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, catalog/1415/curriculum.pdf), 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/sites/default/files/resource/gradcatalog14-15_1.pdf.

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.
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
Biological Physics
Business in the Liberal Arts
(only as second part of a double major)
Canadian Studies-Art and Art History
Canadian Studies-Economics
Canadian Studies-Estudios Hispanicos
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-Math
 English

Environmental Studies
Environmental Studies-Anthropology
Environmental Studies-Biology
Environmental Studies-Chemistry
Environmental Studies-Economics
Environmental Studies-Geology
Environmental Studies-Government
Environmental Studies-Mathematics
Environmental Studies-Philosophy
Environmental Studies-Psychology
Environmental Studies-Sociology
Estudios Hispanicos
Francophone Studies
Geology
Geology-Physics
Global Studies
Government
History
International Economics-Estudios Hispanicos
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 Hispanicos
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

Other Programs of Interest...

• Business
  (see Economics; 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 Hispanicos)
• 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** Blewett (economics), Schonberg (government), Udechukwu (fine arts); **Associate Professors** Assefa (sociology), Barthelmess (biology), **Assistant Professors** Brezault (francophone African studies), Haugh (anthropology and African studies), McKie (government and African studies), Wong (global studies); **Visiting Instructor** Atsiaya (Swahili), Johnson (PCA).

Visit the African studies webpage at [www.stlawu.edu/african-studies](http://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 AFS225 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**

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

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

**Economics and African Studies**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON100, Introduction to Economics*</td>
<td>1 unit</td>
</tr>
<tr>
<td>ECON 200, Quantitative Methods in Economics**</td>
<td>1.5 units</td>
</tr>
<tr>
<td>ECON 251, Intermediate Microeconomic Theory</td>
<td>1 unit</td>
</tr>
<tr>
<td>ECON 252 Intermediate Macroeconomic Theory</td>
<td>1 unit</td>
</tr>
</tbody>
</table>

Four other electives in economics, at least two of which must be at the 300/400 level and at least two of which must be selected from:

- ECON 228, African Economies
- ECON 322 International Economics
- ECON 336, Economic Development | 4 units

*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. Five AFS courses, including a 400-level approved AFS course
COURSES OF STUDY

5 units Total 13.5 units

Government and African Studies

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

History and African Studies

History
Ten courses / 10 units
-1 must be a HIST 299 Seminar on Historical Research Methods
-4 from different regions (including one on African history)
-1 SYE (which should be the HIST-AFS SYE)
No more than three courses at the introductory (100) level may be credited toward the major
Five AFS courses (One of which may be counted for both History and African Studies) 5 units
Total 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 http://www.stlawu.edu/ciis

Courses

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

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
Art and Art History
215. West African Arts.
246. Art and Politics in Nigeria.
Economics
228. African Economies
Global Studies
262. Africa and Globalization.
Government
220. African Politics.
History
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

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), Regosín (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

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.
272. The New South.
273. Civil Rights Movement.
280. History of Women in America
301. 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 (chair); Assistant Professors, Harr, Haugh (chair), and Pitre.

Visit the anthropology department webpage at stlawu.edu/academics/programs/anthropology.

Anthropology is the study of humanity. Its subject of study encompasses the range of human experience among the peoples of the world, and its aims are to understand what people do or have done, and why. In fact, every aspect of human beings, from their DNA molecules to their beliefs about the supernatural, from the beginnings of primate evolution to the present, raises anthropological questions.

For these and many other reasons, anthropology is central to the liberal arts. The anthropology program is designed to cultivate a lively curiosity about the human experience, a deeper understanding of cultures and diverse ways of life, including our own. It works toward developing an informed, comparative sense of the human experience, past and present, and of the many ways of knowing, understanding and communicating. These studies encourage critical reasoning abilities and skills that promote a life of continuous learning, which are of immeasurable value in pursuing a range of careers and goals in a world in which global diversity has become, more than ever, an inescapable aspect of life.

The major program at St. Lawrence not only involves intensive study in anthropology, but also enriches studies in other disciplines. Anthropology links the social sciences, natural sciences, arts and humanities. It has always incorporated insights from biology, geology, geography, history, philosophy, political science, economics, psychology and many other disciplines.

Our faculty members are prepared to assist students in pursuing a range of directions in their studies within the broader field of the discipline. With field research experience in Namibia, Indonesia, India, and the Sudan, they have published books and articles on song and national identity, language and ritual, glass beads and long-distance trade, and microbial growth on ancient bone. The department's teaching and research laboratories house several collections of artifacts and stone and bone materials for hands-on study.

Some courses are dual-listed or cross-listed for credit toward African Studies, Asian Studies, Gender and Sexuality Studies, Peace Studies, Performance and Communication...
Arts, and Government. The department offers a major with African Studies (see below). Specific anthropology courses also fulfill a number of the general education requirements (e.g., DIV01, DIV13, SST01, SSC01, NSC01, and SS13).

In recognition of the diverse approaches to the study of humanity that anthropology involves, the department offers introductory courses in each of the principal branches 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 areas. All four begin from distinct sets of questions and converge on the central and fundamental issue of what it means to be human.

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 have declared majors or minors in it. Some students are members of Lambda Alpha, the national anthropology honorary society. The department also compiles information on the many anthropological field schools (e.g., ethnographic, linguistic, archaeological, biological) and ongoing projects open to students throughout the United States and other parts of the world. St. Lawrence students have accompanied faculty on research trips to Australia, India, Indonesia, Kenya, and Papua New Guinea. Opportunities outside the University are also available through programs with other universities on summer field schools in Bermuda, Kenya, Costa Rica, China, Italy, Hungary, and Mexico, as well as several U.S. states. Anthropology courses provide excellent preparation for students wishing to study on St. Lawrence programs in Kenya, Australia, New Zealand, India, Europe, and elsewhere.

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

1. Understand how all the sub-fields — biological anthropology, archaeology, cultural anthropology and linguistics — have been defined, fit together, clashed, challenged each other and complemented each other through time;
2. Articulate how the fundamental ideas in anthropology — of evolution, culture, structure, function and relativism — have developed through time and always come back to address the essential question of what it means to be human;
3. Analyze and articulate the importance of language in the life of humans through time, as biological species and as active participants in living cultures, as evidenced in their anthropological work and co-requisite study of a foreign language;
4. Appreciate cross-cultural and intercultural difference as an inherent part of what it means to be human, through coursework preferably complemented experientially by participation in at least one overseas program;
5. Engage in comparative work within and across all four sub-disciplines;
6. Articulate and use important theoretical, methodological and ethical issues in each of the four subfields with an eye toward distinguishing cultural relativism from moral relativism in analyzing and understanding human behavior of all kinds, and toward recognizing that in cultural anthropology and linguistics we are working with live human beings, with all the ethical responsibilities that that entails;
7. Demonstrate critical reading, thinking, writing and speaking skills;
8. Master American Anthropological Association citation conventions and other "nuts and bolts" issues of competency and ethics of scholarly reportage in anthropology;
9. Distinguish and use critically many different kinds of sources, whether they be primary, secondary or popular;
10. Distinguish good scientific inquiry from bad, both in and outside of anthropology, using all of the aforementioned understandings and 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 102 (Cultural Anthropology), 103 (Introduction to Archaeology), 201 (Introduction to Human Origins), and 205 (Language and Human Experience). There is no particular recommended sequence, but students should take these courses before taking more advanced courses in particular subfields. Because these introductory courses form the foundation of all future work in the major, students should complete all four before participating in an off-campus-semester program.
2. Research Methods (1)
All students must complete a junior-level (300) re-
search methods course, whether the methods include field, laboratory, or library research. This category includes anthropology courses numbered 318, 325, 341 and 365. Certain Special Topics Seminars (numbered 4000-4999), and Junior Projects 389 and 390, also meet the criteria for this category.

3. Capstone Experiences (2)
Senior majors must take two courses to fulfill anthropology’s capstone requirements. Anthropology 420 (Views of Human Nature) is designed as the required senior seminar for anthropology majors. Majors must also take at least one additional course at the 400 level, which include Great Debates in Archaeology (415), Environmental Conservation in Africa (425), Advances in Biological Anthropology (430), Writing Culture (440), Independent Study project (489, 490), and Honors project (498, 499) (see below). Students should consult a faculty member about the latter two options.

4. Electives (4)
We recommend that the remaining four elective courses include study in more than one geographic or topical area and preferably in at least two of the four subfields of anthropology (biological anthropology, archaeology, cultural and linguistic anthropology). Electives may be taken in conjunction with overseas or off-campus study, but no more than two electives may be taken outside the department.

Foreign Language Co-requisite
Because our approach to studying humans is holistic and involves all four subfields of anthropology, stressing not only the evolution and social life of the genus Homo in the past and present but also language, we require all anthropology majors to study a language other than their first (i.e., dominant) language, according to the following guidelines:

1. Students who have studied a language in high school may meet the requirement by:
   • Earning a 4 or 5 on the Advanced Placement (AP) exam, or
   • Taking 200-level course work in that language at St. Lawrence.
2. Students who have not met the above guidelines may meet the requirement by successful completion of two semesters of a (different) language, either on campus or in conjunction with an overseas program.

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 Research Methods (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 language co-requisite is not required of combined majors, we strongly urge African studies combined majors to fulfill it, either on campus or in conjunction with 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 Research Methods course numbered 300, taken in the department;
4. At least one capstone course numbered 400, also taken in the department.

The courses beyond the introductory level should incorporate at least two of the major subfields (biological anthropology, archaeology, cultural anthropology, and linguistic anthropology).

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

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 to 200 level. Recent offerings have been Global Pacific, Talking Politics, and Humans and Other Animals. Offered occasionally.

201. 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.

205. Language and Human Experience.
This course introduces students to the anthropological study of language as a peculiarly human trait. We compare and contrast human vocal language with non-human forms of communication to ask, What is language? What separates human language from other forms of communication? What is the range of human communicative skills (e.g., sounds, gestures, body language, silence)? What is the relationship among language, society and culture? Between language and perception? How do the use, non-use and/or misuse of language communicate aspects of cultural and/or personal identity? How do anthropologists go about studying these things? Restricted to first and second year students. Offered every semester.

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.

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.
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.

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 upon 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 human culture. 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.

341. Popular Culture in Africa.  
This course focuses on the many different forms of popular culture, such as songs, plays, films, and paintings, produced and circulated by amateur and professional artists, musicians, actors, and directors in Africa. We will study these productions as forms of entertainment and artistic expression, but more importantly as efforts to make sense of the world, offer critical commentaries, construct social identities, and take political action. In addition to developing a theoretical understanding of popular culture, we will address themes such as gender, ethnicity and nationality, wealth and power, globalization, protest and resistance, and war. Offered every spring. Also offered as African Studies 341.

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.

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.

4000-4999 Special Topics Seminars.  
These advanced seminars deal with significant topics in anthropology at the 300 or 400 level. Recent offerings have been Archaeology of Collapse; Myth, Magic and Ritual, and Language, Performance, and Power. Prerequisites: previous relevant coursework to be specified in section descriptions or permission of the instructor. 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.

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.

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 anthropological 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, Udechukuwu; Associate Professors Basu, Dane (chair), Denaci, Hauber, Schulenberg; Assistant Professor Kline; Visiting Assistant Professor Falk; Lecturers Stein.

Visit the art and art history department web page at [www.stlawu.edu/academics/programs/art-and-art-history](http://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](http://www.stlawu.edu).

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 concur-ently 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 post-modernism. 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: 11 units

(8 art history/3 studio)

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

Art History:
- Survey of Art History I or 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
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: 11 units (7 studio/4 art history)**

Students interested in a Studio Art Concentration should plan to take AAH 131 Drawing I, the pre-requisite for upper-level studio art courses, as soon as possible.

**Studio:**

- Drawing I
  - (1) course that emphasizes digital media (269 Digital Media and Culture, 270 Collaboration Across the Arts, 260 Photo II, FILM222 Documentary Filmmaking, FILM/MUSIC281 Music Video).
  - (4) studio electives. Students must take courses in 2 different media. Students must have two semesters of study in at least one particular media/area.
  - AAH460 Senior Seminar in Visual Arts, offered each spring semester.

**Art History:**

- Survey of Art History I or 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**

- Drawing I
- Survey of Art History I or II
- 9 upper-level courses, of which at least 4 courses must be in one area and 5 in the other
  - 1 of these courses must be a non-western art history course
  - at least 2 of these 9 courses must be at the 300 or 400 level

**Minor: 6 units**
- Introduction to Studio Art or Drawing I
- Survey of Art History I or 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 AAH 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, except 131 Drawing I

**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. Fulfills the distribution requirement in arts.

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. Fulfills the ART distribution requirement. Also offered through European Studies.

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.

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.

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. Fulfills the diversity and humanities distribution requirements. 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. Fulfills the diversity and humanities distribution requirements. Also offered through African Studies.

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. Fulfills the diversity and humanities distribution requirements. 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. Fulfills the diversity and humanities distribution requirements. 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. Fulfills the diversity distribution requirement. 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.

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.

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 AAH 131 Drawing I, the prerequisite for upper-level studio art courses, as soon as possible.

121. Introduction to Studio Art.
An introductory course that raises fundamental questions about the nature of artistic activity. Students should expect to be engaged in both the process of making art and discussion related to the theoretical basis of such activity. Open to all undergraduates, this course is designed specifically for non-majors. Offered every semester. Registration limited. Fulfills the ART distribution requirement.

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. Prerequisites: AAH 131. Registration limited. Fulfills the ART distribution requirement.

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. Fulfills the ART distribution requirement.
requirement.

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. Prerequisites: AAH 131. Registration limited. Fulfills the ART distribution requirement.

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. Fulfills the ART distribution requirement.

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. Fulfills the diversity distribution credit. 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. Fulfills the ART distribution requirement.

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. Fulfills the ART distribution requirement.

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. Fulfills the ART distribution requirement.

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 include: 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” v. “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. Fulfills the ART distribution requirement.

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. Fulfills the ART distribution requirement.

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. Fulfills the ART distribution requirement.

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. Fulfills the ART distribution requirement.

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 269. Registration limited. Fulfills the ART distribution requirement.

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. Fulfills the ART distribution requirement.

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. Fulfills the ART distribution requirement.

360. Photography III.
Prerequisites: AAH 131, 259, 260. Registration limited. Fulfills the ART distribution requirement.

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
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 Professors** Hou (sociology), Jayman (global studies)

Visit the Asian studies webpage at [www.stlawu.edu/asian-studies](http://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

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AAH 269 by instructor permission only. Prerequisites: AAH 131, 269. Registration limited. Fulfills the ART distribution requirement.

**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.
History/Asian Studies

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 in each of 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.

Government/Asian Studies

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:

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.

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. Asian Politics Course

(1 unit): Majors will take either Chinese Politics (322) or a special topics course on Asia. 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.

Religious Studies/Asian 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. One semester-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 College 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

History
125. Early Asian Civilizations.
106. Modern Asia.

Global Studies

Philosophy
103. Philosophy East and West: An Introduction.
223. Asian Philosophy.

Religious Studies
222. Buddhist Religious Traditions.
224. Islamic Religious Traditions.

Sociology
288. Dilemmas of Development.

Elective Courses

Departmental Offerings
Anthropology
208. Ancient Civilizations.
262. Ancient India.

Art and Art History
212. Icons of Islamic Architecture. (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

Government
105. Comparative Politics.** (East/South Asia).
322. Chinese Politics (East Asia)

History
282. Modern Japan (East Asia).
292. Modern China. (East Asia)
475-476. SYE: Seminar in Asian History. (East Asia).

Modern Languages and Literatures
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.** (South Asia)
244. Musics of South Asia. (South Asia)

Philosophy
103. Philosophy East and West: An Introduction.
223. Asian Philosophy.

Religious Studies
221. Religious Life of India. (South Asia)
222. Buddhist Religious Traditions.
224. Islamic Religious Traditions.
226. The Religious Life of Japan. (East Asia)
227. The Religious Life of China. (East Asia)
450, 451. Directed Studies in Religion.**

Sociology
278. China's Market Transition (East Asia)
288. Dilemmas of Development

**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. Chinese Politics.

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 stlawu.edu/ciis/thailand-chiang-mai.

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:

In biology: General Biology (101 and 102), Genetics (245 or 246), Introduction to Cell Biology (250).

In chemistry: General Chemistry (103 and 104), Organic Chemistry (221 and 222), Biophysical Chemistry (342).

In biochemistry: Biochemistry (309), Research Methods in Biochemistry (394), Research Methods in Molecular Biology (395), Advanced Biochemistry (415), and a senior project following either chemistry or biology department guidelines.

In physics: College Physics (103, 104) or University Physics (151, 152)

In mathematics: Calculus I (135) and Calculus II (136).

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.


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.
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.

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.

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.

Honors Projects. (.5 or 1 unit)
Graduation with honors in biochemistry requires exceptional academic accomplishment as demonstrated by a combination of 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, Erfichman, Hornung, McKnight; Associate Professors Barthelme (co-chair), Dixon (joint appointment with chemistry), Estevez (joint appointment with psychology), Olendzenski, Pai, Schreiber, Temkin (co-chair), Willson; Assistant Professor Heckman; Visiting Assistant Professors Auer, 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-physics. 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 (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.
245. Genetics.
250. Introduction to Cell Biology.
270. Endocrinology.
288. Introduction to Neuroscience.
309. Biochemistry.
333. Immunology with Lab.
387. Cellular Mechanisms of Memory.
388. Drugs and the Brain.
389. Advanced Neuroscience.
415. Advanced Biochemistry.

Ecology and Evolutionary Biology

215. Invertebrate Biology.
218. Ornithology.
221. General Ecology.
227. Mammalogy.
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 modeled based on the federal Public Health Service policy of the Office of Research Integrity (see 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 of 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 guide
lines 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. 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, selected support courses 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 and Denmark programs. However, only two units of biology credit from abroad programs 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. Offered in the fall semester. 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 investiga-
tive 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 and 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. Of-
fered 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. Invertebrate Biology with lab.
This course covers the life histories, ecology, behavior, physiology, morphology,
evolution, relations to humans, and taxonomy of non-vertebrate animals such as
clams, starfish, insects, etc. Emphasis is on aquatic invertebrates from freshwater,
estuarine and marine habitats. A mixture of field and laboratory work trains
students in collection, observation and experimental techniques. 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 environ-
ment, 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 mam-
mal 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 on-
campus 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 offered through Outdoor Stud-
ies. 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 is-
sues 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-ENVS, 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
colorectal and gastrointestinal organisms including bacteria, archaea and protists. Students examine
the metabolic activities and adaptations of these organisms and their interac-
tions 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, anaesthetics, surgical tech-
niques, and proper animal handling and husbandry. The ethical use of animals in
research, appropriate and humane care, and the functions of regulatory agencies
COURSES OF STUDY

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 other spring semester.

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 emphasized. 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; there is thus 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. Offer 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 energetic and the coniferous tree advantage are discussed. Students review local and regional climate data and measure several microhabitats 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 tracks) major.

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.


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 other spring semester.

351. Anatomy and Physiology II with lab.

This course is devoted to the general principles and concepts of animal physiology. Lecture topics include functioning of the neuroskeletal, muscular, respiratory, circulatory, excretory and endocrine systems. Three hours of lecture and one three-hour laboratory every each weeks. Prerequisites: Biology 101, 102 or equivalent. Offered each spring semester. Also counts as an elective for the neuroscience (cellular track) majors.


A seminar course in the evolutionary and ecological approach to understanding animal behavior. Class time is split between lecture and discussion of current primary literature in behavioral ecology. Topics include sexual selection and mating systems, parental care, foraging theory, the evolution of social behavior, cooperation and helping and competition for resources. Prerequisite: Biology 221 or permission of instructor. Offered on a three year basis in the spring semester. Counts toward the neuroscience major (behavioral track). Also fulfills the advanced ecology requirement of the conservation biology 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 high reading load). This class is ideal for junior and senior Biology, Biology-ENVS, and Conservation Biology majors. Prerequisite: Biol 221. Offered each spring semester. Also fulfills the advanced ecology requirement of the conservation biology major.


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.

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

Required Courses
- Four biology courses: 101, 102, 288, 341.
- Four physics courses: 151 or 103, 152 or 104, 221, 222.
- Two additional units chosen from appropriate courses in biology or physics at the 200 level or above.
- Two units of chemistry: 221, 222.
- A senior research project in some area of biophysics, with advisors from both biology and physics.

Recommended Courses
- Chemistry 342
- Mathematics 205

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 http://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 liberally educated individual will bring to bear multiple
perspectives and deploy multiple strategies in solving a wide 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.

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 ACC 204: Managerial Accounting, MATH 113: Statistics, or ECON 200: Quantitative Reasoning, PHIL 202: Reasoning.

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; at least one of these one of these must be in the student’s double-major. (Students double-majoring in Economics and Business in the Liberal Arts may not take their business electives from courses taught in the Economics Department, since three of their core courses are in Economics.) 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, rather than by the program coordinator, as a St. Lawrence course equivalent to count toward the Business in the Liberal Arts major.

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.

Courses that fill this elective include (but are not limited to):

CHEM 306: Environmental Chemistry and Toxicology.
ECON 308: Environmental Economics.
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.

Courses that fill this elective include (but are not limited to):
- Any Modern Languages and Literatures course
- ANTH 225: Peoples and Cultures of Africa
- BIOL 412: Cross-Cultural Perspectives in Healing
- CLAS 104: Survey of Caribbean and Latin American Studies
- ECON 322: International Economics
- GEOG 112: Global Climate
- GOVT 108: International Politics
- GOVT 228: Latin American Politics
- GS 333: Ethics of Global Citizenship
- HIST 205: Nineteenth-Century Europe
- HIST 206: Twentieth-Century Europe
- PHIL 223: Asian Philosophy
- PHIL 232: Africana Philosophy
- PHIL 333: Ethics of Global Citizenship
- REL 226: Religious Life of Japan
- SOC 278: China’s Market in Transition (Also ASIA 278)

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.

Courses that fill this elective include (but are not limited to):
- BIOL 101/102: General Biology
- CHEM 103/104: General Chemistry
- CS 140: Introduction to Computer Programming
- ECON 342: Econometrics
- ECON 344: Mathematical Economics
- MATH 135: Calculus I
- MATH 136: Calculus II
- PHIL 302: Symbolic Logic
- PHYS 103/104: College Physics
- PHYS 151/152: University Physics

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.

Courses that May Fill This Elective Include (but are not limited to):
- ECON 305: Industrial Organization
- ECON 309: Labor Economics
- ECON 336: Economic Development
- GEND 103: Gender and Society
- HIST 263: African-American History to 1865
- HIST 264: African-American History 1865-Present
- PCA 315: Gender and Communication
- PHIL 290: Gender and Feminist Theory
- PHIL 334: Feminist Philosophy
- PSYC 253: Personality
- PSYC 325: Social Psychology
- SOC 112: Inequality
- SOC 221: Sociology of Sex and Gender
- SOC 228: Race and Ethnicity
- SOC 253: Race, Class and Environmental Justice
- PSYC 325: Social Psychology
- SOC 112: Inequality
- SOC 228: Race and Ethnicity
SOC 253: Race, Class and Environmental Justice.

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 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 can (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 pursuing 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* 4 units

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 francophone 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. Senior Seminar: Famous Dead Canadians.
This multidisciplinary seminar examines the lives and historical significance of selected famous Canadians. These vary each time the course is offered. Examples include Sir John A. Macdonald, Louis Riel, Gabriel Dumont, Wilfrid Laurier, Emily Carr, Maurice “The Rocket” Richard, René Lévesque, and Pierre Trudeau. 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.

Prerequisite: permission of program director.

Plus offerings in several departments.

Caribbean and Latin American Studies
Minor offered

Professors Llorente (modern languages and literatures), Stoddard (global studies), White (modern languages and literatures); Associate Professors Bass (Emerita, English), Casanova-Marengo (modern languages and literatures), Chew-Sánchez (global studies), Jennings (history); Assistant Professors Diaz de Leon (modern languages and literatures), McConnell (government), McLane (sociology).


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.

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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.

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-level 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)

English
224. Caribbean Literature in English.

Global Studies
102. Introduction to Global Studies II: Race, Culture, Identity. (When taught by Chew-Sánchez)
206S. Spain and Latin America: Construction of a Common Cultural Space (Spain Program)
250. La Frontera: Cultural Identities on the Mexican-U.S. Borderland.
255. Popular Culture. (When taught by Chew-Sánchez)
260. Transnational Migration. (When taught by Chew-Sánchez)

History
234. Modern Latin America.
256. Slavery and Freedom in the Americas.

Modern Languages and Literatures
Spanish
103, 104. Intermediate Spanish.
201. Advanced Spanish.
221. Latin America in Film.
344S. Survey of Latin American Literature (Spain Program)
444. Survey of Latin American Literature (equivalent to Spanish 344)
446. Oral Expression in Spanish.

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 Professor Hill.

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 com-
merce 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.

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 0.5-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

<table>
<thead>
<tr>
<th>Year</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>General Chemistry (103-104)</td>
</tr>
<tr>
<td>Second</td>
<td>Organic Chemistry (221,222)</td>
</tr>
<tr>
<td></td>
<td>Quantitative Analysis (205) (spring)*</td>
</tr>
<tr>
<td>Third</td>
<td>Quantum Chemistry and Spectroscopy (341)</td>
</tr>
<tr>
<td></td>
<td>Biophysical Chemistry (342)</td>
</tr>
<tr>
<td>Fourth</td>
<td>Advanced Inorganic Chemistry (403) (fall)*</td>
</tr>
<tr>
<td></td>
<td>Instrumental Analysis (452) (spring)*</td>
</tr>
<tr>
<td></td>
<td>Senior Project (489 and/or 490) 0.5 unit each semester</td>
</tr>
</tbody>
</table>

*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 Chem 103-104, Chem 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 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.

**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 also 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
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 FY5.

3000 – 3999. Special Topics in Chemistry.
The content of each course or section of these 100-level 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 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.

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 orbits 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 extremum 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 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 seniors. 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, Torrey; Assistant Professor Lee

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

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 biomechanical engineering, business administration and pure 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 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.
- 256. Data Structures.

**Core Courses (three required)**
- 362. Algorithm Analysis.
- 364. Programming Languages.

**Electives (any two)**
Any 300-level non-core CS course can count as an elective.

**Mathematics Course (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 CS 489 or CS 498. 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 CS 498, 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 Computer Science 140, 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 140. Students who enter with a 4 or 5 on the Advanced Placement AB test will receive credit for Computer Science 140 and 219. 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. Fulfills the distribution requirement in quantitative literacy. 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. Fulfills the distribution requirement in quantitative literacy. 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 C and 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,
COURSES OF STUDY

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. Prerequisite: 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, Associate Professors Barthelmess (coordinator), McKnight, Pai, Olendzenski, Temkin, Willson (all biology).

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

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
Ecology and 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:
D) Statistics 113, Applied Statistics and Global Studies 233, GIS with lab

III. Electives

Students completing the major must take one genetics/evolu-

lution 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 courses fulfill the Genetics/Evolution elective:
Biology 245
Genetics
Biology 343
Evolution and certain special topics courses.

The following courses fulfill the Advanced Ecology elective:
Biology 330
Ecology of Lakes and Rivers with lab
Biology 335
Winter Ecology with lab
Biology 357
Behavioral Ecology
Biology 360
Marine Ecology
Biology 380
Tropical Ecology and certain special topics courses.

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

Anthropology 102, Cultural Anthropology.
Anthropology 255, Environmental Perception and Indigenous Knowledge.
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 require-ment of the major.

Economics
Major and minor offered

Professors Blewett, Horwitz (Chair), Young; Associate Professors Bansak, Chezum, Del Rossi (associate dean), FitzRandolph, Jenkins; Assistant Professors Malikov, Motika Visiting Assistant Professor Cho; Janusch, 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 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.

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.

Students majoring in economics 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

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.

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.

New York State was center stage in the 19th-century transformation of the American economy; and a surprising number of the cast of characters were from northern New York. This course seeks a deeper understanding of American economic development by studying the "North Country" perspective. Novels by Gore Vidal, Irving Bacheller, Samuel Hopkins Adams and Carl Carmer and biographies of Silas Wright, David Parish and John Brown are included in the reading. Seminar format emphasizes discussion and writing. 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.

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.

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, externality, contract law, tort law (accidents), product liability and criminal adjudication are criticized 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-wage 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. Prerequisite: 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.

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.

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 analysis, 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 US economy, and the Great Depression. Emphasis is placed on the role economic theory can play in understanding pivotal events of US history and their relevance for current events. Prerequisites: Economics 251 and 252. Also offered as History 362.

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 http://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.


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)

**Professor** Clark; **Associate Professor** Ladd; **Assistant Professors** Frank, Collins; **Visiting Assistant Professors** Dodd, Oey, Williams; **Visiting Instructors** Boyd, Pitzer.

Visit the education department's webpage at www.stlawu.edu/academics/programs/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, 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 Re-
COURSES OF STUDY

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 (TPA)
   - Educating All Students Test (EAST)
   - 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


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 http://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. Methods, Materials and Literacy Development in the Content Area.
(separate sections for each certificate area)
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 included EDUC 250, EDUC 350 or EDUC 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 of the previous semester. Students intending to student-teach during any spring semester should submit an application to the education department by October 1 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 courses in education.

6. Recommendation by the department of the academic major, verified by communication from the department chair or designee.

(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. A LiveText portfolio evidencing successful completion of field experience requirements in the prerequisite education courses.

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 precertification 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 from the department of education.

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, 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 tool of 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/matching 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.

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. Registration priority to juniors and sophomores intending to enroll in the professional semester.

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...
Students investigate the current theories in classroom organization and behavior to develop successful approaches to classroom management for diverse learners. This course is designed to assist student teachers in the professional semester.

437. Classroom Organization and Management. (0.5 credit)

This course addresses the need for teachers to facilitate the learning of students with special needs in inclusive classroom settings. Attention is paid to research-based educational practice by designing and teaching lessons that apply constructivist learning theory in classroom situations. Pre-requisite: EDUC 270.

405. The Dynamics of School Teaching.

Student teaching seminar.

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. Special workshops in Education 405 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. Prerequisites: Education 250, 350, 450. Enrollment by permission only.

410. Methods, Materials and Literacy Development in the Content Area.

As a part of the professional semester, separate sections of this course are offered in art, English, foreign languages, mathematics, social studies and the sciences. Each section 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 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 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. 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, 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. Registration priority to juniors intending to enroll in the professional semester.

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, Ponce; Assistant Professors Barber, Kittler, Sturges, Vlagopoulos; Visiting Assistant Professor Hurt; Viebranz Visiting Professor Bertram; 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 300 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 300 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.
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 300 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.

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.

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).

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.

220. Introduction to African Literature.
This course introduces students to a wide range of literature, including poetry, plays and fiction, from many parts of Africa. The purpose is to explore the cultural fertility and diversity of literary production to be found on the continent. In addition, students gain insight into topics central to African/Third-World studies, such as reaction and resistance to colonialism, and the forging of complex cultural identities, in a post-colonial culture. Also offered through African Studies.

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, Erena Broodler 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 polities 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.
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.

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, stu-
dents 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.

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, intonation, 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.

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 306,
format emphasizes the revision and editing process. Prerequisite: English 244.

245. 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
will mine autobiography, secondary research and other sources for ideas
that display our deepest feelings about life. As beginning fiction writers, stu-
dents 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.

246. 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
concentrates on the revision and editing process. Prerequisite: English 244.
Also offered as Performance and Communication Arts 306 and through Film
and Representation Studies.

247. 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,
Camus, Aleix. Prerequisite: English 250.

248. 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 opportu-
nities 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.

249. 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,
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 essay 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 English. Includes study of narrative, romantic, spiritual and polemical/poetic 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 text includes 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.

330. **GS: 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 poetical theory and performance theory. Also offered as Performance and Communication Arts 317.

331. **LT: American Romanticism: 1830-1860.**
In this course students will embark on a wild ride through the canon of midnineteenth-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.

332. **LT: American Realism: 1860-1920.**
This course focuses on developments in American literature from the Civil War to the First World War, examining such movements as realism, local colorism and naturalism, and attending to contemporary social issues to which the literature responds: the aftermath of the Civil War and reconstruction, racism, the "woman question," immigration, industrialization and urban poverty, rural life and westward expansion. Readings include works by realists such as Mark Twain, W.D. Howells, Edith Wharton and Stephen Crane, and those by less well-known writers like W.E.B. DuBois, Charles Chesnutt, Rebecca Harding Davis, Abraham Cahan and Kate Chopin. Prerequisite: English 250.

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 was 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.**
A study of the literary response to the taming of the American wilderness. The course focuses on the close association of nature and art in American literature, examining how American writers, in shaping story and poem, have tried to reconcile the processes and values associated with "wilderness" and "civilization." Some attention is given to the historical and cultural backgrounds of the wilderness theme. Writers such as Crevecoeur, Jefferson, Cooper, Thoreau, Melville, Twain, Whitman, Frost, Faulkner, Cathér, Steinbeck, McPhee and Dillard are studied, as well as authors of works not usually taught in surveys of American literature. Prerequisite: English 250. Also offered as Environmental Studies 346, and through Outdoor Studies.


350. GS: Modern British and American Poetry. A survey of modern poems 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. Also offered as Environmental Studies 350, and through Outdoor Studies.

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.

353. AT: Time and Self in Modernist British Fiction. This course focuses on an era of radical change and experimentation in fictional narrative, during which new ideas in psychology, philosophy, and science accompanied the development of new fictional techniques designed to explore and revise how time and identity might be represented. Readings are largely In British fiction from 1900 to 1950. Prerequisite: English 250. Also offered through European Studies.


355. LT: Contemporary British Novel. This course focuses on the post-World War II British novel. Authors studied have included: Julian Barnes, A.S. Byatt, Angela Carter, John Fowles, William Golding, Kazuo Ishiguro, Doris Lessing, Ian McEwan, Iris Murdoch, V.S. Naipaul, Salman Rushdie, Zadie Smith, and Jeanette Winterson. Prerequisite: English 250. Also offered through European Studies.

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 postcolonialism 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; national identity. 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.


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.

367. AT: 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 postcolonial studies. Literature and film are used in dialog with theoretical texts to examine questions about gender and women's issues in various societies. Prerequisite: English 250. Also offered as Gender and Sexuality Studies 367, Global Studies 367 and Philosophy 367.

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 (Dory, Olds, Addonizio, Young, Armstrong, Wright, Muldoon). While a great deal of attention is given to primary texts, poetic theory and social history are
Environmental Studies

Major and interdisciplinary majors offered

**Professors** Harris, 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), Barthelmess (biology), Buck (government), Desmond (religious studies), Gao (chemistry), Hussmann (English), McLane, (sociology), O’Donoghue (physics), Pai (biology), Skeels (chemistry), Willson (biology); Assistant Professor Milani (economics), Stewart (geology); Visiting Professors Gifford (geology).

Visit the environmental studies department webpage at [www.stlawu.edu/environmental-studies](http://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 these advanced special topics courses varies, and is announced when the Class Schedule is published prior to registration.


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.
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 and 335 in their sixth or seventh semester. 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 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

(from dual-listed course options)

Social Science/Humanities Course 1 unit

(from dual-listed course options)

Electives* 3 units

Total 11 units

Possible Environmental Studies Course Tracks within the Interdisci-
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, 321. Land-Use Planning and Sustainable Design, 327. Topics in Environmental Sustainability. 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; and 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. 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:


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 must include two 300- or 400-level courses. No more than one course designated as "major credit restricted" can be used as an elective under biology. 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 and Toxicology. 1 unit
341. Quantum Chemistry and Spectroscopy, or 1 unit
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
200. Quantitative Methods in Economics. 1.5 units
251. Intermediate Microeconomic Theory. 1 unit
252. Intermediate Macroeconomic Theory. 1 unit
308. Environmental Economics, or 1 unit
384. Natural Resource Economics. 1 unit
Electives*  3 units
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. Economics 108 cannot be counted as an elective.

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
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.
A relevant special topics seminar or independent study in literature.
   4. At least one dual-listed English/environmental studies course:
      4 units
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 with lab. 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 1 unit
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 geol-
### Environmental Studies - Government

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>Interdisciplinary Major Core (listed above)</td>
<td>7</td>
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<tr>
<td>Government</td>
<td></td>
</tr>
<tr>
<td>103. Introduction to American Politics.*</td>
<td>1</td>
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<tr>
<td>105. Introduction to Comparative Politics.*</td>
<td>1</td>
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<tr>
<td>108. Introduction to International Politics*</td>
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<td>or 206. Introduction to Political Theory.</td>
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<td>290, 291, 292, or 293. Research Seminar.</td>
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<tr>
<td>343. Ecology and Political Thought.</td>
<td>1</td>
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<tr>
<td>Electives**</td>
<td>2</td>
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<td>Total</td>
<td>14</td>
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*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

<table>
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<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>Interdisciplinary Major Core (listed above)</td>
<td>7</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
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<tr>
<td>135. Calculus I</td>
<td>1</td>
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<tr>
<td>136. Calculus II</td>
<td>1</td>
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<tr>
<td>205. Multivariate Calculus.</td>
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<td>113. Applied Statistics.</td>
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<td>213. Applied Regression Analysis</td>
<td>1</td>
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<td>230. Differential Equations</td>
<td>1</td>
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<td>350. Mathematical Modeling</td>
<td>1</td>
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<tr>
<td>Mathematics elective</td>
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### Environmental Studies–Philosophy

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<td>Interdisciplinary Major Core (listed above)</td>
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<tr>
<td>Philosophy</td>
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<tr>
<td>201. Ancient Philosophy.</td>
<td>1</td>
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<tr>
<td>202. Reasoning.</td>
<td>1</td>
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<tr>
<td>203. Ethical Theory.</td>
<td>1</td>
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<tr>
<td>206. Introduction to Political Theory.</td>
<td>1</td>
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<tr>
<td>208. Modern Philosophy.</td>
<td>1</td>
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<tr>
<td>310. Philosophy of the Environment.</td>
<td>1</td>
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<tr>
<td>Electives*</td>
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<td>Total</td>
<td>15</td>
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*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

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<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interdisciplinary Major Core (listed above)</td>
<td>7</td>
</tr>
<tr>
<td>Psychology</td>
<td></td>
</tr>
<tr>
<td>100. Introductory Psychology. or</td>
<td>1</td>
</tr>
<tr>
<td>101. Introductory Psychology (with lab).</td>
<td></td>
</tr>
<tr>
<td>205. Research Methods in Psychology.</td>
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</tr>
<tr>
<td>318. Environmental Psychology.</td>
<td>1.25</td>
</tr>
<tr>
<td>Electives*</td>
<td>5.25</td>
</tr>
<tr>
<td>Total</td>
<td>15.5</td>
</tr>
</tbody>
</table>

*Electives must include two courses from the biological/acquisition processes list, one from the developmental/social processes list and one from the applied areas list (see the psychology section of this Catalog). One additional course (beyond 205 and 318) must be taken for lab credit. Note: Statistics 113 must be taken prior to or concurrently with Psych 205.

### Environmental Studies—Sociology

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>Interdisciplinary Major Core (listed above)</td>
<td>7</td>
</tr>
<tr>
<td>Sociology</td>
<td></td>
</tr>
<tr>
<td>110. Global Problems. or</td>
<td></td>
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<tr>
<td>112. Inequality. or</td>
<td></td>
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<tr>
<td>161. Social Problems and Policy. or</td>
<td></td>
</tr>
<tr>
<td>187. Environment and Society.</td>
<td>1</td>
</tr>
<tr>
<td>Other courses may be considered, in consultation with the department chair.</td>
<td></td>
</tr>
<tr>
<td>Two socio-environmental dynamics courses</td>
<td>2</td>
</tr>
<tr>
<td>235. Earning a Living.</td>
<td></td>
</tr>
<tr>
<td>253. Race, Class, and Environmental Justice.</td>
<td></td>
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<tr>
<td>257. Environmental Problems.</td>
<td></td>
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<tr>
<td>278. China’s Market Transition</td>
<td></td>
</tr>
<tr>
<td>288. Dilemmas of Development.</td>
<td></td>
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<tr>
<td>377. Sociology of Consumption.</td>
<td>2</td>
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<tr>
<td>Other courses may be considered, in consultation with the department chair.</td>
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</tr>
<tr>
<td>Two electives in sociology</td>
<td>2</td>
</tr>
<tr>
<td>Capstone: one additional 300/400 socio-environmental dynamics course with research component.</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
</tr>
</tbody>
</table>

*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

The environmental studies department cares for and utilizes an approximately 100-acre parcel of University land that encompasses farmland, wetlands, woods, a barn and farm- house 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. Physics 107 has a lab component and fulfills the natural science with lab distribution requirement; 105 is taught in a lecture format with shorter integrated lab activities and fulfills the natural science distribution requirement. One of these courses is typically offered every other year. Also offered as Physics 105, 107.

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. Also offered as Economics 108.

110. Environmental Geology.

This course relates geology, the science of the Earth, to human activities and emphasizes the importance of geology in environmental affairs. Important geologic concepts and fundamental principles necessary to unite the cultural and physical environments are discussed. Topics include natural geologic hazards and interaction between people and the environment, including human modification of nature, geologic resources and energy. May not be taken following or in conjunction with Geology 103. Also offered as Geology 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 team-taught studio lab course satisfying the natural science distribution requirement. Also offered as Geology 112 and Physics 112 and through Global Studies.


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 core-periphery. The course employs local examples through discussion and field trips. Prerequisite: Environmental Studies 101. Also offered as Outdoor Studies 203.

204. Population Ecology. (3.0 units)
This introductory course deals with the role of populations in the dynamics of species, communities and ecosystems. It emphasizes characteristics of local communities or specific techniques such as 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 permission of instructor. Also offered as Biology 221 and through Outdoor Studies.

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, titrimation, 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, with variations, as Chemistry 205.

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 early-morning bird-watching sessions. 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 landscape-shaping processes into a comprehensive investigation of the dynamic landscape system including glaciation, hills, rivers, mountains and plains. Prerequisite: Environmental Studies 101. 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 biological 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 United States. 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 our economy and politics and the processes that have 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 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
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 examine 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.
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). 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. Prerequisite: Environmental Studies 101. Also offered as English 293.

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. 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. A laboratory program accompanies the lecture. Prerequisites: Environmental Studies 101 and Chemistry 221 or permission of instructor. Also offered as Chemistry 306.

310. Philosophy of the Environment.
Our current environmental problems are due primarily to the total volume of human consumption. This course focuses on the problem of high consumption in developed countries and possible solutions for it. Is this high consumption necessary for our happiness, or could we be just as happy while doing less damage to the natural world? If we could, as many environmentalists argue, why do so few of us live as though we truly believe it? Is it possible to consume less, either as individuals or as a society? What kinds of changes are feasible in society to reduce our damage to the natural world? The course offers a theory of happiness intended to make it possible to answer these questions. Prerequisite: Environmental Studies 101. Also offered as Philosophy 310 and Outdoor Studies.

318. Environmental Psychology.
COURSES OF STUDY

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 reflexive exercises. Prerequisite: Environmental Studies 101.

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. A study of the literary response to the taming of the American wilderness. The course focuses on the close association of nature and art in American literature, examining how American writers, in shaping story and poem, have tried to reconcile the processes and values associated with “wilderness” and “civilization.” Some attention is given to the historical and cultural backgrounds of the wilderness theme. Writers such as Crevecoeur, Jefferson, Cooper, Thoreau, Melville, Twain, Whitman, Jewett, Frost, Faulkner, Carver, Steinbeck, McPhee and Dillard are studied, as well as authors of works not usually taught in surveys of American literature. Prerequisites: English 250 and one other 200-level English course. Also offered as English 346 and through Outdoor Studies.

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 domination? 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.

363. Tourism and the Environment. (ESP) Tourism is often promoted as a sustainable way for communities to capitalize on natural environments without the impacts of extractive industries. Although no trees are logged or mines are dug, tourism permanently alters the social fabric and natural landscapes of communities that embrace it. This course critically examines tourism and its effects on the environment and local cultures. The extensive literature on this topic is examined from managerial, industry and participant perspectives. Examples are drawn from the United States and internationally, with a special emphasis on the practice and management of ecotourism. Prerequisite: Environmental Studies 101.

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. Prerequisite: Environmental Studies 101. Also offered as Environmental Studies 101 and permission of instructor.
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.

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. Prerequisites: Environmental Studies 101 and 221. Also offered as Biology 380 and through Global Studies and Outdoor Studies.

384. Natural Resource Economics.
This course complements Economics 308 (Environmental Economics). Standard economic approaches to problems of 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 coping with natural resource scarcity. Specific topics include economics and population growth, economics and environmental ethics, ecological economics and sustainability, biodiversity and water resources. Prerequisites: Environmental Studies 101, Economics 200 and 251 or permission of instructor. Also offered as Economics 384.

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.

421. SYE: Directed Readings.
Directed study for an individual or small group of students, based on an in-depth exploration of the literature. The topic is usually an extension of normal offerings in the curriculum. Prerequisites: senior standing and permission of instructor.

451. SYE: Senior Internship.
Student-arranged study with an environmental organization. The internship comprises three parts: contact with daily operations; intensive work on a particular project; and extensive reading in appropriate areas with a paper. 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: senior standing and permission of instructor.

461. SYE: Research Seminar.
Faculty-directed research designed for small groups of advanced students. The focus often is on environmental problems of northern New York. Topics for the course are often 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: senior standing and permission of instructor.

489,490. SYE: Senior Research.
Special research designed by senior students on an individual basis with the faculty sponsor. Specific topic is a more detailed study of some interdisciplinary environmental problem in which the student as background from prior coursework. Prerequisites: senior standing and permission of instructor.

498,499. SYE: Honors Project.
Special research undertaken by senior students on an individual basis. The specific topic is a detailed study of some interdisciplinary problem in which student has undertaken prior coursework and study. The project is usually undertaken in the fall semester of the senior year as an honors thesis. Eligibility requires a minimum GPA of 3.5, submission of a written proposal in the junior year and approval by the lead mentor and core faculty of environmental studies. The lead mentor for the project may be either in the core faculty or an environmental studies dual-listed faculty member. At least one reader must be from the environmental studies core faculty. Prerequisites: senior standing and permission of instructor.
European Studies
Minor offered

Advisory Board: Professors Limouze (art and art history), Llorente (modern languages and literatures); Associate Professors Breashears (English), Denaci (art and art history), DeGroat (history), Gabriel (coordinator; history), Jenkins (economics), Salvi (modern languages and literatures); Assistant Professors Buck (government).

Visit the European studies webpage by linking directly to it from the Majors and Programs page at www.stlawu.edu.

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 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.

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.

English
225, 226. Survey of English Literature.
228. Irish Literature.
319, 320. Shakespeare.*
324. Elizabethan and Jacobean Drama.*
325. Eighteenth-Century English Literature.
328. English Romanticism.
340. The Victorian Novel.
353. Time and Self in Modern British Fiction.

*Dual-listed with Performance and Communication Arts.

Government
206. Introduction to Political Theory.*
330. Politics and Governments of Western Europe.
*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.*
471-472. SYE: Seminars in European History.
*Dual-listed with Physics; **dual-listed with Religious Studies.

Modern Languages and Literatures

French
201. Advanced French.
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.
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), 251 (History of the Cinema) and 311 (Film Theory) and three electives offered 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 historical and social definitions of normality and seeing otherwise, whether that is manifested in photography; the beginnings of narrative cinema; special effects; new camera technologies epitomized by the Internet. It likewise focuses on the historical evolution of two other closely related fields—advertising and public relations.

**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.

**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—advertising and public relations. Also offered as PCA 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 ENG 244 and PCA 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, cybertexture, 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 GS 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 Australian), 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(in)is; themes; ethnicity and immigration; revising history and national identity to include Aboriginal peoples; and the emergence of a global postmodern cinema. Also offered as GS 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, morbidity, contemporary art discourse, visual culture, entertainment, identity and other forms of social effects/effects. 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 Barkness Method of student-centered discussion and inquiry to help students learn to think critically, listen analytically, and interact respectfully. Also offered as AAS 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 disavowed 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 GNDR 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-structuralist, feminist theory and emerging work in postcolonial and global 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 cultural studies as a means of understanding contemporary Spanish culture. Materials include cartoons, posters, film trailers, newspapers, graffiti, popular music and other media products. Also offered as SPAN 439.

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 PCA 306 and ENG 306.

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.

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 GS 340 and PCA 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 AAH 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. Also offered as FR 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 SPAN 439.

Gender and Sexuality Studies
Minor offered

Professors Egan (Coordinator), Lehr (government; dean of academic affairs); Associate Professor DeGroat (history); Assistant Professor Hornsby-Minor; Advisory Board: Professor Stoddard (global studies); Associate Professors Bass (English), Llorente (modern languages), Denaci (fine arts), Fordham-Hernandez (performance and communication arts); Visiting Instructor Zhafr.

Visit the gender and sexuality studies webpage by linking directly to it from the Majors and Programs page at www.stlawu.edu.

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 con-
structured, 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**

Students are required to take at least one of the following courses:

1. GNDR 103 (Gender and Society) or GNDR 201 (Gender in a Global Perspective) or GNDR 280 (Sexuality, Society and Culture)

As well as:

2. GNDR 290 (Gender and Feminist Theory)

And a methods course or an additional upper-division theory course:

3. 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)

**Praxis requirement:**

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. 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 (the 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.

The off-campus requirement can be met by the following: 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.

**Electives**

5. 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.


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.

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 (chair), Erickson (emeritus); Associate Professors Bursnall (emeritus), Husinec, Shrsdy; Assistant Professors Nagel-Myers, Stewart; Visiting Professor Gifford.
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 includes six geology courses, two cognates, and 7 units in environmental studies (15.25 units total) as follows:

103. Dynamic Earth
211. Geomorphology
216. Sedimentology
319. Hydrology and Hydrogeology
362. Geochemistry

Geology Elective (1) at the 200 or 300 level
103. Chemistry
135. Calculus

Environmental Studies Core (7 Units)

For specifics on the Environmental Studies core, see the Environmental Studies section of this Catalog.

Required Cognates

Geology majors are required to take at least one semester of the following courses: 1) chemistry (103); 2) calculus (Math 135); and 3) either physics (151) or biology (101).

As noted above, Environmental Studies-Geology majors are required to take at least one semester of the following courses: 1) chemistry (103); and 2) calculus (Math 135).

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 Geology 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 Geology 110 (Environmental Geology) and Geology 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: 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. Combinations 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)
This course relates geology, the science of the Earth, to human activities and emphasizes the importance of geology in environmental affairs. Important geologic concepts and fundamental principles necessary to unite the cultural and physical environments are discussed. Topics include natural geologic hazards and interaction between people and the environment, including human modification of nature, geologic resources and energy. 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. Roadsides and Rivercuits: North Country Landscapes through Geological Field Trips (Special Summer Program)

This special, field-intensive geology course will help you understand and appreciate the geographical 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. 2 units.

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.

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 post-depositional 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 circulating. (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 samples. 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.
Micropaleontolgy 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 and destructive 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.

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 200or 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.

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; some courses are taken in other departments, depending upon choices students make:

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 with GS designation – one at the 200 level and one at the 300 – 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:
   • Comparative area studies: complete three courses in each of two geographic or cultural areas; and one semester of a second language: or
   • One-area intense study: complete four courses in one geographic or cultural area and three semesters of a second language related to their area concentration; or
   • Area and thematic study: complete three courses in one geographic or cultural area, and three 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

Minor Requirements

The global studies minor consists of six courses: Global Studies 101, 102, either 301 or 302, two 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 historical 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 idea 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. Cities are not just the outcome but also the agents of globalization.

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, gender, inequalities, human rights discourse, fundamentalism, and social movements. Also may be counted toward the minor in Asian Studies.

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. It 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. 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 borderland residents through historical and critical approaches to the cultural expressions of music, images or other forms of discourse that have served as mechanisms to mediate the contradictions arising out of the border. 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, 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 CLAS 255.

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 transformations 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.
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.


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.

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.


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.

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.


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.

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.


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.


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, a new age healer, 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, Kling. Associate Professors Buck, Huang (chair), Olesker; Assistant Professors McConnell, McKie, Morrisroe; Visiting Assistant Professor Oliver, Vidange.

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 openness-mindedness 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

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

03. 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.

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.

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 relationship 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 whistle-blowing, and the roles that public policy should—or should not play.
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.

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.

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.

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.

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 350 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 examines how 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.

351. African-American Political and Social Thought. This course will offer a broad-based survey of African-American social and political thought. Its focus will be on the theme of duality: what it means for a culture and a people to be both integral to and excluded from the larger society of which they are a part. It will examine the variety of ways African-American thinkers have confronted this duality and how they have asserted the dignity and autonomy of their people in the context of a social order historically structured to deny them their full humanity. The course will include such African-American thinkers and writers as David Walker, Frederick Douglass, Ida B. Wells, Booker T. Washington, W.E.B. DuBois, Richard Wright, James Baldwin, Audre Lorde and Toni Morrison.

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.

333. Model OAS. Model OAS is an experiential learning course through which students explore how intergovernmental organizations engage in global governance. Participants study how the Organization of American States (OAS) helps coordinate policies related to democracy, development and security in the Western Hemisphere. Students in the course travel to Washington, DC to role-play as diplomats in a mock OAS General Assembly meeting. In preparation, they study the history and politics of the country they represent. The half-credit course will convene for the first eleven weeks of the term, and may be repeated. Enrollment is by permission of the instructor. Limit of 10 students. Also offered as CLAS 333.

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 to 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. Prerequisites: 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.

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.

377. Global Cyber Politics (Online/Hybrid)
This course introduces students to global political dimension emerging from the use of the internet and cyberspace as a medium and site for politics. Students will be introduced to how states are attempting to rework their foreign policy initiatives, security policy and political communication as a response to transformations in cyberspace. The course also will look at how both state and non-state actors compete for political authority and control of information as it is a new form of power that affects both global and local policy making. The course will look at how our understanding and workings of political activism, political power, social and geopolitical conflicts and global security have to be reimagined in a connected world.

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 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 Rogosin; Associate Professors Alvah, Carotenuto, Csete, DeGroat, Gabriel (chair), Jennings, Schrens, Smith; Assistant Professors Eissenstat, Ponce-Vázquez (Visiting); 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.
COURSES OF STUDY

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, particularly focusing 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 don't 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.

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 Quebec 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.

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 whose history of Native peoples’ reactive adaptations to historical change. Also offered through Native American Studies and Peace Studies.


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 scope extends 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.

244. Twentieth-Century U.S. Foreign Policy.

A history of the development and prosecution of American foreign policy following the emergence of the United States as a world power. Particular attention is focused on the effort to rationalize traditional democratic ideals with the expanding role of the United States as an imperialist world power. Much of the latter half of the course is devoted to an examination of the causes and consequences of the rivalry between the United States and the USSR and the post-Cold War era. History 243 or 104 is recommended but not required. Also offered through Peace Studies.

246. The Cold War.

The United States and the Soviet Union were the rival superpowers in the Cold War.
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.

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.

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-Semitism 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 ulama, 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.
COURSES OF 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.

300-3999. 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 and European Studies.

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.

319. The Nuclear World.
Are nuclear weapons fundamentally different from conventional weapons? If they are, how did we allow them to become such a central part of our political world? In this course we examine the confluence of history and science that led from the discovery of nuclear fusion to the first atomic weapons and beyond, to issues of use and control of nuclear materials today. To help us understand some of the complexities of the nuclear world, we will study and discuss both the scientific and the historical sides of the issue through scholarly accounts, primary documents, biography, fiction, and film. Also offered as Physics 319 and through Peace 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?

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
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.

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.

In this course we examine the relationships 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.

377. Colloquium in Asian History.
Topics vary; consult the semester course schedule for current offerings. Also offered as Economics 362.

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.

The last two centuries have seen mass violence on a scale unprecedented in human history. Among the most horrifying forms of this violence took 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.

471-481. 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.

474-475. SYE: Seminars in American History.
Also offered through American Studies.

476-477. SYE: Seminars in Asian History.
Also offered through Asian Studies.

478. SYE: Seminar in Comparative History.

480. SYE: Seminar in African History.
From political strife to economic and social challenges, contemporary African issues 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.

COURSES OF STUDY

See the description of the history honors program in the history department’s online Majors/Minors Handbook: handbook-2013-2014. Students should consult the department chair for further details.

Intercollegiate Athletics and Recreation
Minor offered in Sports Studies and Exercise Science

*Associate Professor* Robert Durocher (Director of Athletics; 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 Lifeguarding 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

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<tr>
<th>Economics</th>
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<tbody>
<tr>
<td>100. Introduction to Economics.</td>
<td>1 unit</td>
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<tr>
<td>200. Quantitative Methods in Economics.</td>
<td>1.5 unit</td>
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<tr>
<td>251. Intermediate Microeconomics Theory.</td>
<td>1 unit</td>
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<tr>
<td>252. Intermediate Macroeconomics Theory.</td>
<td>1 unit</td>
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<tr>
<td>THREE electives in Economics</td>
<td>3 units</td>
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<tr>
<td>At least two of these electives at the 300/400 level.</td>
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<td>At least two of these electives must include:</td>
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</tr>
<tr>
<td>322. International Economics.</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7 units</td>
</tr>
</tbody>
</table>

Requirements for the International Economics and French Major

<table>
<thead>
<tr>
<th>Economics</th>
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<tbody>
<tr>
<td>Requirements from above</td>
<td>7.5 units</td>
</tr>
<tr>
<td>Modern Languages – French</td>
<td></td>
</tr>
<tr>
<td>SEVEN units at the 103 or higher level</td>
<td>7 units</td>
</tr>
<tr>
<td>Total</td>
<td>14.5 units</td>
</tr>
</tbody>
</table>

Requirements for the International Economics and German Major

*major not available to students who matriculated after 2010*

<table>
<thead>
<tr>
<th>Economics</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Requirements from above</td>
<td>7.5 units</td>
</tr>
<tr>
<td>Modern Languages – German</td>
<td></td>
</tr>
</tbody>
</table>
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

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 or above the 200-level, or
THREE courses in German at or above the level of 103, or
THREE courses in Spanish at or above the 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, R. Lock, Melville; Associate Professors Bos, Chapman, Giarrusso, Harcourt, Look (chair), Ramler, Schuckers, Torrey; Assistant Professors, Komarov, Lee.

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

The department of mathematics, computer science and statistics 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 ap-
plied 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.

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 a 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.

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 educational 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 taken the AP course, students receiving a grade of 4 or 5 on the BC 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

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 develop and prove the 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.

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.

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.

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 205. Offered as interest warrants.

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.

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 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), Llortente, White; Associate Professors Casanova-Marengo (co-chair), Ceete, Salvi, Stipa, Zhang; Assistant Professors Breault, Diaz de León (visiting), Fotova (visiting), Giardino (visiting), Morris (visiting); Instructors Atsiaya, El Khoury, Rhodes-Crowell (visiting)

Visit the modern languages and literatures webpage at www.stlaw.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 equips 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 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 Quebec 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, spring), three courses (semester program, fall) or five courses (year program) toward the Francophone studies minor.

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
- Arabic 103, 104 - Intermediate Arabic
- Arabic 201 - Advanced Arabic
- Arabic 489, 490 SYE - Independent study
- Global Studies 350 - Global Palestine
- Government 290 - Israeli-Palestinian Conflict
- Government 331 - Politics of the Middle East
- History 160 - The Islamic World
- HIST 379. Colloquium in Middle Eastern History.
- HIST 368. Palestine and the Arab-Israeli Conflict
- Religious studies 224 - Islamic Religious Traditions.

Chinese Studies (minor)
Students are required to take six courses, four language courses and two Asian Studies courses.

Two of the four language courses must be taken on campus. If Chinese is also part of a Multi-language major, students are required to take two additional classes for the minor in Chinese Studies.

Study on the St. Lawrence Shanghai semester is strongly encouraged for the minor.

Courses:
- Chinese 101, 102 Elementary Chinese
- Chinese 103, 104 Intermediate Chinese
- Chinese 201, 202 Advanced Chinese
- Chinese 489, 490 SYE Independent Study
- Ltrn/Asia 232 Cultures of China
- Ltrn /Asia 234 Chinese Literature and Film
- Govt 293 (when offered on topics about China)
- Govt 322 Chinese Politics
- Hist 105 Early Asian Civilizations
- Hist 106 Modern Asia
- Hist 292 Modern China
- Phil 223 Asian Philosophy
- Rel 223 Religious Life of China
- Soc 278 China’s Market Transition

German Studies (minor)
Requirements for students matriculating in the fall semester 2015:

Students minoring in German Studies are required to complete up to a total of six units from 101 through 202; if they wish, they may replace GER202 with either GER247/8, or GER219 (both taught in English) when these are offered by the department; if neither is offered during a given year, students may select a course from another discipline from the list of approved courses attached below. Students minoring in German are also strongly encouraged to spend one semester in Germany or Austria to complete their minor requirements, or alternatively to take the courses appropriate to their level through 202 along with GER219 or GER247/8 and complete the minor with independent studies. Students participating in the Vienna program may earn up to two, and those in the ISEP or a similar program up to three credits towards the completion of the minor.

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.

Requirements for students who matriculated before 2015:

Students minoring in German Studies are required to complete a total of six units, beginning with German 101. A minimum of four units must come from the basic (101 and 102), intermediate (103 and 104) or advanced (201
and 202) German courses and two may come from general culture courses taught in English (list of approved courses attached below). Students participating in the Vienna program may count the language course as well as two general culture courses toward the completion of the minor. Those who do not study in Vienna may select two general culture courses from the list below in order to complete the minor.

AP Credit: students who have earned a 4 on the AP exam will receive credit for German 101; those who have earned a 5 will receive credit for German 101 and German 102.

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
• Italian 103, 104 - Intermediate Italian I & II
• Italian 489, 490 SYE - Independent study
• AAH 116 Survey of Art I
• AAH 117: Survey of Art History II
• AAH 202: Art of the Italian Renaissance
• AAH 204: Baroque and Rococo Art
• AAH 4401: Baroque and Modern Architecture
• MUS 234: Music in Venice
• PCA 312: The Public Sphere of Renaissance Venice
• REL 102: Religion and Science
• REL 206: Introduction to The New Testament
• REL 227: Religion in Ancient Greece and Rome

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.

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 as a Second Language (no major or minor)

All courses denoted with an ESL designation require instructor permission and 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 ESL courses. Courses with a Lang designation are for native or near native English speakers interested in teaching English to speakers of other languages and do not require instructor permission.

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. 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
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.

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. Also offered through African Studies.

102. Elementary Arabic.

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. Also offered through African Studies.

103. Intermediate Arabic.

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.

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 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 which 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.

This is a two-semester sequence providing an introduction to the speaking, reading, writing and oral comprehension of modern Mandarin Chinese. Films. 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.


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.

LANG 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 which complement the textbook and VirtuaLab 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.

English as a second language

ESL 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.


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 both the written and spoken form 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. Students will also have the opportunity for additional language support during individual meetings with a conversation partner tutor. 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 inter-cultural 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.

4000-4999. Special Topics.

Designed for students interested in the field of TESOL (Teaching English to Speakers of Other Languages), special topics courses offer the opportunity to study specific areas of English language pedagogy. The most recent course was titled Critical Aspects of Teaching English as a Second Language. The content of each course or section of these 300-400 level special topics courses varies and will be announced each semester.

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. 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.


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.


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.


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 Île 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 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 which complement the textbook and VirtuaLab 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 socio-political 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, Djibar 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.
At the elementary level of the language courses sequence (GER 101 in the fall and 102 in the spring), the 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 different 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.
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 Courses (taught in English):

GER 219:

Turn of the Century Vienna: City of Waltz and Psychoanalysis (offered either in the fall or in the spring) is an interdisciplinary course taught in English 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. The course is also offered through European Studies.

GER/LTRN 3000-3999 Special Topics.

For example, Where Does Europe Begin and End? (offered either in the fall or in the spring). This is an interdisciplinary course taught in English, which investigates the plurality and mobility of European identities with the help of fictional works (literature and performing arts), essays, and texts in history and cultural studies and challenges the traditional perspective of one European cultural identity as a sum of common cultural values created through common history. The fictional journey in time and space to the former border between the Habsburg and Ottoman Empires, which shaped the dominant cultural patterns of Central Europe and the Balkans, helps us reexamine the imaginary, cultural, and political borders between the Balkans and Central Europe and question the border between Europe and “non-Europe.” The course is also offered through European Studies

LANG 350. Teaching Languages.

This course is designed to help students develop competency in language instruction. It 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 which complement the textbook and Virtual Lab 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 it is cross-listed in 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 Catalogue.

List of courses from other departments approved for the German minor

111
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

101, 102. Elementary Italian.
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 compositions. Materials in class and in the language laboratory facilitate students’ exposure to the various aspects of contemporary Italy and give them insight into its culture and social structures.

LANG 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 which complement the textbook and VirtuaLab 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, audiocassettes 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.

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.
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 200 or 400-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 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 which complement the textbook and language laboratory 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 at any level above Spanish 211 and 213, these courses at the 300-level or 400-level offer the opportunity to study specific topics in the Spanish language or Hispanic culture. Examples include Latinos in the United States; post-Franco Spanish society in film; Latin American women writers; Afrohispanic culture and literature; the representation of the Amerindian in contemporary Hispanic American literature; and the study of specific authors such as Pablo Neruda or Carmen Martín Gaite. A recent example includes:

Taller de Literatura Creativa (Creative Writing Workshop)

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 US. Toward the end of the semester, students work collectively to edit material and to produce the online cultural journal Aquí y Allá.

The content of each course or section varies and will be announced each semester. Also offered through Caribbean and Latin American Studies.
Federico García Lorca and Carmen Martín Gaite. 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 Contempo-
rary 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 sociohistorical 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.


In this workshop, students use translation as a tool to learn how to express themselves more effectively in both English and Spanish. Theories such as Octavio Paz, José Ortega y Gasset, Willis Barnstone, Carol Maier, Walter Benjamin, Tejaswini Niranjan and others help illuminate the practice of translation in a variety of genres that include poetry, autobi-
ography, 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. Crosslisted 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 considere 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.

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 Gaite, 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 which 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.


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.

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 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 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 http://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 http://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.

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.

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.

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 have often 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 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


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), Schremes (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.slu.edu.

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 Performance and Communication Arts 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 the each semester under both Native American Requirements...
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**
- 229. Introduction to Native American History.
- 333. The Age of the American Revolution.

**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](http://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**
- 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:
  - 392. Research Methods in Fluorescence and Confocal Microscopy
  - 395. Research Methods in Molecular Biology

Plus three courses from:

**Biology**
- 250. Introduction to Cell Biology.
- 270. Endocrinology.
- 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.
- 399. Current Topics in Neuroscience.
489/490. Senior Year Experience (SYE) (1 unit)

Behavioral Neuroscience Track
Psychology
205. Research Methods in Psychology.

Plus three courses from:

Biology
270. Endocrinology.
341. Anatomy and Physiology I.
351. Anatomy and Physiology II.
388. Drugs and the Brain.
399. Current Topics in Neuroscience.

Psychology
205. Research Methods in Psychology.
327. Sensation and Perception.
402. Memory and Cognition.
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)

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.
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 biochemical 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 Psych 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 Shrady (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
ODST 101, Modern Outdoor Recreation Ethics
ODST 115, Introduction to Snow Science and Avalanches
ODST 3003, Advanced Topics: Outdoor Leadership

Field Science
Biol 121, The Natural World.
Biol 209, Vertebrate Natural History.
Biol 215, Invertebrate Biology.
Biol 218, Ornithology
Biol 221, General Ecology.*
Biol 227, Mammalogy.
Biol 224, Ecology of Vascular Plants
Biol 258, Ethnobotany
Biol 325, Mycology.
Biol 330, Ecology of Lakes and Rivers
Biol 335, Winter Ecology
Biol 360, Marine Ecology.
Biol 380, Tropical Ecology.*
Biol 440, Conservation Biology

*Dual-listed with Environmental Studies.

Geol 103, The Dynamic Earth
Geol 211, Geomorphology
Geol 216, Sedimentology
Geol 320, Regional Field Studies
Geol 350, Structural Geology.
Phys101/102, Introduction to Astronomy
Envs 326, Once and Future Forests

Philosophy/Literature/Environmental Studies/Arts
Eng 243, Creative Non-Fiction Writing.*
Eng 295, Nature and Environmental Writing.*
Eng 308, Advanced Creative Non-Fiction Writing.*
Eng 328, English Romanticism.
Eng 346, American Literature and the Environment.*
Eng 352, Contemporary Literature and the Environment.*

*Dual-listed with Environmental Studies.

*Only sections including experiences in nature satisfy this requirement.

Envs 249, Outdoor Recreation and Public Land
Envs 310, Philosophy of the Environment.*
Envs 343, Ecology and Political Thought
Rel 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.


(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.
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. Pre-requisite: 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.

Art and Art History

Asian Studies
106. Modern Asia (also offered as History 106).
125. Early East Asian Civilization (also offered as History 105).
210. Music 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
224. 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).
357. Torture, Truth, Memory (also offered as Government 337).

Economics
100. Introduction to Economics.
234. Comparative Economics.

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.
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).
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.
### COURSES OF STUDY

#### Government
- 108. Introduction to International Politics.
- 206. Introduction to Political Theory.
- 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.
- 364. Terrorism and Human Rights.

#### History
- 104. Development of the United States, 1877-Present.
- 105. Early Asian Civilizations (also offered as ASIA 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.
- 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.

#### Modern Languages and Literatures
- Spanish 440. Poetry, Music, and Ethics.

#### Music
- 210. Musics of the World (also offered as Asian Studies 210).

#### Performance and Communication Arts
- 221. Intercultural Communication (also offered as Gender and Sexuality Studies 221 and Global Studies 221).

#### 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
- 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
- 112. Inequality.
- 161. Social Problems and Policy.
- 169. Media and Society.
- 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.
- 315. Capstone Seminar: Family and Relationship Violence (with Community-Based Learning).
- 465. Environmental Sociology.
Performance and Communication Arts
Major and minor offered

Associate Professors Fuoss, Gardiner Halstead, Hill, Kittler; Assistant Professors Johnson, Prody, Rowland, Thomas; Visiting Assistant Professors Cram, Trainor; Lecturer Canedy; Technical Director/Lighting Designer Torres; 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: theatre/performance studies or rhetoric/communication studies. The department’s major is designed to enable students to pursue their 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. Ten courses are required to complete the major. Fulfillment of the major requires the following:

1. Majors take seven courses in their primary area of concentration, at least two of which must be introductory courses and at least five of which must be advanced courses.

2. Majors take three courses from their secondary area of concentration, at least one of which must be an introductory course and at least two of which must be advanced courses.

While a few courses appear in both areas of concentration, students are not allowed to “double dip”—that is, all courses must be designated as fulfilling a course requirement in one of the two areas of concentration.

Introductory courses in rhetoric/communication studies include:

- 111. Rhetoric and Public Speaking.
- 127. Introduction to Communication Studies.

Introductory courses in theatre/performance studies include:

- 100. Beginning Ballet
- 103. Stagecraft
- 107. Beginning Acting
- 113. Introduction to Performance Studies
- 125. Introduction to Dramatic Scripts
- 202. Sound for the Stage
- 204. Costume History and Construction
- 215. Dramatic Texts in Context
- 223. Playwriting
- 270. Collaboration Across the Arts
- 3000-3999. Special Topics in Theatre/Performance Studies

Advanced courses in rhetoric/communication studies include:

- 239. Media Industries
- 270. Collaboration Across the Arts
- 311. Advanced Public Speaking
315. Gender and Communication
316. Advanced Communication Studies
318. Argumentation and Debate
321. Intercultural Communication
322. Native American Oral Traditions
325. Peer Mentoring in Rhetoric and Communication
326. American Public Address
328. Interpersonal Communication
329. Rhetoric of Social Movement
330. Ritual Studies
331. Presidential Campaign Rhetoric
332. Environmental Communication
333. Persuasion: Analyzing Rhetorical Texts
334. Sex Talk
335. Rhetoric and Citizenship
4000-4999. Special Topics in Rhetoric/Communication Studies
489/90. SYE: Senior Project
498/99. SYE: Honors Senior Project

Advanced courses in theatre/performance studies include:
230. Beginning/Intermediate Modern Dance
235. Beginning/Intermediate Jazz Dance
255. African-American Drama
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 Studies
489/490. SYE: Senior Project
498/499. SYE: Honors Senior Project

Minor Requirements

Minors choose one of the two areas — rhetoric/communication studies or theatre/performance studies — as their primary area of concentration and the other as their secondary area of concentration. Fulfillment of the minor requires the following:

1. Minors must take four courses in their primary area of concentration, at least two of which must be introductory courses and at least two of which must be advanced courses;

2. Minors must take two courses in their secondary area of concentration, at least one of which must be an introductory course and at least one of which must be an advanced course.

While a few courses appear in both areas of concentration, students are not allowed to “double dip” — that is, all courses must be designated as fulfilling a course requirement in one of the two areas of concentration.

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.

480. Independent Study.

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 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, dialogue, 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 English 125.

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 new 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.

This course examines how knowing the theatrical and cultural contexts of plays helps theatre practitioners make informed choices regarding how to stage them.

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.

This course focuses on the developmental process of modern dance 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.

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 isolation, rhythmical 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.

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 English 244 and through Film and Representation Studies.

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 for 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 feature-length screenplays. Workshop format emphasizes the revision and editing process. Prerequisite: PCA 244. Also offered as English 306 and through Film and Representation Studies.


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.

311. Advanced Public Speaking.

An 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.

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.

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.

314. Group Performance.

This course focuses on the process of adapting and staging non-dramatic texts (e.g., novels, short stories, poems) for group performance. The class emphasizes the process of selecting, adapting, scripting and rehearsing texts for group 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 or GNDR 103. Also offered through Peace Studies.

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 twinebird” 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.

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. Prerequisite: 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.


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 and 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
COURSES OF STUDY

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.

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, exploiting 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.

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.

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.

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.

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.

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.

Students read essays about the historical tradition of performance art and the relationship between performance art, theatre 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.

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.

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.
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. 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.

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
Philosophy

Major and minor offered

Professors Hansen, McCarthy (chair); Associate Professors Johnson (emeritus), Rediehs; Assistant Professor Maynes; Visiting Assistant Professor Jaima.

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.

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...
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 a methodology, the East requires 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. Africana 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 meta-philosophical 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 world-view. 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! Prerequisite: 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, Outdoor Studies 310 and also offered 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. Prerequisite: 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 revaluation 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.
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. Prerequisite: any 100-level Philosophy course, or Peace Studies 100. Also offered as PEAC 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.

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.

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 Jahnncke (chair), Johnson, O’Donoghue, Watson; 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 10 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 nine 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.
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.
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 some of the preparatory work is given in 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.

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 110 and 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. 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.
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.
The Modern Physics 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 period per week in addition to class work. Prerequisites: Mathematics 136 and Physics 104 or 152.

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.

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. Prerequisite: Physics 302, 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.

(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. Second-semester 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, Tweed; Teaching Emeritus Professor Cunningham, 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 pre-requisite, numerous laboratory courses allow students to learn in a “hands-on” fashion, 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 at 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 following new requirements for the major in psychology were adopted in January 2014 and apply to all students who matriculated beginning in the fall of 2012.

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 by the Psychology Department. 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 (other than Psychology 101WL and Psychology 205) are worth 1.25 units, are usually offered once a year, and must 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 without the laboratory section 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.

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<th>Biological/Evolutionary:</th>
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<td>PSYC 326: Hormones &amp; Behavior LAB</td>
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<td>PSYC 327: Sensation &amp; Perception LAB</td>
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<td>PSYC 401: Fundamentals of Learning LAB</td>
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<td>PSYC 432: Animal Behavior LAB</td>
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<td>PSYC 438: Human Neuropsychology SEM</td>
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<td>PSYC 207: Developmental Psychology</td>
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<td>PSYC 215: Cultural Psychology</td>
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<td>PSYC 253: Personality Psychology</td>
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<td>PSYC 402: Memory &amp; Cognition LAB</td>
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<td>PSYC 461: Critical Thinking &amp; Psychological Science SEM</td>
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<td>PSYC 255: Sport Psychology</td>
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<td>PSYC 313: Industrial/Organizational Psychology</td>
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<td>PSYC 317: Abnormal Psychology</td>
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<td>PSYC 318: Environmental Psychology LAB</td>
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<td>PSYC 322: Positive Psychology LAB</td>
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<td>PSYC 413: Community Psychology SEM</td>
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<td>PSYC 442: Intellectual and Developmental Disabilities SEM</td>
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<td>PSYC 443: Clinical Psychology SEM</td>
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<td>PSYC 456: Health Psychology SEM</td>
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<td>PSYC 232: Lab Animals (.5 unit)</td>
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<td>PSYC 455: Highlights &amp; Connections SEM</td>
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<td>PSYC 468/469: SYE: Independent Research IP</td>
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<td>PSYC 471/472: Independent Study IP</td>
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<td>PSYC 489/490: SYE: Independent Study IP</td>
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<td>PSYC 496/497: Independent Research IP</td>
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<td>PSYC 498/499: SYE: Senior Project IP</td>
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## Minor Requirements

The following are new requirements for the minor in psychology, which were adopted in January 2014 and apply to all students who matriculated beginning in the fall of 2012.
The minor in Psychology requires a minimum of 7.25 units of credit: 6.25 units of psychology courses plus Statistics 113. Required psychology courses are Psychology 101WL or 101NL and Psychology 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 anesthesia/analgescics, 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 STATS 113 or ECON 200. Also offered through Peace Studies.

317. Abnormal Behavior.
This course is designed to study the major behavioral disorders, personality disturbances and mental illnesses. Included are consideration of the mentally ill throughout history and current methods of diagnosis, treatment and research. Actual case reports are reviewed. Prerequisite: Psychology 101WL or 101NL; restricted to majors and minors in psychology or neuroscience (behavioral track) or permission of the instructor.

318. Environmental Psychology
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
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
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.
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, mood 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.
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
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 nonhuman 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
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).

4.13. 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).

4.32. 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.

4.38. 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.

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; permission of the instructor; restricted to majors and minors in psychology or neuroscience (behavioral track) or permission of the instructor.

4.43. 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.

4.55. 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.

4.61. 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 overlap- ping 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.

4.68, 4.69. 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.

4.71, 4.72. 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.

4.89, 4.90. SYE: Independent Study.
This course offers seniors 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.

4.96, 4.97. 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.

4.98, 4.99. 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 Instructor 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. Four additional 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, at least one of these being at either the 300 (excluding 360) or 400-level.

5. Religious Studies 360: Majors Seminar (ideally taken in the spring semester of the junior year).

6. 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 “four additional courses” in number 4 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, http://

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 plots) 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 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, African religions and Wicca/Neo-Paganism. Also offered as Asian Studies 105 and Environmental Studies 103.

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. Also offered: 206. Introduction to the New Testament.

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 perfected, 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. Also offered as Asian Studies 223. Offered every other year. Also offered in Asian Studies.

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.
226. The Religious Life of Japan.
At the Far Eastern end of Asia, Japan has benefited 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 spring. Also offered in Asian Studies.

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.

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 as 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

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.

267. The Holocaust.
This course focuses on the development of the Holocaust from 1933 to 1945, within the contexts of European 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; Islamicate 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.”

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 through Asian Studies. Also offered in Asian Studies.

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 travelling 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 intersections 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.

336. Religion and Theology in the Fantasy World of J. R. R. Tolkien
This is a seminar in which we will discuss the question of the theology of Tolkien's fantasy world and whether or not there is a "religion" that derives from that theology. We will examine Tolkien's works to determine whether or not he posits a sacred world inhabited by sacred beings and if so, for whom they are sacred. Students will be asked to choose a methodology for the study of religion and then use that methodology as an analytical lens throughout the semester to assess the questions before the seminar.

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.

Sociology

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.

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

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.
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: 1 Sociology course at the 100-level, one Sociology course 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.
6. Experiential component, fulfilled by one of the following:
   (a) A 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.
   (b) Any Sociology course with a CBL (Community-Based Learning) component.
   (c) SOC 309 Internship. Prerequisite: at least 2 sociology courses. Enrollment is by permission of instructor.
   (d) Summer term course in Ethiopia offered through Sociology.
7. After the completion of the Capstone Seminar, for majors who wish to then pursue an additional Capstone opportunity through independent research:
   (a) 486 Capstone Independent Study (1.0 credit, 1 semester, Fall or Spring). Prerequisites: SOC 203 Foundations of Social Theory, SOC 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, SOC 203 Foundations of Social Theory, SOC 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 + 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.

1. Environmental Studies Requirements:

<table>
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<th>Units</th>
<th>Course</th>
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<tbody>
<tr>
<td>1</td>
<td>ENVS 101 Introduction to Environmental Studies</td>
</tr>
<tr>
<td>3</td>
<td>Environmental Science and Policy (ESP) courses</td>
</tr>
<tr>
<td>1</td>
<td>ENVS 335 Foundation of Environmental Thought</td>
</tr>
<tr>
<td>1</td>
<td>Any elective from a dual-listed course in the natural sciences</td>
</tr>
<tr>
<td>1</td>
<td>Any elective listed under ENVS, or from programs abroad if preapproved</td>
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2. Sociology Requirements:

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<tr>
<th>Units</th>
<th>Course</th>
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<tbody>
<tr>
<td>1</td>
<td>SOC 110 Global Problems</td>
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<td></td>
<td>SOC 112 Inequality</td>
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<td></td>
<td>SOC 161 Social Problems and Policy</td>
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<tr>
<td></td>
<td>SOC 187 Environment and Society</td>
</tr>
<tr>
<td>1</td>
<td>SOC 203 Foundations of Social Theory. Prerequisite: any 100-level or 200-level Sociology course.</td>
</tr>
<tr>
<td>1</td>
<td>SOC 300 Qualitative Research Methods or SOC 301 Quantitative Research Methods. Prerequisite: any 100-level or 200-level Sociology course.</td>
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2 units socio-environmental dynamics courses chosen from the following:

SOC 235 Consuming Food  
SOC 314 Nomads in World History  
SOC 377 Sociology of Consumption

Other courses, including Special Topics courses, may be considered in consultation with the Department Chair.

<table>
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<tr>
<th>Units</th>
<th>Course</th>
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<tr>
<td>2</td>
<td>Any Sociology electives. Students may take additional courses at the 100 level, but a maximum of two such courses can be counted toward the combined major.</td>
</tr>
<tr>
<td>1</td>
<td>Capstone: 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 SOC 203 Foundations of Social Theory. SOC 300 Qualitative Research Methods or 301 Quantitative Research Methods recommended but not required.</td>
</tr>
</tbody>
</table>

15 units Total

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 Minimumum of six units of credit.

2. Of these courses, no more than 2 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 (SOC 495/496) before a departmental committee. Prerequisites: 3.5 major GPA, SOC 203 Foundations of Social Theory, SOC 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 SOC 390 Independent Study toward their major/minor.

3. Majors and minors may count no more than two SOC 290 Independent Study courses toward their major/minor.

4. No more than a total of two SOC 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.


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.

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.

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.

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.


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 ENVS 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-level 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.


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.

238. Social Services, Agencies and Advocacy (w/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 Biebetsmills, 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 mediated role that digital media and communication technologies play in the organization and maintenance of present-day social life. Also offered as FILM 240.

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 ENVIS 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.

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.

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 REL 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.

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 ASIA 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.

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, health care, 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 exploiting 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.

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 aspects of social relations. The history of slavery has laid the foundation for race and human rights, specific manifestations of family relationship violence and its relationship to larger societal power arrangements, consequences of violence within the family for both individuals and larger society, and our normative, legal and policy responses to family violence. Integral to this seminar is four hours per week with a local agency that deals with family relationship violence. Possible placements: the Department of Social Services, Citizens Against Violent Acts, Renewal House, Reachout, police agencies and courts. Placements are made in collaboration with Community-Based Learning. This course fulfills the Experiential Component and Capstone requirement for majors. Prerequisite: 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.

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. Also offered as ENVS 314. 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.

337. Capstone Seminar: Sociology of Consumption.
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.
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-level or 400-level special topics courses varies and will be announced each semester.

465. Environmental Sociology.
What is the “environment”? How do we know it’s in trouble? Why should we protect it? What are we protecting it from? Who are we protecting it for? We examine both the social origins of the major environmental problems facing us today and the political conflicts that result. We focus on the role of society’s use of natural resources in creating these crises, as well as the way societies identify them as social problems, and examine the social responses. We explore the ways in which these responses lead to political conflicts, and seek to develop viable solutions to socio-environmental problems. 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.

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

Sports Studies and Exercise Science
Minor offered
Associate Professor Robert Durocher (Director of Athletics; 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.
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. Sociocultural, 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.

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.
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, 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)**

- 201. Statistical Computing (0.5 units).
- 325. Probability.

**Electives (any three units*)**

- Stat 240: Statistical Learning (0.5 units).
- Stat 250: Special Topics in Statistics.
- Stat/Econ 342: Econometrics.
- Stat 343: Time Series Analysis.

Stat 350: Special Topics in Statistics.
Stat 450: SYE Seminar.
Stat 489: SYE Independent Project.
Stat 498: SYE Honors Project.
Math 305: Real Analysis.
Math 350: Mathematical Modeling.
CS 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 could 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**

- 201. Statistical Computing (0.5 units).
- 240: Statistical Learning (0.5 units).
- 325: Probability.
- 326: Mathematical Statistics.
- 343: Time Series Analysis.
- 350: Special Topics in Statistics.
- Disciplinary Methods Courses.

**Economics**

- 342: Econometrics.

**Psychology**

- 205: Research Methods in Psychology.

**Sociology**


**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.
Courses

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.

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.

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-mediods, 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, heteroskedasticity, 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.

Permission required.

450. SYE: Senior Seminar.
Permission required.

489. SYE: Senior Independent Project.
Permission required.

498. SYE: Senior Honors Project.
Permission required.