covers music that has been considered experimental, radical or transgressive in classical music, jazz and rock. Through surveying European and American perspectives on the relations between the arts and society in the 19th and 20th centuries, we work toward understanding the ideologies that have motivated musicians to locate their styles and practices outside of an imagined mainstream. In studying influential musical works from the last two centuries, we seek to clarify how musicians have put their ideologies into musical practice. Offered occasionally. Prerequisite: Music 200/201. *Also offered through Peace Studies.*

350. Composition.

The fundamental activity in this course is observation. Having arrived at a formative idea for a composition by means of a close analysis of

a generative source, we begin describing that idea by any of several means (for example, a score, a performance or a sound generator), and making sense of that idea in sound. At the discretion of the instructor, students work with acoustic instruments, digital music technology, or both. Offered occasionally. Prerequisites: Music 200/201 and Music 220. May be repeated for credit when course content varies.

470, 471. Advanced Projects in Music.

Independent research in an area of musical study under the guidance of a member of the music faculty. Students must submit a written proposal to the department chair no later than November 15 for projects to be undertaken in the spring semester or April 15 for projects for the following fall. Prerequisites: Music 200/201, 210, and at least one other course in music.

489, 490. SYE: Independent Study.

Senior-year projects are intended to be the product of several semesters of study, bringing together more than one area of musical endeavor. Students must submit a written proposal to the department chair no later than November 15 for projects to be undertaken in the spring semester or April 15 for projects for the following fall. Prerequisites: Music 200/201, 210 and at least one other course in music.

Native American Studies

Minor offered

Professor Nyamweru (anthropology, emerita);
Associate Professors Hill (performance and communication arts), Johns (environmental studies), Chew-Sánchez (global studies), Pai (biology), Schrems (co-ordinator; history);
Director of Community-Based Learning Partnerships Papineau.

Visit the Native American studies webpage by linking directly to it from the Majors, Minors and Programs page at www.stlawu.edu/native-american-studies.

The Native American studies program integrates course work from several fields into an interdisciplinary curriculum that enables students to examine the histories, cultures and contemporary issues affecting the indigenous peoples of the Americas. Courses focus on pre-contact civilizations, historic and contemporary societies, Native cosmologies, social organization, art, literature, film and environmental adaptations. In several courses, the study of the struggle for survival of Native cultures presents students with a range of issues from political/legal status, treaty rights, demography, land claims, sovereignty and self-governance to identity politics, natural resource development, preservation and reclamation.

Minor Requirements

The Native American studies minor consists of six courses. Students must complete two “foundation” courses:

History

229. Introduction to Native American History.

Performance and Communication Arts

322. Native American Oral Traditions. **or**

330. Ritual Studies. (*with permission of the instructor*)

Students must also complete a 300 or 400-level course **or** an approved project as a Senior-Year Experience. Three other courses must be selected from the courses cross-listed with the Native American studies program. Students are advised to contact the program coordinator for the most current information on course offerings and program requirements.

Courses

Students should check each semester under both Native American studies and the relevant departments for course offerings.

Departmental Offerings

Anthropology

255. Environmental Perception and Indigenous Knowledge.

English

263. Native American Fiction.

Environmental Studies

302. Air Pollution.

Global Studies

102. Introduction to Global Studies II: Race, Culture, Identity.

250. La Frontera: Cultural Identities on the Mexican-U.S. Borderland.

260. Transnational Migration.

302. Theories of Cultural Studies.

History

103. Development of the United States, 1607-1877.

229. Introduction to Native American History.

333. The Age of the American Revolution.

352. Playing Indian: Native American Stereotypes in American History and Imagination.

Performance and Communication Arts

322. Native American Oral Traditions.
(*offered in even-numbered years*)

330. Ritual Studies.

(*offered in odd-numbered years*)

In conjunction with the Native American Student Organization, the program sponsors films, guest speakers and social events throughout the academic year.

Neuroscience

Major offered

Professors Erlichman (biology); **Associate Professors** Crosby-Currie (co-coordinator; psychology), DeCoteau (psychology), Estevez (biology and psychology), Ghiraldi (psychology), Onyper (psychology), Temkin (co-coordinator; biology); **Assistant Professor** Fox (psychology).

More information on this interdisciplinary major can be found at www.stlawu.edu/neuroscience.

The departments of biology and psychology have collaborated to implement a dual-track major in neuroscience. There are many areas of common interest and study at the interface of these two disciplines. Students may elect a cellular track or a behavioral track as described below. Both tracks are designed to give students preparation for graduate study in a variety of neuroscience sub-disciplines as well as preparation for entry into health professions. It is imperative that first-year students seek early advisement from a biology or psychology faculty member; they should also begin the introductory courses in each department during the first year. See the respective department listings for course descriptions. Occasionally, the biology and psychology departments offer special topics courses not listed in the *Catalog* that may count toward this major.

Courses

Core Courses (*required by both tracks*)

Biology

101,102. General Biology. 2.5 units

288. Introduction to Neuroscience. 1 unit

389. Advanced Neuroscience. 1 unit

Chemistry

103, 104. General Chemistry. 2.5 units

221. Organic Chemistry. 1.25 units

Statistics

COURSES OF STUDY — NEUROSCIENCE

113. Applied Statistics.	1 unit
Psychology	
100 or 101. Introductory Psychology.	1 unit
Total	10.25 units

Cellular Neuroscience Track Biology

One of the following: 1 unit

- 392. Research Methods in Fluorescence and Confocal Microscopy. *or*
- 395. Research Methods in Molecular Biology.

Plus three courses from: 3 units

- 245/246. Genetics.
- 250. Introduction to Cell Biology.
- 270. Endocrinology.
- 309. Biochemistry.
- 326. Human Physiology.
- 333. Immunology.
- 341. Anatomy and Physiology I.
- 351. Anatomy and Physiology II.
- 387. Cellular Mechanisms of Memory.
- 388. Drugs and the Brain.
- 392. Research Methods in Fluorescence and Confocal Microscopy.
- 395. Research Methods in Molecular Biology.
- 399. Current Topics in Neuroscience.
- 415. Advanced Biochemistry.
- 489/490. Senior-Year Experience (SYE) 1 unit

Behavioral Neuroscience Track Psychology

205. Research Methods in Psychology. 1 unit

Plus three courses from: 3 units

- Biology
- 270. Endocrinology.
- 341. Anatomy and Physiology I.
- 351. Anatomy and Physiology II.
- 357. Behavioral Ecology.
- 388. Drugs and the Brain.
- 399. Current Topics in Neuroscience.
- 489/490. Senior-Year Experience (SYE) 1 unit

Psychology

- 327. Sensation and Perception.
- 401. Fundamentals of Learning.
- 402. Memory and Cognition.
- 432. Animal Behavior.
- 438. Human Neuropsychology.

In both tracks, at least two of the three units of elective courses must be taken with a laboratory component.

Students majoring in either track must also take 1 unit of ancillary courses. This includes a course

from the opposite track, an approved study abroad course, or any of the courses listed below.

Ancillary Courses

Biology

- 232. Laboratory Animals: Ethics, Care and Techniques. (Note: this is a 0.5 unit course)
- 412. Cross-Cultural Perspectives of Healing.

Computer Science

- 140. Introduction to Computer Programming.

Psychology

- 317. Abnormal Psychology
- 326. Hormones and Behavior. (*by permission of the instructor*)
- 442. Intellectual and Developmental Disabilities.

A year of physics (Physics 103-104 or 151-152) and the second semester of organic chemistry (Chemistry 222) are highly recommended, especially for those who intend to pursue graduate study in neuroscience.

Note that students majoring in neuroscience may not also major and minor in either biology or psychology.

Advanced Standing

Students scoring a 4 or 5 on the AP biology test must enroll in the first semester of Biology 101 (General Biology) for which they will receive the normal 1.25 units of credit toward the neuroscience major. Students who do well in this course may bypass the spring biology course (Biology 102) and receive the course credit toward the major. This requires approval of the General Biology instructors, who use multiple criteria to determine whether or not the AP student should take the spring course. The AP score of 4 or 5 automatically nominates a student for this option, but the student may also volunteer to forgo it.

Students who have taken Advanced Placement psychology and received a grade of 4 or 5 on the advanced test are eligible to receive 1 unit of credit for Psychology 100NL.

Academic planning forms are available on the neuroscience web page.

Courses

- 288. Introduction to Neuroscience. (*with lab*)
This course provides basic understanding of the architecture and

processing of information in the brain. Particular emphasis is placed on the cellular properties of cells in the nervous system and how these biophysical properties affect information processing. To this end, students learn neuroanatomy and use computer models to gain insight into the computational power of the brain. Other topics include development of the nervous system, neurophysiology of sensation and homeostatic control mechanisms. Three hours of lecture and three hours of laboratory per week. Offered every fall semester. Prerequisites: Biology 101,102. Recommended: Biology 245, 246 or 250. *Also offered as Biology 288.*

387. Cellular Mechanisms of Memory.

This course examines the molecular mechanisms of neuronal plasticity. Topics include an analysis of the cellular processes that have been proposed to be at the core of memory formation, with discussion of the electrophysiological methods that have been used to analyze these processes; the biochemical mechanisms for short-term and long-term information storage at the cellular level and the vertebrate and invertebrate experimental models used for studying the molecules involved in memory formation. Prerequisites: Biology/Neuroscience 288. Counts toward the neuroscience major (cellular track). Offered in alternate fall semesters. *Also offered as Biology 387.*

388. Drugs and the Brain.

This course will focus on how psychoactive drugs modify nervous system function and human behavior. The neurochemical and behavioral techniques used to study drug action will be addressed. Students will learn how drugs are metabolized by the body (pharmacokinetics), act (pharmacodynamics) and affect behavior (psychopharmacology), gaining comprehensive understanding of the neurotransmitter systems of the brain and how different drugs affect these systems. The laboratory component will utilize the nematode *C. elegans* as a model system to explore drug action; students will learn research techniques and carry out independent research. Three hours of lecture and three hours of laboratory per week. Prerequisites: Biology/Neuroscience 288. Counts toward the neuroscience major (both tracks). Offered every spring semester. *Also offered as Biology 388.*

389. Advanced Neuroscience.

Builds on the fundamental concepts presented in Biology 288 (Introduction to Neuroscience) and begins to examine neurobiology from a systems perspective. Topics include the biological basis of sexual orientation, sleep and dreaming, sleep disorders, epilepsy and seizures, motivation and addiction, Alzheimer's disease, disorders of thought and volition, and mood disorders. Prerequisite: Biology/Neuroscience 288. Required for the neuroscience major. Offered every spring semester. *Also offered as Biology 389.*

399. Current Topics in Neuroscience.

This seminar course will cover a wide variety of topics related to current neuroscience research. Our main source of information will be neuroscience primary literature articles available in the public domain. Students enrolled in the course will decide on the topics that will be addressed throughout the semester, will read the primary literature and will lead critical and comprehensive discussions on each research topic. Examples of topics that can be covered in this course include: epigenetics; mirror neurons; autism spectrum disorders; neurobiology of mental disorders; learning and memory; drug abuse and addiction; and the aging brain. Prerequisites: Biology/Neuroscience 288. Counts toward the Neuroscience Major (both tracks). Offered in alternate fall semesters. *Also offered as Biology 399.*

438. Human Neuropsychology.

This seminar course will examine the function of the human nervous system as it relates to cognition and behavior. Topics covered will include: language, attention, memory, motor skills, visual-spatial processing, problem solving, emotion, and consciousness. Special attention will be paid to the modern methodologies used to study brain-behavior interactions in normal and neuropsychological populations. Lectures, discussions and projects will make use of both empirical and clinical case materials. Prerequisites: Biology/Neuroscience 288 or Psych 331. Counts toward the Neuroscience major (behavioral track). Offered in alternate fall semesters. *Also offered as Psychology 438.*

489,490. SYE: Senior Project.

Senior research may be conducted with a willing faculty mentor and may be of one semester duration (Neuroscience 489, SYE research for 1 unit) or for the entire senior year (Neuroscience 489, 490, SYE research for 1, 1.5, or 2 units). Expectations vary, contingent upon the units desired. The project should integrate acquired research skills and/or subject knowledge gained through the major and culminate in an appropriate written format and an oral presentation. Presentation at the St. Lawrence Festival of Science is encouraged.

499. SYE: Honors Research.

Students integrate acquired research skills and subject knowledge gained through the major to collect original experimental data and analyze the results in reference to the existing scientific primary literature. Results will be presented orally to the neuroscience faculty and/or at the annual Festival of Science and be written as an honors thesis, to be bound and archived in both departments and in the science library. Graduation in neuroscience with the designation of honors requires exceptional academic accomplishment as demonstrated by a major GPA equal to or above a 3.5, and completion of a second semester of SYE honors research according to established guidelines. To graduate with honors in neuroscience, students normally take Neuroscience 489 in the fall semester and then enroll in Neuroscience 499 for the spring semester. In addition, students must: 1) have a neuroscience GPA of 3.5, 2) form a mentoring committee, 3) complete an honors nomination form by the end of the fall semester, 4) submit a written thesis to the committee by the last day of spring classes, 5) present the work at the St. Lawrence Festival of Science.

Outdoor Studies

Minor offered

Associate Professor Shradly (director; geology).

Visit the outdoor studies webpage at www.stlawu.edu/outdoor-studies.

Outdoor studies is concerned with the interaction between humans and the natural world. Students in Outdoor Studies engage in that interaction through practical experience in the outdoors, particularly in wilderness settings, and through interdisciplinary study including field science, philosophy, literature, environmental studies and the arts.

The goals of the minor are:

- To foster a life-long appreciation and respect for the natural world that encourages decision-making rooted in the interconnectedness of the outdoors and the human experience.
- To prepare, through experience and skills acquisition, those students interested in pursuing careers in outdoor education and leadership.

Minor Requirements

To complete a minor in outdoor studies, students may choose between two tracks, the on-campus track or the Adirondack Semester intensive off-campus track. Both tracks require the acquisition of certain elementary outdoor skills.

On-Campus Track

Students must take:

1. ODST 111 *or* ODST 3003.
2. An additional 0.5 or 1.0 credit course from the Outdoor Education category of courses.
3. Two courses from the Philosophy/Literature/Environmental Studies/Arts category, preferably from two different disciplines.
4. Two additional one-credit courses from one or two of the above categories or a relevant First-Year Program or First-Year Seminar.

Courses in the three required categories include but are not limited to the list below; refer questions to the director.

Outdoor Education (ODST)

- 111. Principles of Outdoor Leadership. *or*
- 101. Modern Outdoor Recreation Ethics (“MORE”). (0.5 units)
- 115. Introduction to Snow Science and Avalanches.
- 3003. Advanced Topics:
Outdoor Leadership – Field Science.

Biology

- 121. The Natural World.
- 209. Vertebrate Natural History.
- 215. Invertebrate Biology.
- 218. Ornithology.
- 221. General Ecology.*
- 227. Mammalogy.
- 224. Biology of Vascular Plants.
- 258. Ethnobotany.
- 325. Mycology.
- 330. Ecology of Lakes and Rivers.
- 335. Winter Ecology.
- 360. Marine Ecology.
- 380. Tropical Ecology.*
- 440. Conservation Biology.

**Dual-listed with Environmental Studies.*

Geology

- 103. The Dynamic Earth.
- 211. Geomorphology.
- 216. Sedimentology.
- 320. Regional Field Studies.
- 350. Structural Geology.

Physics

- 101/102. Introduction to Astronomy.
- Environmental Studies
- 326. Once and Future Forests.

Philosophy/Literature/Environmental Studies/Arts

Two courses, preferably from two different disciplines:

English

- 243. Creative Non-Fiction Writing.+
- 295. Nature and Environmental Writing.*
- 308. Advanced Creative Non-Fiction Writing.+
- 328. English Romanticism.
- 346. American Literature and the Environment.*
- 352. Contemporary Literature and the Environment.*

**Dual-listed with Environmental Studies.*

+Only sections including experiences in nature satisfy this requirement.

Environmental Studies

- 249. Outdoor Recreation and Public Land.
- 310. Philosophy of the Environment.*
- 343. Ecology and Political Thought.

Religious Studies

- 103. Religion & Ecology.

**Dual-listed with Philosophy.*

- AAH 256. Art and Nature.

Intensive Off-Campus Track

1. Four and a half units taken during the Adirondack Semester.
2. One 1-credit elective from the Outdoor Education, Field Science or Philosophy/Literature/Environmental Studies/Arts categories other than ODST Core Course.

Courses

111. Principles of Outdoor Leadership

An introduction to outdoor studies that includes many elements of the minor. The course integrates lecture and field experiences that explore the basic theories, concepts and skills in the field of outdoor leadership and education. It also examines personal outdoor recreational ethics as well as knowledge about environmentally sensitive recreation in the outdoors.

101. Modern Outdoor Recreation Ethics. (.5 units)

By means of study, experience and reflection, this half-unit lecture and required lab course attempts to foster a personal environmental ethic as well as knowledge about environmentally sensitive recreation in the outdoors. Course content focuses on historical and present-day philosophies and practices of outdoor pursuits, including backcountry travel, canoeing, climbing, first aid and expedition planning. The course requires five

overnight field trips to practice the material covered in the classroom.

115. Introduction to Snow Science and Avalanches.

This eight-day January course integrates theory with scientific technical skills on a unique field-expedition in a mountain range in North America. Students learn the foundation principles of snow science and avalanche study through readings, classroom learning and field experience, and explore the relationship between human behavior and decision-making, and how it affects snow pack stability. Topics include snow science, mountain weather, geology, avalanche search and rescue, backcountry travel, and the human-nature interaction and relationship in a mountainous winter environment, as well as backcountry wilderness skills necessary to recreate, travel and study safely in a mountainous winter environment.

201. Natural History and Ecology of the Adirondacks. (Adirondack Semester)

This field-oriented course emphasizes the natural history, ecology, geology, geography and climate of the Adirondacks. Primary emphasis is on the ecology, life history, local adaptations and uses of Adirondack flora and fauna. Basic ecological concepts such as ecosystem function, community diversity, food web structure, seasonal change, competition, and nutrient cycles are studied by means of field trips and field studies. Studies examine the influence of weather, day length, and geology and may include the movement of stars and planets. Students learn how to record observational data and how to conduct an experiment.

202. Creative Expressions of Nature. (Adirondack Semester)

This course looks at our interaction with the natural world through an individual and artistic eye. We consider the purpose of art in general through a look at nature writing, nature journaling, papermaking, sketching, poetry and artistic representation. Students try their hand at various modes of artistic expression and mine their own experiences in the outdoors for raw material, to explore the intersection of self and the natural world, that internal landscape where the “eye” and the “I” meet. Through a series of focused reading and creative writing assignments, art projects, and writing exercises outside, students are encouraged to slow down, observe and reflect on the personal relationship they have with the natural world.

203. Land Use Change in the Adirondacks. (Adirondack Semester)

Using the Adirondacks as a case study, this course examines current activities in land planning and the importance of historical context. Study of Adirondack history begins with 16th-century information from European explorers and Native Americans. Emphasis is then placed on industrial and recreational use in the 19th century. The course highlights formation of the State Forest Preserve and the Adirondack Park, and regulations governing private land use. Study of the present utilizes political theory such as internal colonization and coreperiphery. The course employs local examples through discussion and field trips.

277. Knowing Nature. (Adirondack Semester)

Students examine and practice a variety of methods and techniques by which humans know nature. In particular, the course engages the western scientific and the shamanic (as practiced by indigenous cultures) paradigms, and asks how our perception of nature affects how we relate to and treat it. The course will explore the concept of nature as knowing and intelligent through the lenses of recent scientific research and traditional knowledge.

3003. Advanced Topics of Outdoor Leadership

and Education.

This intensive, field-based course culminates with a two-week expedition in which students apply the leadership and teaching skills learned through lectures and labs during the semester. This is a student-designed and instructor-facilitated experience, in which students develop risk management plans, course itineraries and outdoor education lesson plans specific to a wilderness expedition, and assume direct leadership roles implementing their developed lesson plans. The course is designed for students who will work as outdoor guides and educators in the St. Lawrence University Outdoor Program and other professional organizations.

Peace Studies

Minor offered

Advisory Board: Professor Stoddard (global studies); **Associate Professors** Alvah (history), Rediehs (philosophy; coordinator); **Assistant Professors** Buck (government), Jayman (global studies); **Chaplain** Buckley.

Visit the Peace studies webpage at www.stlawu.edu/peace-studies.

Peace studies is an interdisciplinary field whose purpose is to investigate a variety of concepts of peace and to explore the potential for nonviolent methods of building social, political and economic justice.

The purpose of the peace studies minor is to study the basic concepts and methods of analysis that shape the field of peace studies. Researchers from a variety of disciplines, including, for example, philosophy, religious studies, political science and social theory, have developed theories of nonviolent transformation; activists have tested these theories in practice. Students who choose this minor study these theories and methods and also examine some of the deep and rich and sometimes forgotten history of nonviolent social change, which provides material for further analysis. Students engage in critical reflection, comparing the efficacy of violence and nonviolence in addressing conflicts at all levels, from the interpersonal level to the level of international disputes.

Minor Requirements

A minor in peace studies consists of at least five courses, including Peace Studies 100; three or more courses cross-listed from other academic departments and programs; and either Peace

Studies 400 or Peace Studies 410. From time to time the program also offers special topics courses that also count towards the minor.

Students must complete the cross-listed courses after taking 100 and before taking 400 or 410. In rare cases, and with the approval of the program coordinator, a student may take one cross-listed course concurrently with 100 if the student is already clear that he or she intends to minor in Peace Studies and consults with the program coordinator and instructor of 100 early in the semester. It is strongly advised that students who want to minor in Peace Studies should declare their minor in their sophomore or junior year to allow for comprehensive planning of the minor and the senior capstone experience. Also in rare cases, and with the approval of the program coordinator, a student may take his or her cross-listed courses concurrently with 400 or 410. In general, however, students take the three cross-listed courses between the introductory course and the capstone course.

No more than one of these cross-listed courses should be a course that counts for the student's major(s) (or other minor, if relevant). Students who intend to minor in peace studies should meet with the program coordinator to plan a set of cross-listed courses that complements their interests in a meaningful way. Some students may focus on a particular peace studies angle: international issues with a focus on a particular conflict, for example. Others may wish for a more broad-based background, choosing an array of courses that helps them gain a wider and interdisciplinary perspective on peace issues.

Students who minor in Peace Studies must keep portfolios of their work in all courses intended for their minor, and are expected to keep in regular touch with the program coordinator about their progress through the minor.

Courses

100. Introduction to Peace Studies.

The purpose of peace studies is to explore the potential for nonviolent methods of building social, political and economic justice. This course intentionally searches for alternative ways of understanding conflict. We will ask questions such as: Can we define "peace" in more positive terms than the unrealistic "absence of conflict"? Can conflict be positive or even transformative? Are "peacemakers" different from the rest of

us? Can we all learn to live harmoniously with others who are very different from us? And what are ways to cultivate the inner peace that gives people the strength and insight to deal with conflict creatively and positively? *Also offered as Philosophy 120.*

3000-3999.

The content of each course or section of these 100-level or 200-level special topics courses varies and will be announced each semester.

4000-4999.

The content of each course or section of these 300-level or 400-level special topics courses varies and will be announced each semester.

380. Philosophy of Peace.

In this course we explore the meanings of terms such as peace, justice, conflict, violence, pacifism, conscientious objection, and civil disobedience, and we will consider the relationships among these terms. We will also consider questions such as: Is it possible to create a truly just world? Is it possible to respond to serious conflict or oppression nonviolently? Is the use of violent force ever justified? Is a "just war" possible? We will read classic works by philosophers and others on these topics. We will also reflect on our own identities, how power is constructed in our world, and will conclude the course by envisioning a better world and considering how to work towards creating it. Prerequisite: Peace Studies 100 or any 100-level philosophy course or permission of the instructor. *Also listed as Philosophy 380.*

400. Peace Studies Capstone Seminar.

This course is intended to provide an opportunity for peace studies minors to integrate what they have learned in all of the courses that they have taken for their minor. Students re-examine what they learned in these courses, making connections to important peace studies concepts; they also design integrative projects that draw from and extend those studies, and share their work with each other throughout the course. Prerequisite: Peace Studies 100. Limited to Peace Studies minors.

410. Peace Studies Capstone Independent Study.

If a student must take the capstone seminar in a semester during which it is not offered, he or she may take the course as an independent study under supervision of a faculty member.

Departmental Offerings

African Studies

252. Conflict in Africa. *(also offered as History 252)*

320. African Politics. *(also offered as Government 320)*

Anthropology

102. Cultural Anthropology.

420. Views of Human Nature.

Art and Art History

217. Buddhist Art and Ritual.

Asian Studies

106. Modern Asia. *(also offered as History 106)*

125. Early East Asian Civilization. *(also offered as History 105)*

210. Musics of the World. *(also offered as Music 210)*

292. Modern China. *(also offered as History 292)*

Canadian Studies

201. Canadian-American Relations.

Caribbean and Latin American Studies

234. Modern Latin America. *(also offered as History 234)*
 250. La Frontera: Cultural Identities on the Mexican-U.S. Borderland. *(also offered as Global Studies 250)*
 337. Torture, Truth, Memory. *(also offered as Government 337)*

Economics

100. Introduction to Economics.
 234. Comparative Economics.
 236. Globalization Issues: Equity, the Environment and Economic Growth.

Education

203. Contemporary Issues in American Education.

Environmental Studies

216. Climate Change Policy and Advocacy.
 261. Agriculture and the Environment.
 263. Global Change and Sustainability.
 275. Energy and the Environment.
 310. Philosophy of the Environment. *(also offered as Philosophy 310)*
 318. Environmental Psychology. *(also offered as Psychology 318)*

Gender and Sexuality Studies

201. Gender in Global Perspective.
 221. Intercultural Communication. *(also offered as Performance and Communication Arts 221 and Global Studies 221)*
 316. Gender and Communication. *(also offered as Performance and Communication Arts 315)*

Global Studies

101. Intro I: Political Economy.
 102. Intro II: Race, Culture and Identity.
 160. The Islamic World. *(also offered as History 160)*
 221. Intercultural Communication. *(also offered as Gender and Sexuality Studies 221 and Performance and Communication Arts 221)*
 230. Secrets and Lies: Nationalism, Violence and Memory.
 250. La Frontera: Cultural Identities on the Mexican-U.S. Borderland. *(also offered through Caribbean and Latin American Studies)*
 301. Theories of Global Political Economy.
 302. Theories of Global Cultural Studies. *(also offered as Film and Representation Studies 302)*
 333. Ethics of Global Citizenship. *(also offered as Philosophy 333)*
 350. Global Palestine.

Government

108. Introduction to International Politics.
 206. Introduction to Political Theory.
 320. African Politics. *(also offered through African Studies)*
 322. Chinese Politics.
 331. Middle East Politics.
 337. Torture, Truth, Memory. *(also offered as Caribbean and Latin American Studies 337)*
 345. Political Theories of Violence and Nonviolence.
 351. African-American Political and Social Thought.

360. International Relations Theory.
 363. International Organization and Global Governance.
 364. Terrorism and Human Rights.

History

103. Development of the United States, 1607-1877.
 104. Development of the United States, 1877-Present.
 105. Early Asian Civilizations. *(also offered as Asian Studies 125)*
 106. Modern Asia. *(also offered as Asian Studies 106)*
 160. The Islamic World. *(also offered as Global Studies 160)*
 229. Introduction to Native American History.
 233. Colonial Latin America.
 234. Modern Latin America. *(also offered through Caribbean and Latin American Studies)*
 243. Origins of American Foreign Policy (Colonial Era to 1900).
 244. Twentieth-Century U.S. Foreign Policy.
 252. Conflict in Africa. *(also offered through African Studies)*
 256. Slavery and Freedom in the Americas.
 267. The Holocaust.
 273. The Civil Rights Movement.
 292. Modern China. *(also offered as Asian Studies 292)*
 299. Seminar on Historical Research Methods. *(when relevant; e.g., Armenian Genocide; World War I)*
 308. European Imperialisms.
 325. The United States and the Vietnam War.
 333. The Age of the American Revolution.
 371. 18th-Century Europe and the French Revolution.
 373. Japan and the United States in World War II, 1931-1952.

382. Genocide in the Modern World.

Modern Languages and Literatures

Spanish

440. Poetry, Music, and Ethics.

Music

210. Musics of the World. *(also offered as Asian Studies 210)*
 245. Musics of Eastern Europe.
 337. Avant-garde and Underground Music.

Performance and Communication Arts

221. Intercultural Communication. *(also offered as Gender and Sexuality Studies 221 and Global Studies 221)*
 315. Gender and Communication. *(also offered as Gender and Sexuality Studies 316)*

Philosophy

203. Ethical Theory.
 206. Introduction to Political Theory.
 310. Philosophy of the Environment. *(also offered as Environmental Studies 310)*
 333. Ethics of Global Citizenship. *(also offered as Global Studies 333)*
 380. Philosophy of Peace. *(also offered as Peace Studies 380)*

Psychology

215. Cultural Psychology.
 313. Industrial/Organizational Psychology.

318. Environmental Psychology.
(also offered as *Environmental Studies 318*)

322. Positive Psychology.

325. Social Psychology.

Religious Studies

335. Religion and Violence.

Sociology

110. Global Problems.

112. Inequality.

161. Social Problems and Policy.

169. Media and Society.

235. Earning a Living: Work and Occupations in a Global Economy.

236. Education and Society.

238. Social Services, Agencies and Advocacy.
(with *Community-Based Learning*)

239. The Web in Real Life.
(also offered as *Film and Representation Studies 240*)

268. Sustainable Development.

269. Population and Natural Resources.

275. Medical Sociology.

288. Dilemmas of Development.

310. Capstone Seminar: Slavery, Race and Culture.

314. Capstone Seminar: Nomads in World History.

315. Capstone Seminar: Family and Relationship Violence. (with *Community Based Learning*)

377. Capstone Seminar: Sociology of Consumption.

465. Environmental Sociology.

Performance and Communication Arts

Major and minor offered

Associate Professors Fuoss, Hill, Kittler;

Assistant Professors Johnson, Prody, Rowland, Sweigart-Gallagher, Thomas; **Lecturer** Canedy;

Costume Shop Supervisor French.

Visit the performance and communication arts webpage at www.stlawu.edu/performance-and-communication-arts.

Mission Statement

The curricular and extracurricular activities of the department of performance and communication arts (PCA) are guided by a number of fundamental assumptions:

- All performances are acts of communication, and all acts of communication are performances;
- All humans communicate, and all humans

perform;

- Performance entails not merely the disingenuous act of faking but more importantly the creative and constructive act of making;
- Communication entails not merely the transmission and reception of messages but more importantly the community-inducing communion among humans that the transmission and reception of messages makes possible;
- Performance and communication are not just acts in which humans sometimes engage but rather the fundamentally humanizing acts that shape who we are and how we negotiate our relationships with others and with the material world in which we live; and
- Examination of the basic components of performance and communication theory, when coupled with repeated practice in the art of shaping performances and engaging in communicative acts, enables students to become more effective and ethical producers and more discriminating and critical consumers of performances and other communicative behaviors.

Theatre studies engages students in critical inquiry into previous performances and previous performance texts, as well as artistic engagement with the craft of producing original texts and performances. Performance studies includes theatre studies but encompasses a broader array of performance behaviors, including (among others) the performance of gender, the performance of self in everyday life, the performance of texts other than plays, ritual performances, and political performances, both mainstream and activist.

Rhetorical studies focuses on the use of symbols to alter attitudes and induce others to act in a particular manner. Students engaged in rhetorical studies are challenged to critically examine previous attempts at persuasion, as well as to enter creatively into the production of original persuasive messages. Communication studies, a broader term, includes rhetorical studies, but also encompasses a broader array of communication behaviors in a wider variety of contexts, including (among others) interpersonal, small-group and intercultural communication.

In addition to regular course offerings, the department also regularly sponsors public events, including faculty-directed productions, student-directed productions, showcases and performance hours, faculty and guest lectures, and a variety of workshops related to the intellectual and artistic mission of the department. All events are free and open to the public.

Learning Goals

The department's curriculum is designed to enhance students' competency in seven specific areas:

- **Reading texts:** (with "texts" broadly defined to include written and oral texts, as well as visual and physical texts). Before graduating, majors must demonstrate the ability to attribute reasonable meanings to texts, as well as an understanding of why they attribute the meanings they do to texts.
- **Creativity:** Before graduating, majors must demonstrate the ability to engage in creative problem-solving strategies and a facility in creative expression.
- **The production of knowledge:** Before graduating, majors must demonstrate an understanding of what inquiry entails, the ability to initiate and successfully pursue a line of inquiry, and an understanding of knowledge as constructed, embodied in individuals and embedded within larger structures of power that value different types of knowledge differently.
- **Audience-centered performance/communication:** Before graduating, majors must demonstrate the ability to analyze an audience accurately and to adapt messages and performance/communication strategies to meet the exigencies of particular audiences.
- **Solo and collaborative endeavors:** Before graduating, majors must demonstrate the ability to conceive and execute a solo project and the ability to collaborate successfully with others.
- **Critique and self-reflexivity:** Before graduating, majors must demonstrate the ability to respond critically to others' work in a manner that is informed, informative, constructive and humane, as well as the ability to engage in

sustained and meaningful assessment of their own work and the processes involved in the generation of that work.

- **Communication and performance ethics:** Before graduating, majors must demonstrate an understanding of the responsibility communicators/performers have to themselves, their audiences and society; the ability to interrogate the ethics underlying the communication/performance of others' texts; and the ability to construct/communicate/perform texts in an ethical and responsible manner.

While some departmental courses address all of these competencies, most focus sustained energy on enhancing a few of them. The department assumes that growth is incremental, occurring over the course of the student's completion of the major or minor.

Major Requirements

Most students who major in the department begin with an interest in one of the two broad areas of inquiry described above — rhetoric/communication studies or theatre/performance studies. The department's major is designed to enable students to pursue that interest passionately and in depth. However, we are also committed to a philosophy that emphasizes both depth and breadth of study; accordingly, the curriculum requires majors to enroll in courses that span the performative dimensions of rhetoric and communication and the rhetorical and communicative dimensions of performance.

Majors choose one of the two areas as their primary area of concentration and the other as their secondary area of concentration. Eleven courses are required to complete the major. Fulfillment of the major requires the following:

1. All majors take the following four survey courses that will introduce them to various aspects of the major:
 - 107. Beginning Acting.
 - 111. Rhetoric and Public Speaking .
 - 125. Introduction to Theatre.
 - 127. Introduction to Communication Studies.
2. All majors must complete the research methods course that will introduce them to

basic methods of inquiry and philosophical approaches peculiar to various areas of the major:

250. Communication & Performance Research Methods.

3. Majors must complete six additional courses, at least five of which must be in their primary area of concentration. At least four of these courses must be at 300-level and above.

Introductory courses in rhetoric/communication studies include:

270. Collaboration Across the Arts.

Introductory courses in theatre/performance studies include:

100. Beginning Ballet.

103. Stagecraft.

113. Introduction to Performance Studies.

202. Sound for the Stage.

204. Costume History and Construction.

215. Dramatic Texts in Context.

223. Playwriting.

270. Collaboration Across the Arts.

Advanced courses in rhetoric/communication studies include:

239. Media Industries.

250. Communication & Performance Research Methods.

3000-3999.

Special Topics in Rhetoric/
Communication Studies. (200-Level Courses)

310. Culture & Media.

311. Advanced Public Speaking.

315. Gender and Communication.

316. Advanced Communication Studies.

318. Argumentation and Debate.

321. Intercultural Communication.

325. Peer Mentoring in Rhetoric and Communication.

326. American Public Address.

328. Interpersonal Communication.

329. Rhetoric of Social Movements.

333. Persuasion: Analyzing Rhetorical Texts.

331. Presidential Campaign Rhetoric.

334. Environmental Communication.

335. Sex Talk.

336. Rhetoric and Citizenship.

360. Public Sphere of Renaissance Venice.

361. London Coffeehouse Culture & Modernity.
4000-4999.

Special Topics in Rhetoric/
Communication Studies. (300-Level Courses)

480. Independent Study.

489. SYE: Senior Project.

498. SYE: Honors Senior Project.

Advanced courses in theatre/performance studies include:

230. Beginning/Intermediate Modern Dance.

235. Beginning/Intermediate Jazz Dance.

250. Communication & Performance Research Methods.

255. African-American Drama.

270. Collaboration Across the Arts.

3000-3999.

Special Topics in Theatre/
Performance Studies. (200-Level Courses)

303. Stage Lighting.

307. Characterization.

309. Acting Styles.

314. Group Performance.

317. Performing Poetry.

319, 320. Shakespeare.

322. Native American Oral Traditions.

327. Drama By and About Women.

330. Ritual Studies.

332. Directing.

338. Twentieth-Century Avant-Garde.

340. Performance Art.

344. Children's Theatre in the Schools.

355. Studies in World Dramatic Literature.

437. Contemporary British Theatre. (London)
4000-4999.

Special Topics in Theatre/
Performance. (300-Level Courses)

480. Independent Study.

490. SYE: Senior Project.

499. SYE: Honors Senior Project.

Minor Requirements

Fulfillment of the minor requires six courses and students need to meet the following requirements:

- All PCA Minors must take the following four courses:
 107. Beginning Acting.
 111. Public Speaking.
 125. Introduction to Theatre.
 127. Introduction to Communication Studies.
- Minors must take two additional upper-division courses.

Honors

To graduate with honors, a major must maintain a 3.5 GPA in the department and a 3.0 GPA overall; the major's senior project proposal must be approved for enrollment in 498/499 SYE:

Honors Senior Project; and the student must earn at least a 3.5 in 498/499.

Courses

100. Beginning Ballet.

Fundamentals of classical ballet including barre, center work and across-the-floor movements with emphasis on body alignment and elements of ballet style. Material is presented in a progression from basic to more complex. Lectures consist of pertinent references to dance history, terminology, movement theory and dance films illustrating related subject matter.

101. Production Credit.

This is a practicum credit for students working on faculty-directed productions. Students are selected through the regular audition process and credit (either .25 or .5 credit units) is based on the size of the role and/or the time commitment involved. Students may take up to 1 unit of production credit. Pass/fail grading only. Permission of instructor required.

103. Stagecraft.

The study and practice of creating scenery for the stage, this course also explores the operation of the theater's physical plant. Material is presented in lectures and is further illustrated through the activities of the production studio.

106. Performing Diversity.

Using research, creative writing and personal experiences, this seminar explores various issues of multiculturalism and diversity on the St. Lawrence campus and in America today. We will engage a variety of texts to investigate the links between identity and oppression by race, class, gender, sexual orientation, differing abilities, and religion. As part of a significant research project, members of the class create performance texts (combining video presentations and live performance work) about specific research topic areas. To be a part of this seminar, you do not need prior experience in video production or acting/performance, but you must be willing to get involved with exploring both. This course is available to first-year students only as an FYS.

107. Beginning Acting.

An introduction to the basic mental and physical skills used in acting, including use of imagination, understanding of the self, character analysis, body flexibility and expression, and voice and diction. Coursework includes exploratory and centering exercises, improvisational techniques and scene and monologue study.

111. Rhetoric and Public Speaking.

An introduction to the art of public speaking, focusing primarily on the construction and critique of persuasive discourse. Students study the classical rhetorical tradition as a continuing influence on the contemporary theory and practice of persuasion.

113. Introduction to Performance Studies.

This course engages students in the analysis and performance of texts other than dramas (e.g., poems, short stories, personal narratives). The course emphasizes analysis of the dramatic situation in texts, process-centered workshops, and performance criticism.

125. Introduction to Theatre.

This course is designed to aid the student in an investigation into the various aspects of theatrical performance and process. This course will explore the five main aspects of the theatrical event: director, actor, playwright, designers (costume, scenic, lighting) and audience.

Throughout the course students will discover the relationship between text/literature and the artistic nature of theatre to make and enhance meaning.

126. Persuasion: Analyzing Rhetorical Texts.

This course is designed to foster increased awareness of the diverse forms and functions of persuasion in contemporary society and to improve students' ability to function as discriminating consumers of rhetorical texts. While the course includes extensive reading and analysis of public speeches, it is also intended to heighten student awareness of the presence of persuasive intent in texts not traditionally considered rhetorical, e.g., poems, plays, songs, paintings, music videos and news broadcasts.

127. Introduction to Communication Studies.

This course explores the forms, functions, techniques, technologies and institutions of human communication with the goal of enhancing understanding of the complex dynamics of social interaction. Topics include communication and meaning; language, thought and communication; non-verbal communication; gender and communication; intercultural communication; and the mass media.

202. Sound for the Stage.

This course explores artistic and practical aspects of using sound in support of theatrical productions. *Also offered as Music 222.*

204. Costume History and Construction.

This course explores the artistic and practical aspects of designing costume for performance. Through a series of projects, students analyze the costume requirements for various plays, research period fashions and develop costume designs for specific characters and productions.

215. Dramatic Texts in Context.

This course examines how knowing the theatrical and cultural contexts of plays helps theatre practitioners make informed choices regarding how to stage them. *Also offered as English 215.*

223. Playwriting.

This course explores the processes of composition characteristic of the playwright. In a series of weekly assignments, various aspects of the art are introduced, e.g., characterization, dialogue, dramatic action and others. The course concludes with the writing of a one-act play. Students read exemplary plays from the modern repertoire. *Also offered as English 223.*

230. Beginning/Intermediate Modern Dance.

This course emphasizes development of basic modern dance concepts and technique, including increase of students' strength, control, rhythmic awareness and stage presence. Specific techniques touched upon and/or covered in depth include, but are not limited to, O'Donnell, Nickolas, Garth Fagan and Graham. The course provides an in-depth knowledge of the history of modern dance. Students will strengthen their choreographic skills and produce an original piece.

235. Beginning/Intermediate Jazz Dance.

This course is for the elementary dance student interested in developing the basic movement skills of jazz dance. Emphasis is placed on the Jack Cole technique. Course material consists primarily of building a solid technical base, learning isolations, rhythmic difference and dynamics. The course provides an in-depth knowledge of jazz dance, its phenomenon and its changing character throughout the years. Students are exposed to Broadway, concert and commercial jazz styles, strengthen their choreographic skills and produce an original piece.

239. Media Industries.

This course surveys the historical development of traditional media industries such as newspapers, magazines, books, television, radio, film, music recording and video games, as well as the issues related to the emergence of digital technologies epitomized by the Internet. It likewise focuses on the historical evolution of two other closely related fields advertisement and public relations. *Dual-listed by Film and Representation Studies.*

244. Techniques of Screenwriting.

An introductory study of basic technical problems and formal concepts of screen writing. The study of produced screenplays and formal film technique, along with writing scene exercises, builds toward the construction of a short (50-minute) script. *Also offered as English 244 and through Film and Representation Studies.*

250. Communication & Performance Research Methods.

This course introduces students to a variety of qualitative research methods and theoretical lenses used by scholars of communication, rhetoric, and theater. Students will be exposed to existing research that uses these methods and will practice these approaches throughout the semester. The capstone project involves developing an individual research projects that uses a particular method of qualitative analysis to answer questions about a communicative and/or performative text or act.

255. African-American Drama.

African-American drama is a tradition that has unique themes and forms with sources in African ritual and language; gesture and folklore; the Southern Baptist church; the blues; and jazz. Students examine plays, read essays, view videos and listen to music to discover the qualities that make this drama a vital resource of African-American culture and an important social and political voice. *Also offered as English 255.*

270. Collaboration Across the Arts.

The direction of this course is determined largely by the unique combination of students who participate. Students form groups of two or three to work on a collaborative project of their own design reflecting their collective interests. For example, a pair of students may create a multimedia work that draws connections between image and sound. Students critique works in progress, study exemplary works, discuss relevant aesthetic issues, trace connections across media and consider strategies for collaborative work. Prerequisite: permission of the instructor. *Also offered as Fine Arts 270 and Music 270.*

3000-3999. Special Topics in Rhetoric/ Communication Studies.

The content of each course or section of these 200-level special topics courses varies and will be announced each semester.

3000-3999. Special Topics in Theatre/ Performance Studies.

The content of each course or section of these 200-level special topics courses varies and will be announced each semester.

303. Stage Lighting.

An investigation of theatrical lighting equipment and its applied use in producing drama, concerts, and dance on the modern stage. The course includes a study of basic electricity, lighting instruments, computerized lighting control and design procedures. Materials are presented in a lecture/demonstration format and are further explored in the lighting lab and departmental productions. Prerequisite: PCA 103.

306. Advanced Screenwriting.

An extension and intensification of PCA 244. Students are expected to work independently on the preparation of two featurelength screenplays. Workshop format emphasizes the revision and editing process. Prerequisite: PCA 244. *Also offered as English 306 and through Film and Representation Studies.*

307. Characterization.

An intensive study of the acting process building on skills developed in PCA 107. The course focuses on character development in psychological realism and is intended to expand the actor's range with both scene and monologue work, as well as to expand skills in voice/body integration and script analysis. Prerequisite: PCA 107.

309. Acting Styles.

A concentrated study of three theatrical styles: Greek tragedy, Elizabethan drama and comedy of manners. The course includes reading and research on the theatre and culture of each historical period, followed by an intensive exploration of their vocal and physical styles through guided improvisations, exercise and scene study. Prerequisite: PCA 107.

310. Culture & Media.

Print or electronic mediating technologies have accompanied humans for more than five centuries and at some point people started questioning the extent to which they influenced, or as we will learn to say, co-constructed our everyday reality. This class surveys some of the important intellectual contributions to this inquiry – media theories and seminal studies. At the same time, it follows some of the most significant contemporary debates that reflect the symbiotic relationship between the media and our own culture. *Also offered through Film and Representation Studies.*

311. Advanced Public Speaking.

Intensive study of the principles and practices of researching, organizing, writing, delivering and criticizing persuasive speeches. Students employ contemporary theories of persuasion to analyze a variety of rhetorical situations. Students construct persuasive speeches for different speaking situations in order to develop critical and practical skills. Prerequisite: PCA 111.

314. Devising for Performance.

This course focuses on the process of adapting and staging non-dramatic texts (e.g., novels, short stories, poems) for performance. The class emphasizes the process of selecting, adapting, scripting and rehearsing texts for performance. Prerequisite: PCA 107 or PCA 113.

315. Gender and Communication.

All of our communications have a gendered component, and all gender performances are, by definition, communicative. In this course, we explore some of the many contexts, media and modalities through which communication and gender intersect. We examine both how we perform gender and how we become gendered through the processes of social interaction. Prerequisite: PCA 127, PCA 111, or GNDR 103.

316. Advanced Communication Studies.

This course surveys contemporary theories and principles of human communication and complements this inquiry with practical exercises designed to test and explain the theories. Course material focuses on interpersonal communication, non-verbal communication, mass communication, intercultural communication and the relationship between gender and communication. Prerequisite: PCA 127.

317. Performing Poetry.

"Milktongue, goatfoot, and twinbird" are the words that poet Donald

Hall uses to describe what the voicing and embodying of poetry feels like to him. It's something with taste and texture in our mouths, something we feel in our bodies, and something that sings, chants, and fills the world with sight and sound. In this course we focus on the performance of various poetic forms: traditional fixed forms, open verse, concrete poems, found poems and others. We will add to Hall's list of ways to describe what happens when poetry returns to its roots in the oral tradition, and in the process examine the intersections of contemporary poetic theory and performance theory. *Also offered as English 330.*

318. Argumentation and Debate.

Study of the nature and functions of argument: the classical and contemporary concepts of rationality, truth, knowledge and models of argument; and the evaluation of argument in formal and ordinary language situations. Students participate in several argumentation and debate assignments to develop critical and practical skills. Prerequisite: PCA 111. *Cross-listed with Peace Studies.*

319, 320. Shakespeare.

An intensive study of Shakespeare's plays; 319 concentrates on Shakespeare's histories, comedies and romances, while 320 focuses on the tragedies. Prerequisites: PCA 125 or English 110 and one 200-level English literature course; or two 200-level English courses. *Also offered as English 319, 320 and through European Studies.*

321. Intercultural Communication.

This course explores theoretical and rhetorical frames around culture, cultural difference and cultural encounter, the purpose being to enable participants to become more culturally sensitive and effective communicators. *Also offered through African-American Studies.*

322. Native American Oral Traditions.

This course examines the oral literatures of Native Americans and the incorporation of these oral traditions into written texts. Native American oral traditions are examined using written texts, videos and live performances. With a focus on origin stories, mythic heroes, and rituals, the course considers Native American views of storytelling, family, religion/cosmogony and language. *Also offered through Native American Studies.*

325. Peer Mentoring in Rhetoric and Communication.

This course is designed to train students who will work as rhetoric and communication mentors in the University's WORD Studio. Permission of instructor required.

326. American Public Address.

A study of American history through examination of the speeches of spokespersons for social, political, legal and religious institutions and movements. From Thomas Jefferson to George Bush, from Susan B. Anthony to Phyllis Schlafly, from George Wallace to Martin Luther King Jr.: a study of the impact of rhetorical strategies upon ideas and events and of ideas and events upon rhetorical strategies. *Cross-listed with Peace Studies.*

327. Drama By and About Women.

Using theoretical writings and dramatic scripts, this course asks what, if anything, is different about reading drama written by women about women. Although the foundations of this course are rooted in a variety of feminist perspectives, it focuses on a way of reading rather than on any one of a group of political stances. Students are expected to respond subjectively to the voices of women articulated in the plays and, at the same time, use critical skills to comprehend the social, historical

and cultural contexts that shaped them. Prerequisite: PCA125 or instructor permission.

328. Interpersonal Communication.

This course examines the social situations in which people create and maintain interpersonal relationships, exploring the myriad social and cultural factors that impinge upon the success of these relationships. Topics include identity, relationship formation, family, friendship, intimacy, gender and sexualities, relationships at school and work, conflict, and digitally mediated interpersonal communication. Prerequisite: PCA 127.

329. Rhetoric of Social Movements.

This course examines the rhetorical strategies employed in contemporary American social movements (civil rights, Vietnam/anti-war movement, women's liberation, American Indian Movement, gay and lesbian rights). Cultural texts, speeches, manifestos, sit-ins, marches and songs drawn from each of these calls for change are examined and interpreted using a variety of rhetorical theories. *Cross-listed with Peace Studies.*

330. Ritual Studies.

This course examines the nature of rituals, how humans use rituals, the various types of rituals, and how rituals evolve over time. Students explore the origins, histories, and methods of analysis of rituals as well as learning how we produce them.

331. Presidential Campaign Rhetoric.

This course examines the forms and functions of rhetoric within the context of presidential election campaigns. Students engage in a variety of formal and informal oral and written exercises related to the persuasive strategies that candidates, the media and independent organizations use to advance their political agendas. *Cross-listed with Peace Studies.*

332. Directing.

This course provides the advanced student with practical skills and an understanding of directing methods, including intensive script analysis, concept development and articulation, composition/picturization and collaboration with other theatre artists. Prerequisites: PCA 125 and PCA 107 or PCA 113, or permission of instructor; PCA 103 is recommended.

334. Environmental Communication.

Environmental Communication (EC) begins with the premise: language shapes how humans live with the natural environment. As a discipline EC recognizes that how we speak about the environment and who is allowed to speak about the environment affect how humans view, interact with, and make policy about their surroundings. Throughout the course students examine how environmental discourse connects issues of citizenship, community building, and environmentalism. Students will encounter theoretical concerns, environmental history, and have opportunities to produce their own environmental communication. *Cross-listed with Peace Studies.*

335. Sex Talk.

Sex Talk is an examination of dominant discourses around gender, sex and sexuality with the objective being to have students not only critically analyze these discourses but to interrupt their creation in order to foster counter discourses that challenge hegemonic norms, including misogyny and homophobia. We will explore youth culture and university cultures, and examine how these cultures create, are created by, respond to, and challenge patriarchy, hegemonic masculinities and femininities. The course culminates in students designing and delivering peer education programs/performances on campus. *Cross-listed with Peace Studies.*

336. Rhetoric and Citizenship.

Throughout the course, students explore citizenship through the lens of rhetorical theory and history, study philosophical debates over citizenship, and debate the current state of citizenship in U.S. society. While engaged in these theoretical discussions, students enact their own civic engagement by examining their communities of obligation, identifying concerns in their communities, and using rhetoric to address a community concern. *Cross-listed with Peace Studies.*

338. Twentieth-Century Avant-Garde.

Students are exposed to theoretical writings, dramatic texts and performances that reflect the continuing experimentation in the theatre since the 1890s. Students examine artistic reactions to a post-Darwinian and post-Freudian worldview and are exposed to the various methods by which playwrights and theatre practitioners have grappled with finding new ways of articulating what it means to be human in an industrialized world. Prerequisites: PCA 125 or PCA 215 or permission of instructor. *Also offered through European Studies.*

340. Performance Art.

Students read essays about the historical tradition of performance art and the relationship between performance art, theatre, dance and the visual arts, and consider the work of contemporary performance artists such as Karen Finley, Spaulding Gray, Laurie Anderson, Rachel Rosenthal and Pina Bausch. Students also learn about performance art by doing it—by engaging in the process of creating and producing their own performance art pieces. Prerequisite: PCA107 or PCA 113 or instructor permission.

344. Children's Theatre in the Schools.

Students explore the use of theatre games and acting exercises in order to teach basic acting and educational skills to local elementary school children. Skills include physicalization, vocalization, imagination, public speaking, concentration, problem-solving, collaboration, listening and characterization. Students will rehearse and perform a children's theatre play for an elementary school audience at the conclusion of the course.

355. Studies in World Dramatic Literature.

The study of dramatic literature primarily produced outside the United States and Great Britain. Focus may be upon cultural coherence (e.g., Francophone dramatic literature), discrete dramatic movements on a particular continent (e.g., South African drama), shared thematic concerns (e.g., the role of women) or a period-specific examination of non-Anglo drama. Prerequisite: varies.

360. The Public Sphere of Renaissance Venice.

At the peak of its Renaissance period (1480-1530), the Republic of Venice presented itself as a perfect embodiment of Plato's and Aristotle's classical republican model. At the same time, it reached a significant hegemonic position in the Western world measured both by hard (military and economic) as well as soft (political philosophy, arts and architecture) standards of power. This course is conceived as a multidisciplinary reading and research seminar examining the complexity of the public life in the famous Italian city-state. *Dual-listed through Economics, Government, Global Studies, History, Modern Languages (ITAL) and Philosophy.*

361. London Coffeehouse Culture & Modernity.

German philosopher Jürgen Habermas famously described the culture of the early 1700s London coffeehouses as the spark that kindled the advent of modern democracy. Indeed, the last licensing act in England expired in 1695 and with it also the censorship of press. Within the next decade, London was flooded with newspapers and pamphlets

that openly scrutinized practically all aspects of public, but also private life. They were read and discussed in coffeehouses that soon became social institutions of their own right. Yet, such idealized world of London coffeehouses also had another, much darker side. Relying on secondary sources as well as original newspaper articles, essays and pamphlets published mainly by Addison, Steele and Defoe, the proposed course's main goal is to help students mentally recreate the atmosphere of London at the dawn of what we call the Enlightenment era. *Dual-listed by the English Department.*

4000-4999. Special Topics in Rhetoric/ Communication Studies.

The content of each course or section of these 300-level or 400-level special topics courses varies and will be announced each semester.

4000-4999. Special Topics in Theatre/ Performance Studies.

The content of each course or section of these 300-level or 400-level special topics courses varies and will be announced each semester.

480. Independent Study.

Supervised research on an independent basis. Students wishing to register for independent project credit must submit a proposal for approval before registering for this course. Proposals are due two weeks before the end of classes in the prior semester. Proposal guidelines are available in the Arts Office; proposals should be submitted directly to the faculty member whom the student wishes to supervise the independent study. Only juniors and seniors may propose independent projects. Prerequisite: permission of department chair.

489/490. SYE: Senior Project.

Supervised research on an independent basis. Students wishing to register for independent project credit must submit a proposal for approval before registering for this course. Proposals are due two weeks before the end of classes in the prior semester. They should be submitted directly to the faculty member whom the student wishes to supervise the independent study. Proposal guidelines are available in the department chair's office. Only juniors and seniors may propose independent projects.

498/499. SYE: Honors Senior Project.

The senior project is a capstone designed to allow students to demonstrate their ability to synthesize the analytical and practical skills associated with the discipline. Only those students who have had their senior project proposal approved by the department may register for this course. Proposals are due two weeks before the end of classes in the prior semester. A copy should be submitted to all department members' mailboxes. Proposal guidelines are available in the department chair's office. Students are assigned a three-person honors project committee, one of whom will be designated as the student's primary senior project advisor, with the other two serving as readers. Students must orally defend their project. Project Proposal Guidelines are available in the Arts Office. Students are assigned a senior project advisor who is solely responsible for overseeing the execution and evaluation of the project.

498/499. SYE: Honors Senior Project.

The senior project is a capstone designed to allow students to demonstrate their ability to synthesize the analytical and practical skills associated with the discipline. Only those students who have had their senior project proposal approved by the department may register for this course. Proposals are due two weeks before the end of classes in the prior semester. A copy should be submitted to all department members'

mailboxes. Proposal guidelines are available in the department chair's office. Students are assigned a three-person honors project committee, one of whom will be designated as the student's primary senior project advisor, with the other two serving as readers. Students must orally defend their project.

Philosophy

Major and minor offered

Professors Hansen (Associate Dean of the First Year), McCarthy (chair); **Associate Professors** Johnson (emeritus), Rediehs; **Assistant Professor** Maynes.

Visit the philosophy webpage at www.stlawu.edu/philosophy.

Philosophy deals with a range of fundamental questions. What does it mean to live a good life? How should a person live? Are we free? What is the self? What is the nature of reality? How are individual and community related? What is justice, and can we create a truly just society? How should humans interact with the natural world? What is knowledge? What can be known and what is just a matter of opinion? The methods philosophers employ in addressing such questions include careful analysis of existing opinions and their implications, free speculation about possibilities of all sorts, and rigorous critical reasoning to choose among theories.

Every culture has philosophical legacies. These legacies are contested within each culture, change over time and change in response to encounters with other cultures. The philosophy program at St. Lawrence is designed to give students a solid global overview of philosophy. Our courses introduce students to crucial periods of Western philosophy, illustrate the major subfields of philosophy, and move beyond Western philosophy to provide a global perspective.

The activity of philosophy is vital to liberal education. It is through philosophy that a student synthesizes the many facets of life and education into a personal whole. The methods of philosophy—questioning of common assumptions, analysis of ideas and theories, free speculation combined with reasoned criticism—

develop abilities that are themselves among the chief aims of liberal education.

The philosophy department program serves as an excellent focus for liberal education. Although some majors go on to distinguished graduate schools, most make use of their philosophical training in other pursuits. We believe that a student becomes liberally educated not primarily by accretion of information but by grappling with fundamental questions about life and learning. Philosophy has a rich history of alternative answers to these questions, and we believe that by understanding these varied answers students are better able to formulate their own philosophies. Our curriculum aims at progressive development of mind and character by increasing students' awareness of questions fundamental to a thoughtful life, and by developing the capacity for free, creative, critical thought and action.

Major Requirements

Our 100-level courses are introductory courses and have no prerequisites. Our 200-level courses are intermediate-level courses, and many require a 100-level course as a prerequisite. Our 300-level courses are advanced courses, often requiring relevant 200-level courses as prerequisites. We reserve courses numbered in the 400s for Senior-Year Experience (SYE) or independent study courses. Within levels, there is no recommended sequence. There is, for instance, no reason to take Philosophy 203 before 223, or 301 before 302, although as noted below, it is strongly recommended that students take 201 before 208.

A major in philosophy consists of 10 courses, including five core courses, electives (with at least two at the 300 level), and at least one SYE course or course sequence, normally *Metaphilosophy* (Phil 400). Only one 100-level course counts toward the major. Students are strongly encouraged to begin their philosophical studies with 100, 103 or 120, since a 100-level course is often a prerequisite for core courses.

The core courses are designed to give students a solid global overview of philosophy. They introduce students to crucial periods of Western philosophy (ancient Greek philosophy and modern European philosophy), illustrate the

major subfields of philosophy (metaphysics, epistemology, logic and ethics), and offer a global perspective by requiring students to take at least one course outside of the Western philosophical tradition.

The five core courses are 201, Ancient Philosophy; 202, Reasoning; 203, Ethical Theory; 208, Modern Philosophy; and either 223, Asian Philosophy, or 232, Africana Philosophy. These courses do not have to be taken in any particular sequence, but we strongly recommend that students take 201 and 208 in sequence in their sophomore year.

Minor Requirements

A minor in philosophy consists of five to nine courses, including 202, 203, 201 and/or 208, and either 223 or 232. Only one 100-level course counts toward the minor.

Honors

To receive honors in philosophy, a student must satisfy the requirements for the major. In addition, he or she must have a 3.5 grade point average in the department and complete a departmentally approved honors project (Philosophy 498/499) as his or her SYE.

Preparing for Graduate Studies in Philosophy

Majors considering graduate school in philosophy are strongly advised to take Philosophy 302, Symbolic Logic, plus an advanced course in the subfield of philosophy they may wish to specialize in at the graduate level. Those aspiring to graduate school in philosophy should also plan to write a senior thesis.

Preparing for Law School

A philosophy major or minor offers an excellent background for the study of law. A student who wishes to go to law school is strongly advised to take Philosophy 202, Reasoning, and 302, Symbolic Logic. Philosophy 206, Political Theory, is also recommended.

Courses

100. Introduction to Philosophy.

A non-historical survey that approaches the field through consideration

of such perennial problems as ultimate reality, free will, knowledge, morality, political obligation and the existence of God. No prerequisites.

103. Philosophy East and West: An Introduction.

A thematic introduction to philosophy, taking a comparative approach, looking at philosophy not only of the Western tradition, but also of the Eastern tradition. Themes include the idea of a “good life,” ethics and the self. Through close reading of primary texts, we critically explore both the commonalities and differences across the traditions. Students learn how to analyze difficult philosophical text and arguments critically, develop writing skills and ask and answer questions in a philosophical manner. *Also offered as Asian Studies.* No prerequisites.

120. Introduction to Peace Studies.

The purpose of peace studies is to explore the potential for nonviolent methods of building social, political and economic justice. This course intentionally searches for alternative ways of understanding conflict. We ask questions such as, Can we define “peace” in more positive terms than the unrealistic “absence of conflict”? Can conflict be positive or even transformative? Are “peacemakers” different from the rest of us? Can we all learn to live harmoniously with others who are very different from us? What are ways to cultivate the inner peace that gives people the strength and insight to deal with conflict creatively and positively? *Also offered as Peace Studies 100.* No prerequisites.

201. Ancient Philosophy.

A historical study of Western philosophy from its beginnings in ancient Greece through the end of the classical period, with primary emphasis on Plato and Aristotle. Representative original works are read dealing with such problems as reality, the self, knowledge and value. Prerequisite: any 100-level philosophy course or permission of the instructor. *Also offered through European Studies.*

202. Reasoning.

Critical reasoning is the ability and tendency to be moved by good reasons and not by poor ones. This course examines arguments—how to identify them, how to evaluate them, and how to produce them—so that students will be better prepared to reason critically about issues of importance to themselves and to society. Topics may include both the formal and informal evaluation of arguments, scientific reasoning, and fallacious reasoning. No prerequisites.

203. Ethical Theory.

An introduction to ethical theory, drawing on texts from the Greeks to the present. What is the nature of moral obligation? What character traits are human virtues and vices? How do we discern goodness and evil? How do we justify ethical judgments of any kind? This is an appropriate selection for students with some previous experience in philosophy and provides an important background for further study in philosophy or other disciplines. Prerequisite: any 100-level philosophy course. *Also offered through Peace Studies.*

206. Introduction to Political Theory.

A study of the answers that philosophers from Plato to Nietzsche have given to the question, “How should political life be organized?” This question leads us to consider the related problems of justice, power, equality, freedom and human nature. The course includes discussion of the strengths and weaknesses of liberal democracy. *Also offered as Government 206 and through European Studies and Peace Studies.*

208. Modern Philosophy.

This course examines the history of European philosophy through the “modern” period: the 17th and 18th centuries. This was an important

period in that it gave birth to the phenomenon of “modern science” and was also the period of time in which science and religion became disciplines that separated out from philosophy. Fueling these changes were philosophical debates on the nature of knowledge and reality. The course explores both the systematic thinking of key philosophers of this era, and the historical development of the different viewpoints on these topics. Prerequisite: any 100-level philosophy course or permission of instructor. *Also offered through European Studies.*

216. Philosophical Perspectives on Sport.

The study of ethics and moral reasoning is introduced through the lens of sport. Topics such as moral skepticism, ethical relativism, utilitarianism vs. Kantianism, competing concepts of impartiality, the care vs. justice perspective, positive vs. negative duties and the doctrine of double effect are explored. Students will be asked to evaluate their own opinions, beliefs and attitudes that govern their judgment and/or actions within the realm of sport. *Also offered through Sports Studies and Exercise Science.*

223. Asian Philosophy.

An introduction to some of the major thinkers and themes of the philosophies of India, China and Japan. The major themes—self and ethics—require us to think in a different framework from that of the Western tradition: for instance, whereas the East emphasizes the ethical, the West stresses the logical and epistemological; whereas the West seeks out a methodology, the East requires after a path. Students are encouraged to think in these non-Western frameworks; however, we also make reference to ideas and themes in Western philosophy to aid understanding of the traditions. *Also offered through Asian Studies.* Prerequisite: any 100-level philosophy course, or permission of the instructor.

232. African Philosophy.

This course engages a set of questions that emerge out of three interrelated bodies of philosophic literature—African philosophy, Caribbean philosophy, and African-American philosophy—which comprise an inclusive category of African diasporic thought (or Africana philosophy). We read texts on the metaphysical question, “What is Africana philosophy?” We also engage several philosophers on the political philosophical concerns and legacies of colonization and American slavery, and on the epistemological and ethical questions of Race and racism. Prerequisite: any 100-level philosophy course or permission of the instructor. *Also offered through African Studies and African-American Studies.*

290. Gender and Feminist Theory.

This course examines theoretical explanations of gender, gender difference and gender inequality in society. It includes introductions to some of the questions that shape contemporary feminist theory, feminist writings in multiple disciplines and feminist movements inside and outside the academy. The focus is on how an awareness of intersections of race, class, sexuality, gender and ethnicity is vital for disciplinary and interdisciplinary study in feminist theory. Theoretical works are drawn from the humanities, arts and literature and the social sciences. Prerequisite: Gender and Sexuality Studies 103. *Also offered as Gender and Sexuality Studies 290.*

301. Philosophy of Science.

Why does science produce such reliable knowledge? Is there really a “scientific method”? Does science get at truth, or is scientific knowledge socially constructed? In addition to these questions, we consider whether science advances according to a steady and rational process, or whether it advances according to radical “scientific revolutions.” We

also try to identify what (if anything) distinguishes scientific knowledge from other kinds of knowledge, and reflect on whether scientific knowledge is comprehensive enough to constitute a complete worldview. Prerequisite: any 100-level philosophy course, Philosophy 202, or permission of the instructor. *Also offered through European Studies.*

302. Symbolic Logic.

A study of elementary symbolic logic. Topics include sentential and predicate logic, some philosophy of logic, and Gödel’s Theorem. Prerequisite: Philosophy 202 or permission of instructor. *Also offered through Computer Science and Mathematics.*

303. Philosophy of Science and Religion.

In this course, we examine the nature of scientific knowledge by studying the formulation of the “scientific method” during the logical positivist movement in the early 20th century. Logical positivism failed, and both its rise and fall left us in an epistemological crisis. One effect of this crisis is the common view that science and religion are incompatible. But are they really incompatible? In this course, we will examine the nature of scientific knowledge and religious knowledge, and you can draw your own conclusions! Prerequisites: any 100-level philosophy course, Philosophy 202, or REL 102.

310. Environmental Philosophy.

What obligations, if any, do we have towards the environment? What changes should we make in our own lives? How does material consumption relate to our happiness? If we can be happy consuming less, why do so many of us continue to consume so much? How do our attitudes towards the environment reflect our social position? This course examines such questions in order to come to grips with our relationship with the environment, and what these ideas mean for the way we lead our lives. Students will explore these questions in relation to the global community, to our local community, and in relation to their own lives and choices. Prerequisite: any 100-level philosophy course, or Environmental Studies 101, or permission of the instructor. *Also offered as Environmental Studies 310, and through Peace Studies.*

312. Aesthetics.

Aesthetics characterizes the branch of philosophy concerned generally with the nature and value of knowledge acquired through sense perception. Attendant questions include: what is art, beauty, the sublime, imagination, genius, creativity, and judgment, this course will survey the historical treatment of these topics by philosophers ranging from Plato to the present day. Pre-requisite: any 100-level or 200-level philosophy course.

327. Phenomenology and Existential Philosophy.

Phenomenology is the study of human experience and of the ways things present themselves to us in and through such experience. The core principle of phenomenology is the doctrine of “intentionality.” Every experience, every act of consciousness (seeing, hearing, smelling, remembering, etc.) is intentional: it is always an “experience of” or “consciousness of” something. Existentialism combines the phenomenological tradition of Husserl and Heidegger with the earlier forms of existential philosophy found in such thinkers as Kierkegaard and Nietzsche. Freedom, responsibility, the nature of being, the individual, community and communication are all themes of existential philosophy. The modern existentialism of Sartre, Camus, Merleau-Ponty, and Beauvoir take up the themes of the creation, destruction and reevaluation of meaning in life when there is no absolute standard by which to judge or measure our actions. Prerequisite: Philosophy 201, 203, 208, 223, 232 or permission of the instructor. *Also offered through European Studies.*

333. Ethics of Global Citizenship.

This research seminar is designed to address, from a philosophical perspective, some of the difficult ethical questions arising from the global organization of the world. Readings include classical, non-Western and alternative theories of justice and peace. The course interrogates the discourses surrounding patriotism and cosmopolitanism, peace and violence, terrorism and war, justice and retribution, and the debates surrounding relativism versus universalism, especially with regard to the claims for human rights. Students undertake research projects dealing with the ways these issues are being negotiated in countries where they studied abroad, and develop ethical positions on their own responsibilities toward global citizenship. *Also offered as Global Studies 333 and through Peace Studies.*

334. Feminist Philosophy.

In this upper this division inquiry based seminar we explore the relationship between ways of knowing and ways of being-in-the-world through textual analysis of feminist philosophy texts on epistemology and ethics. After an introduction to feminist ways of knowing, and readings addressing specific topics of concern for feminist philosophers in the first part of the course, we then engage in readings around a particular theme in feminist philosophy. Themes have included, but are not limited to: the body, the self, intersections of race, class, sexuality, gender and ethnicity, Asian feminism, contemporary issues. Prerequisite: Philosophy 201, 203, 208, 223, 232, Gender and Sexuality Studies 290 or permission of the instructor. *Also offered as Gender and Sexuality Studies 334.*

343. Political Theories of Violence and Nonviolence.

Carl von Clausewitz famously remarked that “war is a continuation of politics by other means,” which suggests that politics is intimately connected with violence even as it seeks to avoid it. In this discussion-based seminar we will examine how key figures throughout the history of political thought have conceptualized the relationship between politics, violence, and non-violence. Topics covered in the course include just war theory, the role of violence in the state, non-violent civil disobedience, and revolutionary violence associated with working class and anti-colonial struggles. *Also offered as Government 345 and through European Studies and Peace Studies.*

350. Philosophy of Mind.

We know what it is to feel happy or blue, to feel pleasure and pain, to see vivid colors. But what is consciousness? How does it relate to our minds? To our brains? Could a computer think and feel like we do? Is my own mind itself a computer? Could my phone be part of my mind? Drawing on work in philosophy, psychology and neuroscience, this class attempts to get clear on what it means to have a mind, and what that means for who we are. Prerequisite: any 100-level philosophy course, Neuroscience 288, or permission of the instructor.

357. Post-colonial Literature and Theory.

This course introduces a distinct way of organizing literary study, substituting for the study of national traditions the notion of post-coloniality as a global condition affecting not only literature but also categories we use to think about human experience: relations between colonizers and colonized and between culture and power; identity, authenticity and hybridity; roots, motherland, mother tongue; nationality. Readings include contemporary literature produced in the Indian subcontinent, Australia, New Zealand and the Pacific, Africa, Canada and the Caribbean, as well as important theoretical texts about

post-coloniality. *Also offered as English 357 and Global Studies 357.*

367. Feminist Post-colonial Theory.

Post-colonial theory addresses issues of identity, culture, literature and history arising from the social context of colonization, resistance to colonization, liberation from colonization and the formation of new nations. It crosses the boundaries of the social sciences and humanities in its approach to theory and analysis of the discourses used to constitute colonial and post-colonial subjects. *Also offered as English 367, Gender Studies 367 and Global Studies 367.*

380. Philosophy of Peace.

In this course we explore the meanings of terms such as peace, justice, conflict, violence, pacifism, conscientious objection, and civil disobedience, and we will consider the relationships among these terms. We will also consider questions such as: Is it possible to create a truly just world? Is it possible to respond to serious conflict or oppression nonviolently? Is the use of violent force ever justified? Is a “just war” possible? We will read classic works by philosophers and others on these topics. We will also reflect on our own identities, how power is constructed in our world, and will conclude the course by envisioning a better world and considering how to work towards creating it. Pre-requisite: any 100-level Philosophy course, or Peace Studies 100. *Also offered as Peace Studies 380.*

400. SYE Seminar: Metaphilosophy.

This course provides an opportunity for critical reflection on the nature and value of philosophy itself. What is philosophy? What are the methods of philosophical inquiry? Does philosophy have value in today's world? We read what other philosophers, past and present, and in both Western and non-Western traditions, have had to say about these questions. Other members of the philosophy department will visit the class to share their own perspectives and methods. Students practice and reflect on a variety of philosophical methodologies and will be encouraged to clarify their own philosophical identities. Prerequisite: Philosophy 201, 203, or 208, or permission of instructor. Limited to senior philosophy majors and minors.

402. Philosophy Tutorial.

Under faculty supervision, the student assists in the teaching of an elementary course in philosophy. Limited to majors.

468. SYE: Independent Study.

A one-semester SYE independent study option for students who are unable to complete an SYE in any other way. Students must complete an independent study project worthy of SYE designation under supervision of a faculty member. Prerequisite: permission of department chair.

469. SYE: Independent Study: Metaphilosophy.

Occasionally a student who wishes to take Metaphilosophy as an SYE is unable to take the seminar version of this course (which is only offered in the spring), either because of graduating at the end of fall semester, or because of scheduling conflicts in the spring with another course required for graduation. In those cases, the student can take the Metaphilosophy course as an independent study under supervision of a faculty member. Prerequisite: permission of department chair.

489,490. SYE: Research and Thesis.

Intended for students who are not eligible for honors but wish to fulfill their SYE requirement by completing a philosophy thesis during the senior year. In the fall, the student registers for 489 and conducts research under the supervision of a faculty member. In the spring, the student registers for 490 and develops a philosophical thesis and defends it in a departmental seminar. Students interested in this SYE option must submit a research proposal in the spring of their junior year; these proposals will be considered after honors proposals are evaluated. Limited to majors.

498-499. SYE: Honors Research and Thesis. Intended for students who are eligible for honors and wish to fulfill their SYE requirement by completing a philosophy thesis during the senior year. In the fall, the student registers for 498 and conducts research under the supervision of a faculty member. In the spring, the student registers for 499 and develops a philosophical thesis and defends it in a departmental seminar. Students interested in this SYE option must submit a research proposal in the spring of their junior year. Limited to majors.

Physics

Major and minor offered

Professor Koon; **Associate Professors** Jahncke, Johnson (chair), O'Donoghue; **Assistant Professors** Pirbhai, Armendariz-Picon; **Lab Coordinator** Miller.

Visit the physics department webpage at www.stlawu.edu/physics.

The goals of the physics curriculum are to provide a conceptual and quantitative understanding of the fundamental laws of nature upon which all physical and biological systems depend, and to provide the experimental and theoretical methods required to attain this understanding. The physics department courses serve the needs and interests of students regardless of their background in science and mathematics. Astronomy (101 and 102), Energy (105 and 107), The Scientific Revolution (110) and Global Climate (112) are designed for the student with little or no background in the sciences or mathematical reasoning. Students in the life sciences or the pre-medical program should enroll in Physics 103, 104 or Physics 151, 152. Students who plan to major in a physical science should elect Physics 151, 152, as should those in the Engineering Combined Plan.

Students who are curious about the behavior of the natural world at its most basic level and who find pleasure in discovering the order in the world around them should consider a major in physics. In addition to its intrinsic worth as a liberal art, the study of physics serves as preparation for further professional training in physics, engineering, medicine and other related fields, such as biophysics, geophysics, space science and secondary school science teaching.

Physics majors also pursue careers in business,

management and industry, often in areas that deal in the application or development of technology.

Coursework for the physics major depends on material covered in previous courses, so it is strongly advised to begin with Physics 151, 152 in the first year. Physics 221, 222 should be completed in the sophomore year, by which time all of the major topics in classical and modern physics will have been surveyed. Courses at the junior and senior levels investigate particular areas of physics in greater detail and abstraction, and at increasing levels of mathematical sophistication. Students may also undertake independent studies and projects at the intermediate or upper level on topics of mutual interest between the student and a faculty member.

A special feature of the curriculum is the seminar series in contemporary physics, which introduces students to recent discoveries and active fields of research.

It is possible for physics majors to participate in programs abroad. Those interested in this option should take Physics 151, 152 in their first year and consult the department for details.

We believe that students attain the most complete physics education through the actual process of doing physics. Consequently, the department provides a strong and evolving laboratory program. Most 100-level courses include weekly experiments that are closely related to concurrent classroom work. Laboratory work in higher-level courses gradually allows students more freedom and responsibility to design and execute their experiments. Laboratory work for scheduled courses culminates in Physics 489, a semester-long project selected and executed by each senior major in consultation with a faculty sponsor. Opportunities exist for student participation in faculty research activities during the academic year (Physics 403, 404) and during the summer.

Well-qualified students may receive summer stipends to conduct research in astrophysics, experimental low-temperature physics, computational physics, history of physics and near-field optical microscopy. Physics laboratories are well equipped with modern equipment, electronic instrumentation, computers with data interfaces, a high-vacuum system and a machine shop.

St. Lawrence offers interdisciplinary majors in biology–physics and geology–physics; each is described in its own section in this *Catalog*.

Major Requirements

The requirements for a major in physics total 11 course units, which include two half-unit laboratory courses, Physics 317 and 318. Physics 151, 152, 221, 222, 307, 308, 333, 489 (or 498) and one additional full-unit course at the 400 level make up the other ten course units.

The three-course calculus sequence (Mathematics 135, 136, 205) should be completed as soon as possible. Since physics students make extensive use of computers, potential majors are advised to enroll in Computer Science 140 during the sophomore year. Majors considering the possibility of graduate study in physics are strongly encouraged to take Physics 401. Also recommended for the major are Mathematics 217 and 230 and Chemistry 103 and 104, or Chemistry 105.

Minor Requirements

A minor in physics consists of Physics 151, 152, 221, 222, plus one unit at the 300 level or above selected from the following courses: 307 or 333 or a combination of any two of 317, 318, and 452.

Basic Engineering Combined Plan

Students in the engineering combined plan who choose physics as a major must complete eight course units in physics, which include two half-unit courses, Physics 317 and 318. Physics 151, 152, 221, 222, 307, 308 and 333 make up the remaining seven units. Other requirements for the engineering combined plan are given in the Curriculum chapter of this *Catalog*.

Certification to Teach Physics

Students seeking initial certification as a 7-12 physics teacher in New York must major in physics and also complete the certification minor in education. Physics majors intending to complete student teaching after graduation in the University's Post-Baccalaureate Teacher Certification Program must complete the physics major and

the educational studies minor in education (or its equivalent) as undergraduates. Consult the Education section of this *Catalog* and/or speak to the coordinator of the teacher education program in the education department as early as possible.

Honors

To qualify for honors, students must fulfill the following requirements:

1. A major in physics that includes at least three units of 400-level work in physics, not including units earned in the seminar series 451-454.
2. Submission for departmental evaluation of a copy of an independent project undertaken in the senior year.
3. A minimum grade point average of 3.5 over all courses in the major. (See Honors in the Curriculum chapter of this *Catalog*.)

Courses

102. Introduction to Astronomy. (*with lab*)

People of every time and culture have studied the skies, named the arrangements of stars and used the apparent motions of the sun and moon to mark time. This course, designed for the non-scientist, surveys the known contents of the universe and explores the dynamic natures of celestial objects through study of their motions, interactions and evolutions. To foster appreciation for the methods of science, naked-eye observations are required of each student and attention is given to Western culture's slow path toward understanding the cosmos and our place within it. Physics 102 is taught in studio format; lectures are combined with laboratory experiences, fostering interaction among the students and instructor. Major credit restricted.

103, 104. College Physics. (*with lab*)

This sequence is designed to provide a general survey of physics. It emphasizes the relationship between basic physical principles and observations, both in the laboratory and in everyday events around us. It covers topics in mechanics, wave phenomena, electricity and magnetism and modern physics. The mathematical level of presentation assumes elementary algebra and basic trigonometry. While it serves as the appropriate physics course for students in the life sciences, it is designed to be accessible to all who have an interest in the subject. There is one laboratory period per week in addition to class work.

105. Energy.

This course covers the nature of energy, its application in modern society and a variety of issues associated with that use. We will study the physical principles of mechanical, thermal, electrical, optical and nuclear energy in order to better understand the role of energy in society, focusing on fossil fuels, electric power plants, automobiles, global warming, the ozone layer and energy conservation, as well as nuclear, solar and other power sources. This course makes extensive use of elementary algebra and scientific notation. Physics 107 has a lab component; 105 is taught in a lecture format with shorter integrated lab activities. One of these courses is typically offered every other year. *Also offered as Environmental Studies 105.*

110. The Scientific Revolution.

This course covers the development of scientific thought in the period 1500 to 1725. It examines changing views of nature in the fields of anatomy and physiology, astronomy and physics. Although the primary focus is on specific scientific developments, they are discussed in the context of concurrent social, economic and religious changes. Major credit restricted. *Also offered as History 110 and through European Studies.*

112. Global Climate.

Climate is perhaps the single most important and pervasive factor controlling global ecosystems and human well-being. This interdisciplinary course examines global climate from a historical perspective, beginning with the formation of the solar system and continuing through geologic time to the present. Topics include the development of the atmosphere; the workings of the global heat engine of atmosphere, oceans and continents; evidence for past climate change; causes of global climate change; the effects of climate change on human evolution; and the effects of human evolution on the global climate system. This is a studio lab course. *Also offered as Environmental Studies 112 and Geology 112.*

151, 152. University Physics. (1.25 units)

Organized according to the major unifying principles of physics, University Physics is a general study of conservation laws, Newtonian dynamics, special relativity, electricity and magnetism, thermal and statistical physics and the quantum nature of light and matter. The material is presented at the level of elementary calculus. There is one laboratory period per week in addition to class work. These courses are recommended for all students majoring in the physical sciences or completing the 3+2 engineering program. Co-requisite: Mathematics 135, 136.

221, 222. Modern Physics. (1.25 units)

These courses provide systematic study of the new ideas and discoveries that have transformed physics in the twentieth century. Topics include special relativity, atomic structure, wave-particle duality, basic quantum mechanics, solid-state physics, nuclear structure and elementary particles. There is one laboratory per week in addition to class work. Prerequisites: Mathematics 136 and Physics 104 or 152.

307. Classical Mechanics.

The principles of Newtonian mechanics at the intermediate level; topics include the dynamics of particles and rigid bodies, resonance, rotating reference frames, planetary motion, wave motion and Lagrange's equations. Prerequisites: Physics 152, Mathematics 205.

308. Electricity and Magnetism.

This course is study of electricity and magnetism leading to Maxwell's equations and physical optics. Prerequisites: Physics 152, Physics/Mathematics 333 or permission of instructor.

311. Nineteenth- and Twentieth-Century Science.

In this course we examine a few of the major scientific developments of the 19th and 20th centuries in some detail. Topics include evolution, genetics and a synthesis of the two; the wave theory of light; the discovery of the atomic and nuclear structure of matter; and the Manhattan Project. We also examine the various ways historians of science construct the stories they write as well as some of the historiographic issues they face. *Also offered as History 311 and through European Studies.*

317. Instrumentation Lab. (0.5 unit)

This course is designed to introduce students to a variety of instrumentation used in the physics lab. Computer techniques for acquiring data and controlling experiments are taught. A primary goal

of this lab is to foster a spirit of independence in the student researcher. Each student must complete an independent project. Co-requisite: Physics 307 or permission of instructor.

318. Electronics Lab. (0.5 unit)

This course is designed to teach basic electronics. Students learn enough in this course to put together simple circuits such as voltage dividers, filters and amplifiers. A primary goal of this lab is to foster a spirit of independence in the student researcher. Each student must complete an independent project. Prerequisites: Physics 152 and Math 136.

333. Mathematical Methods of Physics.

Important problems in the physical sciences and engineering often require powerful mathematical methods for their solution. This course provides an introduction to the formalism of these methods and emphasizes their application to problems drawn from diverse areas of classical and modern physics. Representative topics include the integral theorems of Gauss and Stokes, Fourier series, matrix methods, selected techniques from the theory of partial differential equations and the calculus of variations with applications to Lagrangian mechanics. The course also introduces students to the computer algebra system Mathematica as an aid in visualization and problem-solving. Prerequisites: Physics 152, Mathematics 205. *Also offered as Mathematics 333.*

401, 402. Quantum Mechanics.

Intended for physics majors preparing for graduate study in physics and closely related areas, this course applies methods of advanced analysis to quantum mechanics and other topics. Prerequisite: Physics 307, 308 or permission of the department.

403, 404. Topics in Advanced Physics.

Seminars, projects or participation in faculty research designed to meet individual needs of advanced students. Offered on demand. Prerequisite: Physics 307, 308 or permission of the department.

451, 452, 453, 454.**Seminar in Contemporary Physics. (0.5 unit each)**

A weekly seminar in which students and faculty present reports on current research in physics. Representative topics are solar neutrinos, high-temperature superconductivity, the search for gravity waves and quantum chaos. Students are introduced to physics literature and data bases. Students will assemble a comprehensive literature review and research project proposal on a topic of their choice to be presented to the department at the end of the semester. Secondsemester juniors can use this course as an opportunity to select their senior research project. Up to four semesters of enrollment are permitted, at one-half course unit per semester. Prerequisite: Physics 222 or permission of the instructor. 489, 490, 498, 499.

SYE: Advanced Laboratory.

This course for physics majors consists of an individual project selected from an area of common interest between the student and one faculty member. A written report of the project is defended at an oral presentation. Physics 498 and 499 are the honors versions of this course. Prerequisites or co-requisites: Physics 308, 317 and 318, or permission of the department.

Psychology

Major and minor offered

Professors Greene; Associate Professors

Crosby-Currie (chair), DeCoteau, Estevez, Ghiraldi, Stuntz, Onyper, Thacher, Wallace; **Assistant Professors** Fox, Oakes, Su, Twedt; **Teaching Emeritus Professor** Cunningham, Sigmundi, Searleman; **Introductory Laboratory Instructor** Lawson; **Teaching Academic Support** MacDougall.

Visit the psychology department webpage at www.stlawu.edu/psychology.

The primary objectives of the psychology department are to discover and teach the factors that underlie behavior and mental processes. Our scientific approach to understanding behavior and mental processes is featured in the introductory psychology course, which covers a wide variety of topics, including the history of psychology, the brain and behavior, sensation and perception, learning, memory, development, motivation, social behavior, personality and abnormal behavior. In-depth investigation of these and other topics is offered in upper-level courses, seminars, independent study courses and the senior project.

Although the major focus of the department is on psychological theory and research, we also offer courses on applied areas of psychology such as environmental psychology, sport psychology, and clinical psychology. In addition, students have the opportunity to take courses with an internship (Community Psychology) and to pursue independent study and independent research projects designed by the student in collaboration with a faculty member.

Following completion of the research methods course prerequisite, numerous laboratory courses allow students to learn in hands-on learning through numerous laboratory courses, practicing research techniques, replicating experiments and investigating topics of individual scholarly interest. The department strongly encourages and rewards meritorious achievement. Students ranked in the top 30% of their class year with an overall average of at least 3.2 and a psychology average of at least 3.4 based on a minimum of four psychology courses completed a St. Lawrence may join Psi Chi, the international psychology honorary. In addition, each spring psychology faculty members select outstanding

majors as recipients of the J.H.L. Roach Award, the Susan Beucher Cady Prize, the Judith Mearig Memorial Prize, and the Peter Silverhart Award, which are presented at the Moving-Up Day ceremony.

Psychology is one of the most popular majors at St. Lawrence. Alumni surveys indicate that a substantial number of graduates enter graduate school in psychology and related fields. In addition, the Bachelor of Science degree in psychology has provided many students with the liberal arts foundation for careers in business, law, medicine, education, human services and other areas.

Major Requirements

The major in Psychology requires a minimum of 9.5 units of credit: 8.5 units of psychology courses plus Statistics 113. Required psychology courses are Psychology 101WL *or* 101NL and Psychology 205.

Six additional courses fulfill the minimum requirements for the major and must include at least one course from each of the following distribution themes: Biological/Evolutionary, Social/Cognitive, and Applied. At least one course must be a seminar or one of the independent project options offered. In addition, at least two courses must include a laboratory section after completing the research methods course. One of the laboratory courses must be from the Biological/Evolutionary theme and one must be from either the Social/Cognitive theme or the Applied theme. A single course may count toward both a distribution theme and the laboratory or seminar requirement. Courses with laboratory at 300- and 400-level are worth 1.25 units, are usually offered once a year, and must be taken at St. Lawrence. Beginning in the fall of 2016, students will also earn 1.25 units of credit for PSYC 205: Research Methods; Research Methods must also be taken at St. Lawrence.

Some courses with a laboratory section can be taken without the laboratory. Currently, students can register for Psychology 326, Psychology 327, and Psychology 402 without the laboratory section. These courses are worth 1.0 unit and fulfill the same distribution theme as the course with lab.

To receive laboratory credit in a course, a student

must earn a passing grade for both the laboratory and lecture components of the course. A failing grade for the laboratory component will result in the student being re-registered into the non-laboratory (lecture) section, if the course is also taught without the laboratory section.

Once a student matriculates at St. Lawrence, only 1.0 unit of transfer credit taught by a non-St. Lawrence psychology professor may count toward the minimum number of required units in the major. If a matriculated St. Lawrence student wishes to take a course at another college or university for transfer credit, the student and the department chair should agree in advance on the appropriateness of the course(s) and which of the requirements, if any, will be satisfied.

A transfer student and the student's advisor should confer with the department chair about the student's transferred psychology courses and which requirements remain to be filled.

Courses that are currently taught on a regular basis are listed below according to their distribution theme; courses in the "Other Courses" category do not count toward any distribution theme. Seminar (SEM), Independent Project (IP), and laboratory (LAB) courses are designated within each theme. Note that some laboratory courses are also taught without laboratory (see above). Special topic courses may count toward a distribution theme and/or the seminar requirement as indicated in their course descriptions.

Biological/Evolutionary

- 326. Hormones & Behavior. LAB
- 327. Sensation & Perception. LAB
- 401. Fundamentals of Learning. LAB
- 432. Animal Behavior. LAB
- 438. Human Neuropsychology. SEM

Social/Cognitive

- 207. Developmental Psychology.
- 215. Cultural Psychology.
- 253. Personality Psychology.
- 325. Social Psychology. LAB
- 402. Memory & Cognition. LAB
- 461. Critical Thinking & Psychological Science. SEM

Applied

- 238. Psychology and Law.
- 255. Sport Psychology.

- 313. Industrial/Organizational Psychology.
- 317. Abnormal Psychology.
- 318. Environmental Psychology. LAB
- 322. Positive Psychology. LAB
- 413. Community Psychology. SEM
- 442. Intellectual and Developmental Disabilities. SEM
- 443. Clinical Psychology. SEM
- 456. Health Psychology. SEM

Other Courses

- 232. Lab Animals. (.5 unit)
- 455. Highlights & Connections. SEM
- 468/469. SYE. Independent Research. IP
- 471/472. Independent Study. IP
- 489/490. SYE. Independent Study. IP
- 496/497. Independent Research. IP
- 498/499. SYE. Senior Project. IP

Minor Requirements

The minor in psychology requires a minimum of 7.25 units of credit: 6.25 units of psychology courses plus Statistics 113. Required courses are Psychology 101WL *or* 101NL *and* 205.

Four additional courses fulfill the minimum requirements for the minor and must include at least one course from each of the distribution themes discussed above. At least one course must be a seminar or one of the independent project options offered by the Psychology Department. In addition, at least one course must include a laboratory section. All of the other information above regarding the major also applies to the minor in psychology.

Honors

Honors are awarded on the basis of quality point standing in psychology (see Honors in the Curriculum section of this *Catalog*) and successful completion of Psychology 498 and 499 (SYE: Senior Project) with a grade of at least 3.5 in Psychology 498 and 499; an "X" grade may be given in Psychology 498. Two types of projects are acceptable for the senior project:

1. Independent research involving either pure or applied investigation.
2. Independent study involving integration and critical analysis of research and theory in a given area of psychology.

The following are the criteria for successful completion of the senior project:

1. Enroll in Psychology 498 and 499 (SYE: Senior Project) during the senior year.
2. Give a preliminary presentation of the proposed study to other students and faculty involved in the senior project course.
3. Attend colloquia of other senior project students and guest lectures.
4. Satisfactorily complete the course during the senior year (Psychology 498 and 499).
5. Give a formal colloquium or a poster or oral presentation at the Festival of Science on the completed project.
6. File copies of the final project paper in the psychology department office and with the project supervisor.

Courses

101WL and 101NL

Introductory Psychology. (*with lab and without lab*)

This course surveys the scientific study of behavior and mental processes as natural phenomena. Basic psychological areas such as biopsychology, perception, learning, memory, motivation and emotion are typically addressed. Broader, integrated topics such as development, personality, and social and abnormal psychology are also explored. Students who enroll in 100WL gain additional focus on how psychologists formulate research questions, gather data and interpret findings based on the major conceptual approaches in the field of psychology. Psychology 101WL or 101NL is a prerequisite for all other courses, and is also required for the neuroscience major.

3000-3999. Special Topics for Non-Majors.

These courses are offered occasionally in specific areas of psychology at an intermediate level between Psychology 101 and advanced-level courses. Topics and formats vary depending upon the instructor. The content of each course or section will be announced each semester. Prerequisite: Psychology 101WL or 101NL.

205. Research Methods in Psychology.

This course presents students with conceptual approaches and practical techniques for applying the scientific method to behavioral research. Students learn about observational, correlational and experimental research designs and have the opportunity to apply these designs in the laboratory while investigating relevant psychological phenomena. Appropriate statistical procedures and computer software are used to analyze the data from these labs; therefore, students must take a course in statistics prior to 205. This course also covers research ethics and emphasizes effective communication through scientific writing and oral communication. Counts toward the minor in statistics and the neuroscience major (behavioral track). Prerequisites: Psychology 101WL or 101NL, an additional Psychology course at any level and Statistics 113; or permission of the instructor.

207. Developmental Psychology.

This course is intended to describe and explain the changes in behavior that occur with the passage of time from conception until death. While emphasis is placed on the early years of most rapid change, appropriate topics are covered throughout the life span. As the mature

individual is a product not only of his or her own life history, but also of the history of our species, there is some discussion of evolutionary theory and developmental data gathered on other species. Prerequisite: Psychology 101WL or 101NL.

215. Cultural Psychology.

This course is designed to introduce students to current theories and research about the ways in which our sociocultural contexts influence human mind and behavior. Topics will highlight cultural similarities and differences in basic psychological processes, including human development, personality, motivation, cognition, emotion, health, morality, and social relationships. Students will also learn how to consider issues of culture in interpretation of personal experience and in application of cultural diversity issues to various settings. Prerequisite: Psychology 101WL or 101NL. *Also offered through Peace Studies.*

232. Laboratory Animals: Ethics, Care and Techniques. (0.5 unit)

This half-unit course introduces students to the techniques, use and care of laboratory animals. Students gain knowledge and hands-on experience in the areas of anesthetics/analgesics, surgical techniques and proper animal handling and husbandry. Topics covering the ethical use of animals in research, appropriate and humane care, and the functions of regulatory agencies are covered. Concurrently, students explore the relationships between humans and animals used in teaching and research. Prerequisite: Psychology 101WL or 101NL or Biology 101 or permission of instructor.

238. Psychology and Law.

This course explores the contributions psychological science can make and has made to legal policy and the legal system through examination of several topics within the field of psychology and law. Students will also learn about legal concepts and the functioning of the legal system. Topics include eyewitness identification, child witnesses, alternative dispute resolution, the insanity defense, jury behavior and capital punishment. Prerequisite: Psychology 101WL or 101NL.

253. Personality.

Personality theories provide a framework with which to understand a person's development, motivation and behavior. This course examines traditional and contemporary theories of personality, focusing on representative theorists from the psychoanalytic, trait, behavioral, cognitive and phenomenological approaches. Evaluation of theories on logical and empirical grounds is discussed. Prerequisite: Psychology 101WL or 101NL.

255. Sport Psychology.

This course is designed to develop an understanding of human behavior and mental processes in sport and exercise settings. Topics examined include (a) psychosocial aspects (e.g., motivation, psychological responses to injury, aggression) involved in the sport training process and competition among adults, youth and children at all skill levels; (b) psychological skills training for athletic performance (e.g., relaxation, self-talk); (c) social influences (e.g., leadership, cohesion); and (d) major exercise psychology concepts and issues (e.g., exercise adherence, motives for participation, and exercise and psychological well-being). Prerequisite: Psychology 101WL or 101NL.

313. Industrial/Organizational Psychology.

Designed to acquaint the student with major applications of psychological findings and techniques to problems of management and

industry, this course includes human factors engineering, personnel procedures and organizational behavior. Prerequisite: Psychology 101WL or 101NL and Statistics 113 or Economics 200. *Also offered through Peace Studies.*

317. Abnormal Behavior.

This course is designed to study the major psychological disorders, and how stress plays a role in their appearance and severity. The course uses case histories, lecture, movie excerpts, discussion, and extensive use of primary literature to explore the latest thinking in how our biology, psychology, and social environment intertwine to create mental illness and mental health. Prerequisite: Psychology 101WL or 101NL; restricted to majors and minors in psychology or neuroscience (behavioral track) or permission of the instructor.

318. Environmental Psychology. (with lab)

This lecture-laboratory course studies the relationships between humans and physical environments — both natural and built. Topics include environmental assessment, attitudes and behavior toward the environment and the psychological effects of such environmental factors as crowding, architectural design, extreme environments, pollution and natural disasters. The laboratory is required of all students. Prerequisite: Psychology 101WL or 101NL; if taken for psychology credit, Psychology 205. *Also offered as Environmental Studies 318 and through Peace Studies.*

322. Positive Psychology. (with lab)

While there is no shortage of lay theories and self-help literature that offer advice on how to achieve “the good life,” this lecture-laboratory course will examine the nature of positive emotions and well-being from the viewpoint of empirical psychology research. Recent empirical research will be reviewed, and students will apply the information in class discussion, written assignments, and hands-on experiences. By examining the relationship between happiness and such topics as life circumstances, character strengths, the conflicted mind, reciprocity, social relationships, trauma, and spirituality, we will understand and apply empirically-supported ideas for enhancing well-being. Prerequisite: Psychology 101WL or 101NL and Psychology 205. *Also offered through Peace Studies.*

325. Social Psychology. (with lab)

This lecture-laboratory course covers the theory and research of how individual humans think, feel, and behave when influenced by their social environment. Topics include the social self, thinking about people and situations, attributions, attitude formation and change, conformity, affiliation and attraction, altruism, aggression, prejudice and group dynamics. The laboratory is required of all students. Prerequisite: Psychology 101WL or 101NL and Psychology 205. *Also offered through Peace Studies.*

326. Hormones and Behavior. (with lab)

This lecture-laboratory course provides an introduction to the field of behavioral endocrinology. The interplay between hormones and behavior is explored by reviewing current knowledge derived from human and animal research in the field. Topics include the influence of hormones on reproductive behavior, parental behavior, aggression, sexual orientation, moods and emotions, psychiatric disorders and perceptual and cognitive abilities. Environmental and experiential influences on endocrine function are also examined. May be taken as an elective toward the neuroscience major (behavioral track) with permission of instructor. Prerequisites: Psychology 101WL or 101NL; if taken for laboratory credit, Psychology 205 is also required.

327. Sensation and Perception. (with lab)

This is a lecture-laboratory course that examines from multiple perspectives the ways in which humans and lower animals perceive and react to the world around them. All of the major senses are covered, with particular emphasis on vision and hearing. Topics include perceptual development, color perception, visual illusions, taste and smell perception, brain disorders and perception, perception of music, psychophysics, visual and hearing impairment, and pain perception. Counts toward the neuroscience major (behavioral track). Prerequisite: Psychology 101WL or 101NL; if taken for laboratory credit, Psychology 205.

4000-4999. Special Topics for Majors & Minors

These courses cover special topics not regularly offered in the curriculum. The courses are designed for juniors and seniors and are taught in either a seminar or a regular class format, possibly with laboratory. The content of each course or section will be announced each semester. Prerequisite: Psychology 101WL or 101NL and sometimes Psychology 205; may be restricted to Psychology majors and minors.

401. Fundamentals of Learning. (with lab)

A lecture-laboratory course covering the major psychological principles that underlie behavior and its modification through environmental manipulation. An emphasis is placed on the experimental analysis of human and non-human behavior. Topics include the theoretical and historical underpinnings of a science of behavior, classical and operant conditioning, aversive control, choice and preference, conditioned reinforcement, behavior modification, and Applied Behavior Analysis. Counts toward the neuroscience major (behavioral track). Prerequisite: Psychology 101WL or 101NL and Psychology 205.

402. Memory and Cognition. (with or without lab)

This lecture-laboratory course (can be taken with or without lab) offers a fairly comprehensive study of human cognition. In addition to extensive coverage of human memory, the course includes an analysis of such major areas as object perception, attention, semantic organization, decision-making, problem-solving, and human intelligence. Where possible, students consider evidence that sheds light on the neural correlates of cognition, drawn mainly from the related disciplines of neuropsychology and cognitive neuroscience. In addition to providing an introduction to leading theories and empirical findings, the course also examined several applied domains, such as repressed and recovered memories and eyewitness testimony. Counts toward the neuroscience major (behavioral track). The lab emphasizes the use of classic and contemporary empirical techniques to understand the nature of mental representations that underlie various phenomena in the domains of basic and applied cognition. Prerequisites: Psychology 101WL or 101NL; if taken for laboratory credit, Psychology 205; laboratory section restricted to majors and minors in psychology and neuroscience (behavioral track).

413. Community Psychology.

This seminar-internship course has two objectives: to provide an introduction to some basic issues, concepts and methods in community psychology; and to offer experiential learning through an internship placement in a community setting (approximately 80 hours over the course of the semester). Topics include the ecological perspective, stress and coping, and prevention and evaluation research. Possible internships include Head Start, nursing homes, and mental health-related hospital units and residential centers; a small number of students may participate in a community research project as their internship. Students are required to meet with the professor prior to registration, and

generally internships are arranged, with assistance from the instructor, in the semester prior to enrollment. Prerequisites: Psychology 101WL or 101NL, Psychology 205 and permission of instructor; restricted to majors and minors in psychology or neuroscience (behavioral track).

432. Animal Behavior.

This lecture-laboratory course examines various forms of behavior as they appear throughout the phylogenetic scale. The roles of evolution, genetics and the neural system in the control of diverse behaviors from feeding to territoriality and human aggression are considered. Counts toward the neuroscience major (behavioral track). Prerequisite: Psychology 101WL or 101NL and Psychology 205.

438. Human Neuropsychology.

This seminar course will examine the function of the human nervous system as it relates to cognition and behavior. Topics covered will include: language, attention, memory, motor skills, visual-spatial processing, problem solving, emotion, and consciousness. Special attention will be paid to the modern methodologies used to study brain-behavior interactions in normal and neuropathological populations. Lectures, discussions, and projects will make use of both empirical and clinical case materials. Prerequisites: Biology/Neuroscience 288 or Psychology 331. *Also offered as Neuroscience 438.*

442. Intellectual and Developmental Disabilities.

An examination of the area of intellectual and developmental disabilities (e.g., mental retardation, autism, epilepsy, attention deficit hyperactivity disorder) with primary emphasis on intellectual disability, previously called mental retardation. Among topics considered are the influence of biological and psychological factors in producing disabilities; cognitive and personality characteristics associated with the different levels of intellectual disability; assessment of intelligence and adaptive behavior; and societal intervention through community services, educational placement and treatment programs. On-site visits to residential facilities are generally scheduled. Prerequisites: Psychology 101WL or 101NL, and Psychology 205 or Psychology 207, or permission of the instructor; restricted to majors and minors in psychology or neuroscience (behavioral track) or permission of the instructor.

443. Introduction to Clinical Psychology.

This course examines the field of contemporary clinical psychology, focusing on the problems and procedures related to psychological diagnosis, the interaction between theory and practice, and important aspects of research in clinical populations. Prerequisites: Psychology 101WL or 101NL and Psychology 317.

455. Highlights and Connections.

This seminar, designed for senior psychology majors, attempts to enhance the student's knowledge of concepts and facts from a broad range of subfields in psychology, and to aid the student in discovering how the various areas, findings and courses can be integrated. To facilitate this integration, each faculty member in the psychology department visits the class to discuss his or her special area of expertise and to relate it to the general field of psychology. Students read appropriate sections of an advanced-level, comprehensive, introductory text as well as outside readings suggested by the course instructor and/or the visiting professors. Prerequisite: senior major in psychology or permission of the instructor.

461. Psychological Science and Critical Thinking.

Do you know people who believe that: psychics can communicate with the dead, Bigfoot exists, homeopathic medicine is effective, houses can be haunted, people have been abducted by aliens, some folks are

literally possessed by the devil, and vaccines are a cause of autism? In this seminar we will examine the evidence behind a variety of claims that generally fall under one or more of the overlapping headings of parapsychology, the paranormal, pseudoscience, or alternative medicine. More importantly, what psychological processes and statistical errors help us to understand the development of such beliefs? Prerequisites: Psychology 101WL or 101NL, Psychology 205, and permission of the instructor. Interested students without the recommended background should see the instructor.

468,469. SYE: Independent Research.

This course offers an opportunity for seniors to engage in empirical research. Prerequisites: Psychology 101WL or 101NL, Psychology 205, senior status and permission of instructor.

471,472. Independent Study in Psychology.

This course offers students the opportunity to engage in in-depth documentary investigation of a particular topic in psychology. Prerequisites: Psychology 101WL or 101NL and permission of instructor.

489, 490. SYE: Independent Study.

This course offers senior students the opportunity to synthesize, integrate and expand their knowledge in the field of psychology by engaging in detailed documentary investigation of a particular topic in psychology. Prerequisites: Psychology 101WL or 101NL, Psychology 205, senior status, and permission of instructor.

496, 497. Independent Research in Psychology.

This course offers students the opportunity to engage in empirical and/or experimental research in psychology. Prerequisites: Psychology 101WL or 101NL, Psychology 205, and permission of instructor.

498, 499. SYE: Senior Project.

In this two-semester capstone course, students integrate acquired research skills and/or subject knowledge. Students are credited with 0.5 units in 498 and 1.0 unit in 499. Requirements include a proposal presented to faculty and other senior project students; a final colloquium on the project and/or a poster or oral presentation at the annual Festival of Science; attendance at colloquia of others doing senior projects; and a final written paper to be bound and filed with the department, the project supervisor, and the library. Prerequisites: Psychology 101WL or 101NL, Psychology 205, senior status, and permission of instructor.

Religious Studies

Major and minor offered

Professor MacWilliams; **Associate Professors** Greenwald, Self (chair); **Visiting Assistant Professor** Berry.

Visit the religious studies webpage at www.stlawu.edu/religious-studies.

The overarching purpose of the religious studies department is to introduce students to the academic study of religion using a variety of methods and theoretical approaches. The department teaches by emphasizing the key role religion plays in history, politics, culture,

and the human search for ultimate meaning and values. On occasion or by arrangement, the department also offers Greek and Hebrew courses to interested students, but these are not part of the major or minor.

The department's specific aims are to: (1) encourage an interdisciplinary perspective to analyze religion's complexity; (2) train students in the application of the interpretive approaches in religious studies; (3) provide a broad understanding of religion as a human phenomenon; (4) comprehend the interaction of religion with society and culture; (5) promote independent study and research to prepare students who are interested in continuing in the field of religion; and (6) reflect upon "religion" as an academic category.

To accomplish these goals, the department offers introductory courses in the study of religion as well as upper-division courses that cover a wide range of religious traditions. These include courses that use a variety of analytical tools. In addition, majors may take a Senior-Year Experience that allows them to apply their methodological tools to the traditions they have learned. Majors are also encouraged to spend at least one semester abroad, gaining personal experience in one or more religious traditions under study.

Most students who major in religious studies do so out of a desire for a broad liberal arts education. A concentration in religious studies is an ideal way to develop an inquiring mind, an open-minded perspective, and an appreciation for cultural diversity and human spirituality.

Major Requirements

Ten units are required within the field of religious studies. Majors are required to take the following courses. With the permission of the department chair, certain courses outside the department may also count toward the major.

1. **Religion 200, Explaining Religion** (ideally taken in the sophomore year).
2. **Three 200-level survey courses**, no more than two of which may be from the same religious world.

A religious world is defined as one where different religious traditions have had longstanding historical contacts, and share

or have been extensively influenced by each other's texts, doctrines, religious founders, ritual practices, myths and ethical systems. Students should consult with their advisor about completing this requirement. Courses include the following: 221, 222, 223, 224, 225, 226, 227, 231, and 288.

3. **One course in scripture:** 205 or 206.
4. One course at the 300-level (excluding 360). This class may not be taken off campus. Courses include 331, 333, 334, and 335.
5. **Three elective courses.** No more than one of the department's 100-level course offerings may be counted to fulfill this requirement. The other courses must be at the 200-level or above.
6. **Religious Studies 360:** Majors Seminar (ideally taken in the spring semester of the junior year).
7. **Optional Senior-Year Experience (489/490).** This is a one-semester independent research project in which seniors explore a theme or topic of their choice with a faculty member of the department, preferably in the second semester of their senior year. The Senior-Year Experience will count as one of the "three elective courses" in number 5 above.

Minor Requirements

A minor consists of five courses in religious studies: Religion 200, two surveys of traditions drawn from different religious worlds (see #2, above), and two other courses of the student's choice, only one of which may be a 100-level course.

Honors (498, 499)

To receive honors in religious studies, a student must satisfy the requirements for the major and, in addition, must meet the following two requirements: (1) a 3.5 cumulative GPA in the department, and (2) a departmentally-approved honors project taken as Religious Studies 498 and 499. See also Honors in the Curriculum section of this *Catalog*.

Courses

Introductory

100. Mystery and Meaning:

An Introduction to the Study of Religion.

What is religion? Why are people religious? What power does religion have for individuals and societies? How does religion function as a way of knowing, acting, and being in the world? How did the study of religion arise in the modern West, and how scholars of religion go about studying it? What ways have they devised to grasp the rich varieties of religious experiences and expressions that they classify as religions? Throughout the course, students will study a wealth of material that may be regarded as religious, from societies past and present, literate and non-literate, and from around the globe. Finally, students will reflect on the place of the religious in contemporary society. Offered each semester.

200. Explaining Religion.

Why are people religious? This seminar explores both classic and modern interpretations of what religion is, does, and means. The course places emphasis on introducing basic methodological and theoretical tools for the study of religions and their intellectual historical background. This entails exploring a selection of readings that have been and are influential in religious studies, drawn from diverse academic disciplines. The course considers basic methodological approaches for understanding religion as a human construction, offers a general picture of the field of religious studies as a whole, and provides basic research skills that will develop students' abilities to do independent research. Offered every fall.

2000-2999. Religion in the World.

These 100-level thematic courses are designed to introduce the fascinating interdisciplinary field of religious studies. Each course examines a particular theme or topic, highlighting a key interpretive approach or approaches for understanding religion. Courses highlight the diverse academic strengths of the department's instructors.

101. Sacred Cinema.

Films often wrestle with profoundly spiritual issues and questions: Is there a god(s)? What is life all about? Who am I? Is there a way that a person (society) ought to live that is existentially real, true and meaningful? This course explores three types of American popular film dealing with religion: (1) Films that revision traditional religion to make it relevant for a contemporary audience; (2) films that are not explicitly religious (with no obvious symbols, personages, sacred histories in the plot) but nonetheless explore themes and questions that are central to religion; (3) the religious documentary.

102. Religion and Science.

Religion and science are two different ways of knowing and understanding the world that usually ask very different questions. Sometimes, however, the answer that one or the other discipline gives to its understanding of reality brings the two into conflict with each other. Nevertheless, for most of human history, the two have been able to accommodate each other quite amicably. In this course, we examine the role that each discipline plays in society, and some points where the two have come into conflict (creation, evolution, bioethics, for example). Finally, we ask whether religion and science are reconcilable or are ultimately hostile to each other.

103. Religion and Ecology.

How does religion shape human understanding of, and participation in, ecological systems? This course samples widely from a range of religious traditions to come to a better understanding of the diverse

ways that people have developed for interacting with animals, plants, water and the land, and how those behaviors work in tandem with systems of knowledge and practice. The class has a substantial focus on environmental ethics, and thinks hard about how different religious systems might contribute to either or both environmental degradation and solutions to environmental problems. Traditions sampled may include Islam, Christianity, Hinduism, Daoism, Judaism, Buddhism, Native American religions and Wicca/Neo-Paganism. *Also offered as Asian Studies 105 and Environmental Studies 103.*

104. World Religions.

Being a citizen in the 21st century requires that we understand the beliefs and practices of those religious traditions that have passed the test of time and continue to influence the world in which we live. The course will begin with an inquiry into the nature of religion and religious belief, and then survey origins, teachings, practices, and present-day situations of Indigenous Religions, the major Eastern (Hinduism, Buddhism, Daoism and Confucianism) and Western religions (Judaism, Christianity and Islam). Attention will also be given to how these varied traditions influence contemporary issues such as gender, sexuality, ethics, science and ecology. Several field trips will be required. *Also offered through Peace Studies.*

Scripture

205. Introduction to the Hebrew Bible (Old Testament). *(In English)*

This course is designed to enable the student to use the insights of modern biblical scholarship to read the Hebrew Bible (Old Testament) in an informed manner. The student is introduced to the entire array of methods used for understanding biblical texts, although historical, sociological and literary analyses are emphasized. Attention is also given to the ways modern Judaism and Christianity understand specific biblical passages. Offered every fall.

206. Introduction to the New Testament.

The goals of this course are identical to those of Religious Studies 205, although that course is not a prerequisite. The same forms of analysis that were used to understand the Hebrew Bible are used to understand the New Testament. The course emphasizes the different ways Christian communities understood the Christian message and how these different understandings came to be embodied in a single collection of documents. Offered every spring. *Also offered through European Studies.*

Surveys of Religious Worlds

221. Religious Life of India.

In this course we will explore some of the major religions of South Asia through ritual, text, and daily life. We will learn about Hinduism, Buddhism, Jainism, Islam, Sikhism, and others, through the doctrine and practices of each tradition. In each context we will examine the themes of perfection, eroticism, asceticism, class hierarchy, caste, gender, purity, and violence. Throughout the course of the semester we will also consider representations of diversity across South Asian religious traditions. Offered every fall. *Also offered in Asian Studies.*

222. Buddhist Religious Traditions.

This course offers an introduction of Buddhism from its genesis in India to Buddhism important role as a global religion today. Topics include the basic teachings and practices of early Buddhism in India in the sixth to fifth centuries BCE, the development of sophisticated philosophical teachings, meditational techniques and religious practices,

lay and monastic life that arise with the historical spread of Buddhism into Sri Lanka, Southeast Asia, Tibet, China, Japan and, more recently, the West. Offered every other year. *Also offered in Asian Studies.*

223. The Religious Life of China.

This course surveys China's unique religious heritage through a selective survey of major thinkers, texts and cultural expressions. The primary emphasis is on the historical development and mutual influence of the "three teachings"—Confucianism, Daoism and Buddhism—with special attention given to the relationship between philosophy and popular practice, and to the interaction among political and religious institutions. Topics include gods and the sacred, ritual, ethics, human nature, meditation, mysticism and salvation. Offered every other year. *Also offered as Asian Studies 223.*

224. Islamic Religious Traditions.

An introductory examination of that religious tradition which, originating in seventh-century Arabia under the inspiration of the Prophet Muhammad, has come to include one-fourth of humankind, and predominates throughout the Middle East, North and East Africa, Pakistan, portions of India and Indonesia. The course considers the career of the Prophet and the growth of the central institutions of Islamic civilization and endeavors to identify the varied aspirations and concerns of Muslims in the contemporary world. *Also offered in Asian Studies.*

225. Religious Traditions of Judaism.

An introductory examination of the religious traditions of Judaism from the biblical period through the 21st century. Just as Christianity is no longer the religion of the Hebrew Bible, neither is Judaism. Emphasis is placed on the development of Rabbinic (modern) Judaism and its evolution in the modern world. The course also covers recent movements and events such as the emergence of new forms of Judaism, Zionism, the Holocaust and the birth of Israel. Offered every other spring.

226. The Religious Life of Japan.

At the Far Eastern end of Asia, Japan has benefitted over the centuries from a complex inter-mingling of indigenous and foreign traditions that gave rise to Japan's unique religious heritage. Students will learn about the different ways of being religious from pre-history to modern times through studying the ways of the kami, religion and the arts (for example, the tea ceremony), Pure Land and Zen Buddhism, State Shinto, new religious movements, and spirituality in contemporary Japanese popular culture. Offered every other year. *Also offered in Asian Studies.*

227. Religion in Ancient Greece and Rome.

This course is an exploration of the development and evolution of religion in the worlds of ancient Greece and Rome. We first study the religious systems of each, and then examine how these systems affected each other and how each coped with systems that infiltrated from other regions. Finally, we examine the effect that the religious assumptions of the Greco-Roman world had on Judaism and Christianity (which were but two options among many) and the benefits that all of these systems offered to potential adherents. Offered every other year.

231. Christian Religious Traditions.

A survey of the development of Christian traditions from the first century to the present. This course focuses on diversity of what came to be called Christianity and the eventual establishment of what we now think of orthodox Christian positions on issues like the divinity of Jesus and salvation. This course also focuses on key issues in the ongoing development of Christianities around the world. Special

attention is given to the diversity of beliefs and practices in what we usually imagine as a monolithic tradition. Offered annually.

Topical Courses

218. Fantasy Religion.

Animated films or anime in Japan are a fascinating part of pop culture that attracts a huge audience of fans. As part of a global leisure industry, anime can offer an imaginary space not only to entertain, but to explore key questions about spirituality, religion, and the sacred. By viewing films like Anno Hideaki's *Neon Genesis Evangelion*, Shiro Masume's *Ghost in the Shell*, and Miyazaki Hayao's *My Neighbor Totoro*, this class will explore topics as the nature of the gods (kami), Shinto as nature religion, Christianity Japanese style, apocalyptic (end of the world) themes in anime, evil and the demonic, and so on.

238. Global Christianities.

This course explores Christianity outside the United States and Europe. Catholic and Protestant Christianities in addition to newer forms of Christianity are included, and case studies are drawn from Africa, Asia and Latin America. Pentecostal Christianity (also called Charismatic Christianity) is a particular focus. The course considers the conflict and interplay of older forms of Christianity, often part of the inheritance of colonialism, with more recent arrivals; probes the relationship between religion and the processes of globalization; and questions whether any of these forms of Christianity can be described as globalized, and, if so, whether global Christianity resists or supports globalization. *Also offered in Global Studies.*

245. Medieval Christianity.

Approximately half the history of Christianity is medieval Christianity, from the fall of Rome to the Reformation. This course surveys that period of history, with particular attention given to changes in monasticism, heresy, the papacy, and popular Christianity. For popular Christianity, topics will include veneration of saints and their relics, stories of the Grail, and the sacraments. Also included are major shifts in devotion to Christ and Mary, which are important for both church history and the history of popular Christianity.

267. The Holocaust.

This course focuses on the development of the Holocaust from 1933 to 1945, within the contexts of Christian anti-Semitism, Nazi ideas of race and empire, and World War II. We also address the relationship between the Nazi genocide against the Jews and Nazi persecution of other groups such as Slavs, Roma and the disabled. Finally, we consider the Holocaust's implications for Jewish and German identity, Christian and Jewish theology, international law, and understanding genocide broadly. *Also offered as History 267 and through European Studies and Peace Studies.*

272. The Crusades.

The medieval phrase "taking the cross" described a variety of military actions, often characterized as God's will. They were influenced by and generated new ideological expressions of legitimate religious violence. This course looks at crusades to the area known as the "Holy Land," and the expanded ideology of crusading that underpinned attacks against heretics, Iberian Muslims, Jews, pagans, and others. Issues engaged include: crusaders' motivations; ideas of Christian holy war and just war; Islamic perceptions of the crusades; pogroms against Jews; the Military Orders such as the Knights Templar; and cultural interaction and non-interaction among western Christians, eastern Christians, and Muslims in the "Latin East."

273. Religion and Visual Culture.

This course considers the interaction between visuality and religion: the role that seeing might play in religious practice and the role that religion might play in visual practice. It explores not just the ways that images and objects can embody and communicate meaning, but also how they can elicit powerful responses (e.g. fascination, excitement, faith, desire, or fear) in those who view them, and how they help humans to constitute the worlds that they inhabit. The course draws upon case studies from multiple religious traditions. *Also offered in Asian Studies.*

282. Indian Epics.

Epic myths are some of the earliest – and most exciting – forms of religious literature. In this course we will study two of South Asia's most popular epics, and consider how they have changed over time to remain relevant across several communities. We will read, see, and hear several versions of the Mahabharata and the Ramayana, and consider how the stories change in oral, performed, artistic, and film versions. The themes of violence, history, and law will be considered. *Also offered in Asian Studies.*

288. Cults and New Religious Movements.

The rise of new religious and spiritual movements (NRMs) in North America since the 1960s is a response to the rapidly changing religious, social and political conditions of the modern world. The objective of this course is to explore the origins, nature, beliefs and practices of NRMs. Who joins these groups and why? Do NRMs “brainwash” their followers? Are NRMs dangerous and violent? How have NRMs been portrayed in the mass media and in particular, by the news media?

3000-3999. Special Topics.

These 200-level courses deal with significant topics in religious studies. Offered occasionally. The content of each course or section will vary and will be announced each semester.

331. Pilgrimage as a Spiritual Journey.

This course explores the experiences, rituals, stories, beliefs, temples/shrines, images and traveling communities associated with the religious phenomenon of pilgrimage. What kind of travel is pilgrimage? Does it have a particular structure? Are there different kinds of pilgrimages? What kind of religious experience does pilgrimage provide? These and other questions are examined through a close study of selected pilgrimages in Christianity, Hinduism and Buddhism.

333. Goddesses.

How are goddesses portrayed in different communities and traditions? This course examines the phenomenon of goddess worship from a cross-cultural perspective, drawing upon materials from ancient and contemporary India and China, pre-Christian Ireland, classical Greece, contemporary Haiti, and present-day America. It analyzes the ways in which gender is used religiously, and the ways in which religion operates within gendered social relations, in order to consider the question of the relationship between female divinities and the roles and status of human women. *Also offered as Asian Studies 333.*

334. The Ways of the Gods: Shinto in Modern Japan.

Shinto or the “Way of the Gods” has long been viewed as the “archaic indigenous religion” of Japan. This course explores how, in fact, Shinto is an invented religion that changed radically throughout modern Japanese history as it evolved from local cults worshipping kami to state Shinto and new religious movements in the pre-war period to

its modern guise today as religious organizations independent of state control. Topics include: Shinto mythology, religious ultra-nationalism, emperor worship and the imperial system (also called State Shinto), the Yasukuni shrine war memorial issue, Shinto in popular culture, and the role of contemporary shrines and festivals, and kami worship and ecology. Offered every other year. *Also offered in Asian Studies.*

335. Religion and Violence.

This course focuses on the intersection of and assumptions about the relationships between religion and violence. Looking at various instances of the use of force and coercion, as well as verbal and symbolic violence in religious contexts, this course engages the course topic through specific case studies, both historically distant and contemporary, to draw attention to the intersections of political, economic, and demographic concerns that shape instances of “religious violence.” This course also engages with how we may define “religion,” how we may define “violence,” and how they are perceived and discussed together in cases of terrorism, war, and persecution of minority groups. The primary goal of the course is to examine our own as well as the broader society's assumptions about religion and violence, and to develop better critical approaches to understanding their relationships to one another. *Also offered through Peace Studies.*

4000-4999. Special Topics Seminars.

These 300-level seminars deal with significant topics in religious studies on an advanced level. Offered occasionally. The content of each course or section will vary and will be announced each semester.

412. Cross-Cultural Perspectives of Healing.

This class uses healing traditions as the lens with which to examine culture. During the semester students will have the opportunity to meet healers from around the world. In a typical semester presenters include a Traditional Chinese Medical practitioner, an Ayurvedic physician (from India), a shaman from Peru, an exorcist, a native American Healer an allopathic physician, new age healers, a Christian Scientist and others. *Also offered in Global Studies and Biology.*

Special Courses**360. Majors Seminar.**

This is an in-depth examination of theoretical and methodological approaches to the study of religion that will enable students to do sophisticated independent research. Required of all majors in religious studies, ideally in the spring of their junior year.

450, 451. Directed Studies in Religion.

An individual study program for candidates for honors in religious studies or others showing special interest and aptitude in the study of religion, as approved by the department chair and the instructor under whom the work will be completed. A term paper is required as the product of the special study. (A 2.5 average is required.) *Also offered as Asian Studies 450 and 451 at the discretion of the instructor.*

489, 490. SYE: Senior-Year Experience.

An individual study program for candidates for majors in religious studies that fulfills the requirements for their SYE and may be taken in place of Religious Studies 360 with approval of the department chair. (A 2.5 average is required.) An extended term paper is required as the product of the special study.

498, 499. SYE: Honors.

This is a departmentally-approved honors project requiring an extended term paper that is the product of the special study. A cumulative GPA of 3.5 in the department is required to do an honors project.

Hebrew

101-102. Hebrew.

An introduction to Hebrew language, the form of which (biblical, rabbinic, modern) is determined by the interests of the class. No prior knowledge is presupposed. In the first semester, students are introduced to the script and basic grammar and vocabulary. If modern Hebrew is taught, there is an emphasis on conversational skills; if biblical or rabbinic Hebrew, the emphasis is on ability to read the relevant texts. Offered occasionally by request.

Greek

111-112. Hellenistic Greek.

The first term and much of the second are spent mastering the essentials of Greek grammar and vocabulary of the period necessary to proceed in the second semester to readings in the New Testament. Offered occasionally by request.

Sociology

Major and minor offered

Associate Professors Assefa, O'Neil, Rohlfen (chair); **Assistant Professors** Barnard, McLane.

Visit the sociology department web page at www.stlawu.edu/sociology.

The sociology curriculum is intended to provide an understanding of the interactions and workings of societies, their institutions, organizations and groups. Through an introduction to the basic concepts, theoretical perspectives and methodological approaches of the discipline, students are familiarized with the sociological imagination, encouraging a deeper understanding of the relationships between personal experience (one's own and others') and the social world. Courses not only acquaint students with diverse cultures and social structures but also emphasize the dynamics of power and inequality on local, national and global levels, as they operate through race, ethnicity, class, ability, gender, and sexuality.

Our curriculum emphasizes the concepts and practice of social justice and public sociology. Built into courses and the curriculum are opportunities for students to develop a sense of social responsibility by critically engaging the social world outside the classroom. The experiential focus of the curriculum includes

participation in international study, community based service and learning, and internships.

The department emphasizes the active engagement of students in sociological inquiry. Toward that end, many courses are designed to teach students the basics of theory construction and methodological processes. Our courses encourage students to make their own discoveries about human social experiences, and all majors are required to synthesize and apply what they have learned in the completion of an upper-level research-based, topical seminar or faculty-mentored independent research project.

While the department's curriculum provides a strong foundation for graduate work in the discipline, our strength is in the development of strong critical and analytical skills as well as our support of writing and oral presentation skills and computer and visual literacy, all of which are important for success in any chosen life course.

In the tradition of a liberal arts education, the sociology curriculum is designed to promote a sense of curiosity about the diverse ways humans create, transform and adapt to their surroundings, self-reflection and appreciation of perspectives and experiences outside their own, and public intellectualism through attentive, creative, articulate engagement with community affairs and social issues.

The department has partnered with community-based learning programs to offer a variety of courses through which students engage in organized service activities that address community needs while offering structured opportunities to reflect on those activities in ways that promote active learning and personal development. Our campus-community programs have offered sociology majors the chance to work with children, seniors, persons with disabilities and local farmers, as well as participate in programs designed to advocate for the poor, the environment, and victims and survivors of violence.

Sociology Major Requirements

Courses are in the sociology department unless noted otherwise.

1. **9-12 units of credit.**

2. **One course at the 100 level.** Majors may take additional courses at the 100 level, but a maximum of two such courses can be counted toward the major.
3. **203. Foundations of Social Theory.**
Prerequisite: any 100-level or 200-level Sociology course.
4. **300, Qualitative Research Methods; or 301, Quantitative Research Methods.**
Prerequisite: 203, Foundations of Social Theory.
5. **Capstone Seminar:** Any 300- or 400-level topical seminar, including Special Topic seminars. These seminars have significant individual research components and opportunities for collaborative work, critical thinking, synthesis, and practice in a variety of communication skills. Prerequisites: one sociology course at the 100-level, one sociology course at the 200-level, *and* 203, Foundations of Social Theory; 300, Qualitative Research Methods *or* 301, Quantitative Research Methods recommended but not required.
6. **Experiential component, fulfilled by one of the following:**
 - a) An SLU approved off-campus study program (semester or year). To fulfill this requirement, students must also attend a gathering of sociology department faculty and other sociology majors returning from off-campus study to present a sociological reflection on their experiences. Prerequisite: any 100- or 200-level sociology course.
 - b) Any sociology course with a CBL (Community-Based Learning) component.
 - c) 309, Internship. Prerequisite: at least two sociology courses. Enrollment is by permission of instructor.
 - d) Summerterm course in Ethiopia offered through sociology.
7. After the completion of the Capstone Seminar: Majors who wish to pursue an additional Capstone opportunity through independent research have these options:
 - a) 486. Capstone Independent Study.
(1.0 credit, 1 semester, Fall or Spring) Prerequisites: 203, Foundations of Social Theory; 300 or 301, Research Methods; any 300- or 400-level capstone seminar, and Capstone Project Application submitted to the sociology department for approval prior to preregistration the semester before the start of the project. **or**
 - b) 495/496, Capstone Honors Project.
(2.0 credits, 2 semesters, 495 in Fall and 496 in Spring)
Prerequisites: 3.5 major GPA; 203, Foundations of

Social Theory; 300 or 301, Research Methods; any 300- or 400-level capstone seminar; and a Capstone Project Application submitted to the sociology department for approval prior to preregistration the semester before the start of the project.

8. **Electives:** requirements noted above *plus* sociology electives must TOTAL 9-12 units of credit.

Sociology/Environmental Studies Combined Major

In association with the department of environmental studies, the department of sociology offers a combined major in sociology–environmental studies.

Environmental Studies Requirements (ENVS)

- | | |
|--|---------|
| 101. Introduction to Environmental Studies. | 1 unit |
| Environmental Science and Policy (ESP) courses | 4 units |
| Any elective from a dual-listed course in the natural sciences | 1 unit |
| Any elective listed under ENVS, or from programs abroad if preapproved | 1 unit |

Sociology Requirements (SOC)

- | | |
|---|---------|
| 101. Principles of Sociology. | 1 unit |
| 110. Global Problems. | 1 unit |
| 112. Inequality. | 1 unit |
| 161. Social Problems and Policy. | 1 unit |
| 169. Media & Society. | |
| 187. Environment and Society. | 1 unit |
| 203. Foundations of Social Theory. | 1 unit |
| <i>Prerequisite: any 100-level or 200-level sociology course.</i> | |
| 300. Qualitative Research Methods or | |
| 301. Quantitative Research Methods. | 1 unit |
| <i>Prerequisite: 203. Foundations of Social Theory.</i> | |
| Socio-environmental dynamics courses | 2 units |
| <i>chosen from the following:</i> | |
| 233. Consuming Food. | |
| 235. Earning a Living. | |
| 253. Race, Class and Environmental Justice. | |
| 268. Sustainable Development. | |
| 269. Population and Natural Resources. | |
| 278. China's Market Transition. | |
| 288. Dilemmas of Development. | |
| 314. Nomads in World History. | |
| 377. Sociology of Consumption. | |

Other courses, including Special Topics courses, may be considered in consultation with the department chair.

Any Sociology electives 2 units

Students may take additional courses at the 100 level, but a maximum of two such courses can be counted toward the combined major.

Capstone Seminar 1 unit

One additional 300/400 capstone seminar, with a research project on a socio-environmental dynamics topic

Prerequisites: One sociology course at the 100-level, one at the 200 level, **and** 203. Foundations of Social Theory; 300. Qualitative Research Methods, **or** 301. Quantitative Research Methods, recommended but not required.

Total 15 units

Courses that are dual-listed with environmental studies should be taken under the sociology number and count toward the sociology portion of the combined major.

Sociology Minor Requirements

1. A minimum of six units of credit.
2. Of these courses, no more than two sociology courses at the 100 level can be counted towards the minor.

Honors

Honors will be granted to students who complete the major with at least a 3.5 GPA in sociology and who successfully complete and defend a Capstone honors thesis (495/496) before a departmental committee. Prerequisites: 3.5 major GPA; 203. Foundations of Social Theory; 300 or 301. Research Methods; any 300- or 400-level topical seminar; and a Capstone Project Application submitted to the sociology department for approval prior to preregistration the semester before the start of the project.

Alpha Kappa Delta Sociology Honorary

The department sponsors a chapter of Alpha Kappa Delta, the national honorary society in sociology. Membership is open to all students who meet its requirements: a 3.3 overall GPA (exclusive of the first year) and a 3.5 average in four or more sociology courses. Information and application forms are available from the sociology department secretary.

Certification to Teach Social Studies

Students seeking initial certification as a 7-12 social studies teacher in New York can major in sociology. In addition to completing the certification minor in education, students majoring in sociology must also take History 103 (Development of the United States, 1607-1877) and 104 (Development of the United States, 1877-Present); Global Studies 102 (Introduction to Global Studies II: Race, Culture, Identity); one economics course (Economics 100, Introduction to Economics, is recommended if only one course is taken); one government course (Government 103, Introduction to American Politics, is recommended if only one course is taken); and at least one course in the major that illuminates U.S. and/or world history and geography. Students are also encouraged to take courses in other social sciences and area studies to round out their preparation for teaching social studies. Sociology majors intending to complete student teaching after graduation in the University's Post-Baccalaureate Teacher Certification Program must complete the educational studies minor (or its equivalent) as undergraduates and all of the social science requirements listed above (or their equivalents).

Consult the Education section of this *Catalog* and/or speak to the coordinator of the teacher education program in the education department as early as possible.

Restrictions

1. Majors and minors may transfer into their major/minor no more than two approved courses from other institutions, St. Lawrence departments and programs outside the sociology department, or University-approved study abroad/off-campus programs. Permission from the department chair is required for transfer.
2. Majors and minors may count no more than one 390, Independent Study, toward their major/minor.
3. Majors and minors may count no more than two 290, Independent Study, courses toward their major/minor.

4. No more than a total of two 290/390, Independent Study, courses can be applied to the major/minor.
5. Core courses for the major (theory, research methods, and Capstone seminars/projects) must be taken in the department.

Courses

In addition to the regularly taught courses listed below, Special Topics courses are often offered.

101. IntroSoc: Principles of Sociology.

An introduction to how and why particular groups of people act, think, and feel as they do from a social perspective. The course explores different kinds of sociological explanations as well as a variety of substantive areas within the discipline, including deviance, power, social inequality, the family, collective behavior, formal organizations and others. The substantive areas emphasized vary by instructor.

110. Global Problems.

This course introduces students to the sociological perspective through examination of global actors, processes and problems. The course focuses on the process of the consolidation of the world into a single economy. While some people and some regions have benefited greatly, others have suffered tremendously. We look at how social disparities take shape and figure out the reasons they are justified. *Also offered through Peace Studies.*

112. Inequality.

An introductory course that examines forces behind the unequal distribution of economic, political, social, cultural and psychological rewards in contemporary U.S. society and globally. The course also examines the consequences of this distribution for both individuals and societies. Students are encouraged to take a closer look at social inequality through fieldwork projects and autobiographical reflections. *Also offered through Peace Studies.*

161. Social Problems and Policy.

This course explores the causes of and responses to the phenomena labeled “social problems.” The course examines how social phenomena are defined as problems and developed into issues. We investigate the role of the media, social movements, government and private capital in identifying problems and placing them on the public agenda. We also focus on a variety of policies proposed (and/or implemented) in response to specific social problems and the political conflicts that result from competing policy alternatives. The social impacts of various policy options associated with these issues are explored. *Also offered through Peace Studies.*

169. Media and Society.

This 100-level course is designed to explore the complex and often contradictory relationship between media, culture and society. Like the professor and textbook authors, we will cultivate sociological perspectives to analyze and explain how various forms of media—from traditional to digital—can spread their influence across society. On what terms is media content produced and consumed, and what “effects” are likely to follow? What is the “new media environment,” and what significance does it hold for media professionals and citizens? How do culture, technology, and political economy factor in? Throughout the semester, we will address each of these questions (and many more!) as we embark on an engaging, eye-opening journey through the realities of

life in the increasingly mediated world. *Also offered through Peace Studies.*

187. Environment and Society.

This course explores the complex interrelations between human societies and the environment via the sociological perspective, a means of making the familiar aspects of our lives, and our understandings of the world, seem strange and new. In doing so we can better analyze our world and our place in that world especially with regard to human and natural interactions. In this course we will learn about the concepts, theories, and methods that sociologists use to understand critical issues of environmental degradation and ecological crises and how these problems are experienced differently depending on one’s location in global society. By the end of the course students will become familiar with analytical tools that enable an understanding of some underlying drivers of environmental degradation and ideas of what can be done to chart a better future. *Also offered as Environmental Studies 187.*

3000-3999.

The content of each course or section of these 100-level or 200-level special topics courses varies and will be announced each semester.

203. Foundations of Social Theory.

This course brings under scrutiny the false dichotomies crowding the sociological imagination: structure/agency, history/theory, macro/micro, global/local. The broad-based analytical perspective enables students to appreciate theory in the context of historical relations and processes, and to approach history from a coherent theoretical angle of vision. Students are encouraged and expected to reflect on hegemonic rationales and conventional structures of knowledge. Students are assisted in perceiving the absurd fixation of mainstream knowledge on simplification and the axiomatic authority of disjunction, reduction, reification and abstraction. They are encouraged to see the virtue of complexity as an alternative form of knowledge of ecological/historical relations and processes. The objective of the course is to empower students by allowing them to discard simplification, and to embark on complexity as the intellectual path suitable to their reality. Prerequisite: any 100- or 200-level sociology course.

221. Sociology of Sex and Gender.

This introduction to social science ways of thinking about sex and gender provides an overview of contributions from a variety of disciplines and considers both theoretical and historical materials. We examine the social construction of gender and sexuality and the ways gender and sexuality and society interact with and affect each other, and how change takes place. The social developments and history of gender and sexualities are explored, and contemporary issues studied. In particular, how and why gender and sex became politicized, and continue to be so, is explored.

224. Family, Community and Globalization.

(with Community-Based Learning component)

The process of globalization no longer requires a workforce rooted in place. Rather, the need of this new, “flexible capitalism” is for a workforce that is mobile, unencumbered by connections to family, place and community. These larger structural changes do not operate as abstractions. They affect the lives of people at all levels. This course examines the influence of globalization on families and communities. To facilitate an understanding of these processes and their consequences, integrated into this course is a required experiential component through Community-Based Learning. Students develop reciprocity between their classroom experience and work within the local community. This course fulfills the Experiential Component requirement for majors.

225. Women’s Health and Aging.

This course will examine current issues related to the health and aging experiences of women in the U.S. and around the world. Special emphasis will be placed on the challenges women face as they experience various life transitions. The social, historical, cultural, economic, political factors related to women's health and aging will be examined. Topics include puberty, menstruation and PMS, childbirth, infertility, menopause, body image and ageism, employment and retirement, caretaking and social support, widowhood, and dying. The implications of changing demographic characteristics of the aging population in the United States and worldwide will be considered especially with regard to the consequences for women.

228. Race and Ethnicity.

This course introduces students to race and ethnicity from a social-historical perspective. It provides a conceptual background for understanding race and ethnicity. We do not treat race or ethnicity as "natural" or "obvious" identities, but study the sociological and historical emergence of race as an idea: as an effective way to categorize people and as a legitimate basis for social and structural hierarchies. We focus on how socio-historical relations and processes led to current conceptions and patterns of race and ethnic categories in the U.S., and consider possibilities challenging the nature of racial/ethnic identities by examining changes in political economy and anti-racist social movements.

233. Consuming Food.

Food is often seen as human beings' biological needs. However, food is also how we relate to others as social beings. How we eat, cook, and share food and what we consider to be food are bound with social and cultural meanings, as tastes and preferences are socially constructed and often related to class, gender, age, and ethnicity. This course will explore how industrialized agriculture and the food processing industry has changed our relationship to food and the various controversies over alternative food systems like organic food, local food, vegetarian and vegan food, and techno-food. It will also look at how the global capitalist food system has commoditized food and transformed food provision and consumption in developing countries, creating the concurrent existence of epidemic hunger and obesity in the world today. It will discuss the impacts of such a system on farmers and land use in both developed and developing countries.

235. Earning a Living: Work and Occupations in a Global Economy.

Much of the construction of our self-identity is concerned with preparation for and taking up a place in the occupational structure. Our occupations and the "social value" of the work we do contribute to definitions of our social worth. This course is about the complex of social, economic, political, cultural and psychological processes that contribute to what we want to "be" when we "grow up" and what then becomes possible in a global economy. It examines what happens when there is no place for us.

236. Education and Society.

This course provides a critical examination of the structure and consequences of one of our society's major institutions: the formal system of education. It is through participation in this institution that individuals access societal rewards. The course examines the structure of the formal system of education, the processes that maintain this structure, and the consequences of both for individuals and for larger society. *Also offered through Peace Studies.*

238. Social Services, Agencies and Advocacy. (with Community-Based Learning component)

An examination of the structure, processes and outcomes of human service organizations. We consider their promises and limitations, including the political, economic, legal and cultural climate in which they operate as well as the point where policy is translated into practice. We also explore issues and strategies related to "client" advocacy and empowerment. Integral to this course is participation in a placement with a local human service agency through partnership with Community-Based Learning. Possible placements may include the Department of Social Services, Citizens against Violent Acts, Renewal House, police agencies and courts. This course fulfills the Experiential Component requirement for majors.

239. The Web in Real Life.

In this 200-level course, we ask, What does it mean to live in a networked world, where our offline lives are increasingly and irrevocably tied to digital spaces? Beyond the vast array of cat memes and Bieberisms, the World Wide Web provides seemingly endless opportunities for social interaction and identity maintenance. But, as the popular aphorism goes, with great privilege comes great responsibility. Thus, it is up to you—the most wired generation in history—to understand the weight of this opportunity and to contend with the significance of social life in a hyperconnected world. With these concerns in mind, this course will examine the metered role that digital media and communication technologies play in the organization and maintenance of present-day social life. *Also offered as Film and Representation Studies 240 and through Peace Studies.*

240. New Media, Conflict & Control.

The focus of this course is to explore and explain the increasing role of new media tools in conflict and democracy, as well as to take a deeper look at the paradoxical potential for surveillance that these technologies also afford. As seen through the recent examples from the Arab Spring and Occupy movements, social media can serve an integral function in democratic mobilizations. At the same time, digital media have also been effectively employed by governments and cooperating institutions to assert both direct and indirect forms of control. Thus, this course will explore the many ways in which social media afford journalistic, communicative, and controlling functions. How and to what effects new media technologies are leveraged is thus contingent upon many interwoven factors. By applying sociological knowledge about conflict and surveillance to the discussion of emerging media, students will learn new and revealing ways to think about the social and political implications of new media technologies. In addition to learning about emerging forms of media, this course will also require all participants to work with new media in both research and discussion.

246. What's So Bad about Aging?

(with Community-Based Learning component)

This course examines the impact of aging on individuals and society, as well as the reactions of individuals and societies to aging. Theories and research on aging will be discussed, as well as the social, demographic, economic, historical, cultural, political, and health factors related to the aging process. Topics include diversity in the aging experience, housing and long term care, health care, social support networks, interpersonal relationships, work and retirement, leisure, and death and dying. A Community-Based Learning component is integrated with the course material to facilitate a thorough understanding of aging in society. This course fulfills the Experiential Component requirement for majors.

253. Race, Class, and Environmental Justice.

This course focuses on the distribution of environmental degradation and environmental protection, both domestically and globally. The

social processes that generate synergistic racism and class stratification, affecting the distribution of ecological costs and benefits, are explored. Substantive topics include the siting of hazardous facilities and thermo-nuclear weapons testing, the socio-ecological conditions of migrant farm workers, extraction of resources from Native lands, and the transnational export of toxic waste to the “Global South.” The course examines the origins and impacts of a distinct environmental justice movement that has emerged in the U.S. Written and oral assignments involve individual and collaborative quests for socially equitable solutions to socio-eco-historical injustices. *Also offered as Environmental Studies 253.*

268. Sustainable Development.

Defined as “development that meets the needs of current generations without diminishing the possibility of future generations to meet their own needs,” sustainable development has become a ubiquitous yet controversial catch phrase employed by the World Bank, the IMF, the United Nations and other international development agencies. Critics claim the term is merely a cover for continued neo-colonialism while its proponents argue that it allows space for a genuine consideration of the environmental and social good. This course develops students’ capacity to understand these competing claims and develop their own definition of what sustainable development might look like. *Also offered through Peace Studies.*

269. Population and Natural Resources.

Noted demographer John Weeks has argued, “Nearly everything is connected to demography.” While he qualifies this statement by saying that it may sound, “presumptuous, even preposterous” it is certainly easy to see his argument when focused on environmental issues and human population growth. Based in a case study of Haiti, this course examines the interplay of human population and natural resource use. The course introduces the tools and insights of demographic science and then places those insights in the historical context of world population change. Following this introduction the course explores the implications of the population growth on various natural resources and closes with a case study of an attempt to curb population growth in Port au Prince in order to better understand the complexities of developing policy initiatives that address human population growth. *Also offered through Peace Studies.*

272. Cults and New Religious Movements.

The rise of new religious and spiritual movements (NRMs) in North America since the 1960s is a response to the rapidly changing religious, social and political conditions of the modern world. The objective of this course is to explore the origins, nature, beliefs and practices of NRMs. Who joins these groups and why? Do NRMs “brainwash” their followers? Are NRMs dangerous and violent? How have NRMs been portrayed in the mass media and in particular by the news media? *Also offered as Religious Studies 288.*

275. Medical Sociology.

In this course we examine a variety of aspects of health, illness, medical systems and institutions from a sociological perspective. We look at the social causes and consequences of illness, the social construction of disease, and roles played by patients, medical personnel, health institutions and society and the ethical questions they present. Attention is paid to health policy development in the United States and that of other countries. *Also offered through Peace Studies.*

278. China’s Market Transition.

Is the 21st Century the Chinese century? Since the adoption of the reform and opening-up policy in 1979, China has embarked on a

path of miraculous economic growth. Although still declared as a socialist country, China is increasingly influenced by market and global capitalism, and Chinese society has changed in profound ways. This course focuses on China’s transformation from a planned economy to a more market-oriented economy, and examines changes in the social fabrics in tandem with its economic transition, such as the role of private entrepreneurs and social networks, and the effect of the reforms on culture, social classes, genders, and ethnic minorities. *Also offered as Asian Studies 278.*

288. Dilemmas of Development.

What does development mean? Is economic development always at the expense of social integration? By whose standard should we measure development? Is there a single best way of development? Are some cultures more likely to develop than others? Is globalization the remedy for underdevelopment? This course covers the basic sociological theories on development and globalization, and answers the above questions by looking at issues such as gender and class inequality, power of multinational corporations and multilateral agencies, consumerism, environment, and the search for alternative models in Asia and other parts of the world. *Also offered as Asian Studies 288.*

290. Independent Study in Sociology. (0.5 unit)

Open to students who wish to pursue more specialized or advanced sociological study, fieldwork and research with a faculty mentor. Prerequisite: at least one Sociology course. Permission of instructor is required.

300. Qualitative Research Methods.

This writing-intensive course is an introduction to a variety of qualitative social research methods. It includes discussions of the principles of social research, the relationship between theory and method, research design, issues of validity and reliability, and dilemmas and ethical concerns in qualitative research. Students learn qualitative techniques of gathering and interpreting data through a variety of “hands-on” projects in the field and classroom using methods such as participant observation, in-depth interviews, content analysis and other unobtrusive methods. Students engage in an individually designed, ongoing research project throughout the semester. Prerequisite: SOC 203, Foundations of Social Theory.

301. Quantitative Research Methods.

This writing-intensive course is an introduction to a variety of quantitative social research methods, with emphasis on survey data. Students learn using a hands-on, computer-based approach to quantitative data analysis. The course covers topics such as hypothesis construction, conceptualization and operationalization, sampling, data collection and analysis, reliability and validity, and the ethical concerns of quantitative methods. Students engage in questionnaire and table construction, and data management and analysis using SPSS while conducting an individually designed, ongoing research project throughout the semester. Prerequisite: SOC 203, Foundations of Social Theory.

302. Capstone Seminar: Visual Sociology.

This seminar is about “looking” and “seeing” and about the power of visual representations. The course examines the use of the visual and visual representations to reveal aspects of society operating on both the macro and micro levels. Substantive questions are explored through individual and group projects. This course fulfills the Capstone requirement for majors. Prerequisites: one Sociology course at the 100 level, one at the 200 level, and SOC 203, Foundations of Social Theory. SOC 300, Qualitative Research Methods or 301, Quantitative Research

Methods recommended but not required. Majors only.

308. Capstone Seminar: Death and Dying.

This course explores social, historical, ethical and cultural aspects of death and dying. We will analyze the social meaning of death from a historical and cross-cultural perspective. Additional topics include the historical evaluation of images and attitudes toward death, ways of dying, the medicalization and consequences of high-tech dying, life extension, the role of palliative care and hospice, euthanasia, body disposal and abuse, and the death industry. The course will offer an opportunity to formulate, analyze and deepen our views on a number of issues related to death and dying. This course fulfills the Capstone requirement for majors. Prerequisites: one Sociology course at the 100 level, one at the 200 level, and SOC 203 Foundations of Social Theory. SOC 300 Qualitative Research Methods or 301 Quantitative Research Methods recommended but not required. Majors only.

309. Internships.

Internship opportunities exist in social welfare, gerontology, healthcare, social policy, law, criminal justice, the media and college administration. The department also encourages students to be imaginative and innovative in developing internships to meet their own interests. Internships require a commitment of eight hours a week. Students may not enroll in more than one semester of internship credit without petitioning the sociology department for approval. Students interested in exploring internship opportunities must contact the instructor prior to course registration during the preceding semester. Not open to first-year students. Prerequisite: at least two Sociology courses. This course fulfills the Experiential Component requirement for majors. Permission of instructor required.

310. Capstone Seminar: Slavery, Race and Culture.

The purpose of this seminar is to familiarize students with the world of slavery and its relation to the wider world of capitalism. Long a part of the global capitalist economy, slaves and slavery have been critical historical agents in shaping various aspects of social relations. The history of slavery has laid the foundation for race formations. Far from being a peculiar institution, slavery is indeed central to the making of the modern age. This course fulfills the Capstone requirement for majors. Prerequisites: one Sociology course at the 100 level, one at the 200 level, and SOC 203 Foundations of Social Theory. SOC 300 Qualitative Research Methods or 301 Quantitative Research Methods recommended but not required. Majors only. *Also offered as African Studies 310.*

314. Capstone Seminar: Nomads in World History.

Throughout history, the terms nomad and barbarian have been used interchangeably, and with negative connotations. Similarly, the terms settled and civilized have been synonymous, with positive associations. This dichotomy arises out of particular class and power interests and has had, as a consequence, an impact on our understanding of world history and the place of nomads in it. It has resulted in the stigmatization of nomads. In this course, we bring the nomadic factor back to focus and establish a more comprehensive picture and interpretation of world history. This course fulfills the Capstone requirement for majors. Prerequisites: one Sociology course at the 100 level, one at the 200 level, and SOC 203 Foundations of Social Theory. SOC 300 Qualitative Research Methods or 301 Quantitative Research Methods recommended but not required. Majors only. *Also offered as Environmental Studies 314.*

317. Capstone Seminar: Twitter and Society.

This course will explore the sociological significance of Twitter as a platform for personal expression, interaction and networked communication. The breadth of meanings various user communities ascribe to the service, as well as the access and usage patterns found among this and other digital tools, pose obvious challenges for how sociological research may approach or explain Twitter users and the data they produce. Nevertheless, the apparent diversity of Twitter use and users also provides an opportunity to reveal significant insights about how users leverage the affordances of the service, and to what effects. Thus, this course will begin with an introduction to Twitter and its significance for various sectors of society. Then, we will learn to ask sociological questions about Twitter usage and to develop theoretically and methodologically grounded approaches to answering those questions. This will allow us to design and conduct exploratory analyses of Twitter data. The coursework will culminate with students creating digital presentations to showcase their work in engaging and innovative formats.

337. Capstone Seminar: Economy and Society.

Early sociologists, like Karl Marx, Emile Durkheim and Max Weber, were interested in the causes and consequences of the rise of capitalism, and the analyses of changes in economic behavior patterns were important pieces in their works. Then for most of the 20th century, sociologists turned away from the study of economic activities. Under the division of labor, the study of economic behavior was considered to be the turf of economists. That changed in early 1980s when sociologists started to reclaim the lost land and bring a sociological lens to the study of economic activities that emphasizes the importance of social structures, relationships, values, and even emotions in shaping economic behavior. This course will offer a survey of the growing field of economic sociology and look at how social institutions, social networks, power, and values affect the economy. We will also compare the different approaches that economists and sociologists take. Prerequisites: one Sociology course at the 100 level, one at the 200 level, and SOC 203 Foundations of Social Theory. SOC 300 Qualitative Research Methods or 301 Quantitative Research Methods recommended but not required. Majors only.

377. Capstone Seminar: Sociology of Consumption.

In this seminar, we explore consumption along a wide range of material dimensions. The sociology of consumption is concerned with the relationships of (a) the social to the natural and (b) the social to the social and (c) their consequences, such as social disruption and environmental destruction; "things" are fetishized and humans are commodified. The sociology of consumption helps us to understand this in the context of both the capitalist world economy and cultural expressions from early modernity to postmodernity. This course fulfills the Capstone requirement for majors. Prerequisites: one Sociology course at the 100 level, one at the 200 level, and SOC 203 Foundations of Social Theory. SOC 300 Qualitative Research Methods or 301 Quantitative Research Methods recommended but not required. Majors only. *Also offered as Environmental Studies 377.*

390. Independent Study in Sociology. (1 unit)

Open to students who wish to pursue more specialized or advanced sociological study and research with a faculty mentor. Prerequisite: at least two sociology courses. Permission of instructor required.

4000-4999.

The content of each course or section of these 300- or 400-level special topics courses varies and will be announced each semester.

465. Environmental Sociology.

How can we understand ideas like "nature" and "natural" in a world

thoroughly interwoven with human intentions? After all, genetically modified corn is still grown using sun and water. Hurricanes still gather strength according to rules of physics even if the storm is strengthened by human warmed waters and air. In this world, where does the human start and the non-human begin? What are the limits to the sociological insight of the social construction of reality? These are the sorts of questions that environmental sociology has been asking since Dunlap's New Ecological Paradigm challenged sociology (and society) to "bring nature back in" to our understanding of ourselves and our work as sociologists. This course will explore efforts by sociology to incorporate nature in sociology and how those efforts can inform our understanding of complex systems. Prerequisites: one Sociology course at the 100 level, one at the 200 level, and SOC 203 Foundations of Social Theory, SOC 300 Qualitative Research Methods or 301 Quantitative Research Methods recommended but not required. Majors only.

486. Capstone: Independent Study.

This requires completion of an individual research project mentored by one of the sociology faculty. Before registering, students should work with a faculty mentor to prepare a research proposal outlining the intended thesis, theoretical framework, methodology and ethical considerations including the application for human subjects review approval where necessary. This is a one-semester project (Fall or Spring). Prerequisites: SOC 203 Foundations of Social Theory, SOC 300 Qualitative Research Methods or 301 Quantitative Research Methods, any 300 or 400-level capstone seminar, and a Capstone Project Application submitted to the Sociology Department for approval prior to preregistration the semester before the start of the project. Permission of instructor required.

495/496. Honors in Sociology.

This requires completion of an individual research project mentored by one of the sociology faculty. The project is undertaken over two semesters. Students need to register for both 495 (fall) and 496 (spring). Honors will be granted to students who have completed and defended a thesis before a departmental committee. Prerequisites: 3.5 major GPA, SOC 203 Foundations of Social Theory, SOC 300 Qualitative Research Methods or 301 Quantitative Research Methods, any 300 or 400 level capstone seminar, and a Capstone Project Application submitted to the Sociology Department for approval prior to preregistration the semester before the start of the project. Permission of instructor required.

Sports Studies and Exercise Science

Minor offered

Director of Intercollegiate Athletics and Recreation Durocher (chair), **Coordinator of Academic Programs** Canfield.

Visit the sports studies and exercise science webpage at www.stlawu.edu/sport-studies-and-exercise-science.

Sport is deeply embedded in our national consciousness, both reflecting and shaping our daily lives. Since the middle of the 20th century,

sport has emerged as a rapidly expanding scholarly endeavor that offers students a logical forum for the study of the traditional liberal arts disciplines and sub-disciplines found in the humanities, natural sciences and pedagogy. Most courses are introductory in nature and therefore do not have prerequisites. Thus, some students will be taking courses framed in a particular liberal arts perspective for the first time while others enter with experience. For students without prior experience in the theories, conventions and methodologies of the traditional discipline, courses are successful if they develop a solid understanding of the relationships between the disciplinary perspective and sport and physical activity. For students with disciplinary experience, courses are successful if they exit with an understanding that the study of sport and physical activity is another relevant dimension that can deepen their ability to analyze the constructs associated with the discipline.

Requirements for Minors

Students who are interested in the sports studies and exercise science minor must complete a five-course sequence from among any course listed below except SSES 100 or SSES 100S. Students will be advised by the department's coordinator of academic programs.

The following courses may also receive credit toward the minor:

Biology

240. Human Anatomy.

Psychology

255. Sport Psychology.

Coaching Certification

Students completing the following courses in sequence will earn a certificate to coach in the public schools of New York State.

Students pursuing teacher certification in other disciplines are strongly encouraged to explore this option. The required three-course sequence includes Introduction to Kinesiology (115) *or* Philosophical Perspectives on Sport (216), Sport Medicine (319) and Coaching Theory (320).

Courses

100A-F. Lifetime Physical Fitness and Wellness. (.5 unit)

This course is intended to expand the student's awareness of the potential of physical activity to establish and sustain physical fitness and to enrich one's quality of life. The course is designed to provide each student with conceptual and practical exposure to principles of fitness and wellness that will be useful throughout the adult years. It does not count toward the SSES minor.

100S. Aquatics. (.5 unit)

This course is intended to provide each student with the knowledge and skills for water safety and lifeguarding. To be admitted to the course, students are required to pass a pre-course test of swimming skills. At the conclusion of the course, students will have the opportunity to complete an American Red Cross Lifeguarding Certificate. The course does not count toward the SSES minor.

115. Introduction to Kinesiology.

This is the introductory course for the minor in sports studies and exercise science. It focuses on the study of physical activity from theoretical/conceptual, experiential and professional practice frameworks. Socio-cultural, behavioral and biophysical perspectives of physical activity are explored. Emphasis is on the role of physical activity in human development throughout the lifespan. The relationship of physical activity to the structures of school, community, workplace and the natural environment is studied.

212. Sociological Perspectives on Sport.

This course is a study of the structural dimensions of the social phenomenon of sport. Attention is directed toward examining the relationship between sport as a social institution and other dominant patterns of social interaction. While sports in the United States are the primary focus, other societies are examined as well.

216. Philosophical Perspectives on Sport.

The study of ethics and moral reasoning is introduced through the lens of sport. Topics such as moral skepticism, ethical relativism, utilitarianism vs. Kantianism, competing concepts of impartiality, the care vs. justice perspective, positive vs. negative duties and the doctrine of double effect are explored. Students will be asked to evaluate their own opinions, beliefs and attitudes that govern their judgment and/or actions within the realm of sport. *Also offered through Philosophy department.*

230. Principles of Health and Wellness.

This course addresses health and wellness issues that society currently encounters. Topics include nutrition, fitness, obesity, stress management and adherence. Physical inactivity is studied as a disease risk factor. The health impact of lifestyle and behavioral choices is studied.

234. Human Exercise Physiology. (*with lab*)

This course addresses the structure and function of the organs and systems of the human body and their physiological changes resulting from exercise. Beginning with the study of the health benefits of physical activity, emphasis is on the study of the human capacity for exercise and the use of physiological principles to improve physical fitness and performance in sport and physical activity. Laboratory sessions supplement the course.

319. Sport Medicine.

This course provides background in the care and prevention of injuries to athletes. Class topics include nutrition, physical fitness and modern techniques of sports medicine. Lab sessions include basic skills in first aid and evaluation and rehabilitation of athletic injuries. Prerequisites: SSES 115 or 216 and/or permission of instructor.

320. Coaching Theory.

This course provides an overview of the philosophies and practices of coaching. Professional responsibilities, management styles and coach/athlete interaction styles are examined as they pertain to all aspects of the coaching challenge. Prerequisites: SSES 115 or 216, and 319.

366. Obesogenic Society.

This course explores societal patterns of food consumption, marketing, and nutritional information. In addition, environmental facilitators and barriers to physical activity are explored. This course focuses on community and policy implications impacting individual choices regarding levels of consumption and physical activity.

390. Independent Study.

An opportunity to pursue specialized study or research under faculty supervision. Proposals must be presented to the department chair (or designee) for approval. Students may not earn more than one semester of credit for this course.

391. Internship.

Internships are available in such areas as sport medicine, fitness and sport management. Each is designed as a student-arranged study that is comprised of a structured experience with an organization or institution and involves intensive work on a particular project.

415. SYE: Senior Seminar.

Advanced study on topics and issues evident in contemporary sport and exercise science. Permission required. Available to SSES minors only.

490. SYE: Independent Study.

The course offers seniors who minor in sports studies and exercise science the opportunity to pursue advanced study or research under the guidance of a faculty sponsor. Permission required.

Statistics

Major and minor offered under the auspices of the mathematics, computer science and statistics department

Professors P. Lock, R. Lock, Schuckers;
Associate Professors Chapman, Look (chair), Ramler.

Visit the mathematics, computer science and statistics department Web page at www.stlawu.edu/math.

The modern world has become increasingly data-driven, and as a result, statistical methods for analyzing data are invaluable for making informed decisions and predictions. Statistics is interdisciplinary, being used in fields as varied as psychology, biology, physics, chemistry, computer science, economics, law, actuarial science, health, education, business and public policy. Additionally, statisticians need to collaborate with individuals in other fields and clearly communicate statistical ideas and results.

Courses in statistics are available to students wishing to develop a solid understanding of methods for collecting, analyzing, and interpreting data. Course work for the major can be selected from the general statistics courses offered by the mathematics, computer science, and statistics department. For students interested in an interdisciplinary minor in statistics, various disciplinary methods courses offered by the departments of economics, psychology, and sociology are also available.

Students are encouraged to obtain a broad understanding of the fundamentals principles of statistics while emphasizing the important applications of those principles to real-world situations. Students are also encouraged to take advantage of the many opportunities available to undergraduate students such as summer research programs and internships, and to present their work to a broader community at conferences. Previous students who have studied statistics have gone on to graduate school in a wide variety of fields and have pursued careers such as financial analysts, actuaries, teachers, and data analysts.

Students considering graduate work in statistics are strongly encouraged to take Math 280 and Math 305 in addition to majoring in statistics.

Honors

Honors work in statistics provides the student with an opportunity for more independent and creative work in pure or applied statistics. A minimum GPA of 3.5 in all major courses is required to receive honors in statistics. In addition, each student applying for honors must complete a departmentally approved honors project. This work is completed as a senior year experience project. Interested students should consult the department chair.

Advanced Placement

Students who enter St. Lawrence with a 4 or 5 on the Advanced Placement Statistics test will receive credit for Stat 113 and are encouraged to start with Stat 213 or Stat 226.

Major Requirements

The requirements for a major in statistics

are 11.5 units, including four required core mathematics courses, four required core statistics courses, either a 0.5 unit course in statistical computing or comparable introductory computer science course, two electives, and a senior-year experience.

Core Mathematics Courses

(all required)

- 135. Calculus I.
- 136. Calculus II.
- 205. Multivariate Calculus.
- 217. Linear Algebra.

Core Statistics Courses

(all required)

- 113. Applied Statistics.
- 213. Applied Regression Analysis.
- 201. Statistical Computing. (0.5 units)
- 325. Probability.
- 326. Mathematical Statistics.

Electives

(any three units)*

Statistics (STAT)

- 226. Statistical Methods for Data Collection.
- 240. Statistical Learning. (0.5 units)
- 250. Special Topics in Statistics.
- 342. Econometrics. *(also offered in economics)*
- 343. Time Series Analysis.
- 350. Special Topics in Statistics.
- 450. SYE: Seminar.
- 489. SYE: Independent Project.
- 498. SYE: Honors Project.

Mathematics

- 280. Bridge to Higher Mathematics.
- 305. Real Analysis.
- 350. Mathematical Modeling.

Computer Science

- 219. Techniques in Computer Science.

Senior-Year Experience

Students must fulfill a Senior-Year Experience (SYE) requirement either in statistics as one of the 11.5 units in the major or by completing an SYE outside the major.

**At least two of the elective courses must be at the 300 level or above. A Statistics SYE would count toward this total. Further, Math 280 can also count toward this total. At least two of the elective courses must be listed with the prefix STAT.*

Minor Requirements

An interdisciplinary minor in statistics is available to students wishing to develop a solid understanding of methods for collecting, analyzing, and interpreting data. Five units are required for this minor. These courses must be chosen from among the options listed below; no more than two of the five courses can be disciplinary methods courses from outside the mathematics offerings.

Statistics

- 113. Applied Statistics.
 - 201. Statistical Computing. (0.5 units)
 - 213. Applied Regression Analysis.
 - 226. Statistical Methods for Data Collection.
 - 240. Statistical Learning. (0.5 units)
 - 250. Special Topics in Statistics.
 - 325. Probability.
 - 326. Mathematical Statistics.
 - 343. Time Series Analysis.
 - 350. Special Topics in Statistics.
- Disciplinary Methods Courses.

Economics

- 200. Quantitative Methods in Economics.
- 342. Econometrics.

Psychology

- 205. Research Methods in Psychology.

Sociology

- 301. Quantitative Research Methods.
- SYE

An independent study/honors project that involves substantial statistical analysis may also be used as one of the five courses toward an applied statistics minor.

Major/Minor with Mathematics

By their very nature, the disciplines of Mathematics and Statistics are closely connected, and several of the courses offered within the Mathematics, Computer Science, and Statistics department can be used towards a major or minor in both. However, to ensure that the students that wish to double major (or major and minor) in the two fields have sufficient depth of knowledge within each field, there are some limitations on the number of courses that can count towards both. Details can be found at the Mathematics, Computer Science, and Statistics department webpage: www.stlawu.edu/math.

Courses

113. Applied Statistics.

An introduction to statistics with emphasis on applications. Topics include the description of data with numerical summaries and graphs, the production of data through sampling and experimental design, techniques of making inferences from data such as confidence intervals, and hypothesis tests for both categorical and quantitative data. The course includes an introduction to computer analysis of data with a statistical computing package.

201. Introduction to Statistical Computing.

An introduction to the core ideas of programming through the use of the statistical programming language and software, R. Assumes no prior knowledge of programming but a familiarity with basic statistics is required. The course focuses on building essential programming skills such as objects, data structures and management, functions, and flow control to assist in statistical analyses and will introduce students to the powerful graphing capabilities of R. Additional software platforms will be covered at the discretion of the instructor. Prerequisite: Statistics 113 or permission of instructor. Offered in the fall semester.

213. Applied Regression Analysis.

A continuation of Statistics 113 intended for students in the physical, social or behavioral sciences. Topics include simple and multiple linear regression, model diagnostics and testing, residual analysis, transformations, indicator variables, variable selection techniques, logistic regression, and analysis of variance. Most methods assume use of a statistical computing package. Prerequisite: Statistics 113 or Economics 200 or permission of instructor.

226. Statistical Methods for Data Collection.

An introduction to statistical methods for data collection. Topics include methods for survey sampling and design of experiments. Survey sampling topics such as simple random sampling, survey sampling, cluster sampling, and capture/recapture sampling are covered. Design of experiment topics such as randomization, blocking, completely randomized design, randomized complete block design, Latin square, and factorial designs are covered. Statistical methods for analyzing data collected via the aforementioned methods are extensively discussed. Thorough use of a statistical software package is incorporated. Prerequisite: Statistics 113 or Economics 200 or permission of instructor.

240. Introduction to Statistical Learning.

This course is intended to introduce students to a variety of tools and methods in statistical learning. Topics may include supervised learning (such as regression, discriminant analysis, and decision trees), cluster analysis (including hierarchical, k-means, k-medoids, and model based clustering), principal components analysis, and factor analysis. The emphasis will be on applying procedures to data and interpreting both numerical and graphical results.

325. Probability.

This course covers the theory of probability and random variables, counting methods, discrete and continuous distributions, mathematical expectation, multivariate random variables, functions of random variables and limit theorems. Prerequisite: Mathematics 205. Offered in the fall semester. *Also offered through Mathematics.*

326. Mathematical Statistics.

Following Statistics 325, this course deals with the theory of parameter estimation, properties of estimators and topics of statistical inference,

including confidence intervals, tests of hypotheses, simple and multiple linear regression, and analysis of variance. Prerequisite: Statistics 325. Offered in the spring semester.

342. Econometrics.

A study of statistical techniques economists have found useful in analyzing economic data, estimating relationships among economic variables and testing economic theories. Topics include multiple regression, probit and logit analysis, heteroscedasticity, autocorrelation and simultaneous equations models. Prerequisites: Economics 200, 251 and 252 and Mathematics 135. *Also offered as Economics 342.*

343. Time Series Analysis.

Statistical methods for analyzing data that vary over time are investigated. Topics may include forecasting systems, regression methods, moving averages, exponential smoothing, seasonal data, analysis of residuals, prediction intervals and Box-Jenkins models. Application to real data, particularly economic data, is emphasized along with the mathematical theory underlying the various models and techniques. Prerequisite: Mathematics 136 or permission of the instructor. Offered every other year. *Also offered as Economics 343.*

389, 390. Independent Projects.

Permission required.

450. SYE: Senior Seminar.

Permission required.

489. SYE: Senior Independent Project.

Permission required.

498. SYE: Senior Honors Project.

Permission required.