Courses of Study

THE COURSES LISTED IN THIS Catalog reflect, as accurately as possible, what the University offers. Because changes in academic programs and staffing inevitably occur, no guarantee can be made that a particular course will be offered in a given semester or year. Moreover, each semester many departments offer courses that are not listed in this Catalog because they are new or special. The Class Schedule, 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 Class Schedule.

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 Class Schedule.

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), 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 the department’s catalog, which is available in the department’s office in Atwood Hall.

The course list that follows is organized alphabetically by department or program. The Majors and Minors Offered table provides a quick reference guide to current academic departments and programs on campus. For more on these, in addition to their respective entries in the pages that follow, go to www.stlawu.edu/academics.
Department Majors
Anthropology
Art and Art History
Biochemistry
Biology
Chemistry
Computer Science
Conservation Biology
Economics
English
Environmental Studies
Estudios Hispánicos
Francophone Studies
Geology
Global Studies

Combined Majors
African Studies
Asian Studies

Interdisciplinary Majors
Biology–Physics
Business in the Liberal Arts
Economics–Mathematics
Environmental Studies with Biology, Chemistry, Economics, English, Geology, Government, Mathematics, Philosophy, Psychology or Sociology
Geology–Physics
International Economics and Modern Languages

Multi-Field Major
Self-designed

Double Major

Other Programs of Interest...
• Business
  (see Economics, Pre-Management, 4+1 MBA)
• 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)

Department Minors
Anthropology
Arabic Studies
Art and Art History
Biology
Chemistry
Chinese Studies
Computer Science
Economics
Education
English
Estudios Hispánicos
Francophone Studies
Geology
German Studies
Global Studies

Program Minors
African Studies
African-American Studies
Asian Studies
Canadian Studies
Caribbean and Latin American Studies
European Studies
Film and Representation Studies
Gender and Sexuality Studies
Japanese Studies
Native American Studies
Outdoor Studies
Peace Studies
Statistics

• Latin American Studies
  (see Caribbean and Latin American Studies)
• Political Science
  (see Government)
• Journalism
  (see English)
• Languages
  (see Modern Languages and Literatures)
• Law
  (see Pre-Professional Programs, Curriculum section)
• Medicine
  (see Pre-Professional Programs, Curriculum section)
• Spanish
  (see Estudios Hispánicos)
• Speech
  (see Performance and Communication Arts)
• Studio Art
  (see Art and Art History)
• Theater
  (see Performance and Communication Arts)
• Visual Art
  (see Art and Art History)
• Writing
  (see English)
African Studies

Combined major and minor offered

Professors: Alden (English), Blewett (economics), Collins (global studies), Nyamweru (emerita, anthropology), Udechukuwú (fine arts); Associate Professors: Abraham (Anthropology), Assefa (sociology) Barthelmess (biology), DeGroat (history); Assistant Professors: Carotenuto (Coordinator, history), Haugh (anthropology), Willson (Biology), Wong (global studies); Visiting Assistant Professors: Hale (Government), Joslin (French, African Studies); Visiting Instructor: Amisi (Swahili).

Visit the African studies webpage at www.stlawu.edu/african/home.html or link directly from the academics page at www.stlawu.edu.

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, 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. As in the combined major, students are encouraged to begin with either AFST 101 or 225 and must select courses from a range of disciplines. Also, they must complete a capstone course that is either an African studies 400-level seminar or an interdisciplinary independent project approved by the African Studies Advisory Board.

Combined Major

African studies offers combined majors with anthropology, economics, government and history. Each combined major consists of five African studies courses plus requirements from cooperating departments. The typical combined major has between 12 and 14 courses in total. Students are strongly encouraged to begin with either AFST 101 or 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 AFST, 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 AFST 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

Economics

ECON100, Introduction to Economics* 1 unit
ECON 200, Quantitative Methods in Economics** 1 unit
ECON 251, Intermediate Microeconomic Theory 1 unit
ECON 252 Intermediate Macroeconomic Theory 1 unit
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 Economics 1 unit
ECON 322 International Economics 1 unit
ECON 336, Economic Development 4 units
COURSES OF STUDY

AFRICAN STUDIES

*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 AFST course 5 units

Total 13 units

Government and African Studies

Government
GOVT 103, Introduction to American Politics 1 unit
GOVT 105, Introduction to Comparative Politics 1 unit
GOVT 230, African Politics 1 unit
GOVT 290, Research Seminar 1 unit
GOVT 327, Politics of Development and Underdevelopment 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-AFST SYE)
No more than three courses at the introductory (100) level may be credited toward the major
Five AFST 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 Semester 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 (AFST 101 or 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 Semester Program, visit http://www.stlawu.edu/ciis/program/kenya/introduction.

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.
255. Environmental Perception and Indigenous Knowledge.
348. Topical Seminar.

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

Economics

English
220. Introduction to African Literature.

Global Studies
262. Africa and Globalization.

Government
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 AFST 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:

Anthropology

Environmental Studies/Biology

Government/Sociology

History
354. Introduction to the History of Modern Kenya.

African-American Studies
Minor offered

Advisory Board: Professors Bailey (English), Hansen (philosophy), Regosin (history); Associate Professors Denaci (fine arts), Smith (coordinator, history); Assistant Professor Hornsby-Minor (gender and sexuality studies); Associate Chaplain Whitehead; Assistant Track and Field Coach/Assistant Coordinator of Student-Athlete Development Williams.

Visit the African-American studies webpage at www.stlawu.edu/academics/programs/african-american-studies or link directly from the academics page at www.stlawu.edu.

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 200- and 300-level special topics and First-Year Seminar courses on African-American studies.

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
331. Imagining the South.
340. Race, Ethnicity and Baseball

Performance and Communication Arts
221. Intercultural Communication.

Philosophy
232. Africana Philosophy.

Sociology
112. Inequality.
228. Race and Ethnicity.
253. Race, Class, and Environmental Justice.
310. Slavery, Race and Culture.

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

Anthropology
Major and minor offered; combined major with African studies.

Associate Professor Abraham (chair); Assistant Professor Haugh, Visiting Assistant Professors Harr, Pitre.

Visit the anthropology department webpage at http://www.stlawu.edu/academics/programs/anthropology or by linking directly to it from the Majors and Programs page at www.stlawu.edu.

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. Every aspect of human beings, from their DNA molecules to their beliefs about the supernatural, in every part of the world, from the beginnings of primate evolution to the present, poses anthropological questions. Some of the most interesting of these questions remain to be answered.

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 utilized 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 broad field of the discipline. With personal field experience in Africa, Europe, India, Egypt, and the Pacific Islands, they have published numerous books and articles on cultures and human issues in different parts of the world, often addressing the interrelationships among local cultural systems and global forces. The department’s archaeology and biological anthropology laboratory houses several collections of artifacts and stone and bone materials for hands-on study.
Some courses are cross-listed for credit toward African studies, Asian studies, biology, Native American studies, environmental studies, gender and sexuality studies and global studies. The department offers a combined major with African studies (see below). Specific anthropology courses also fulfill the social sciences, diversity, natural science and science studies distribution requirements.

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 linguistics. 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 of them, beginning from distinct sets of questions, 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 archaeological and ethnographic field schools 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. Students have also taken part in the University’s Kenya Program. This program, in which anthropology faculty members have been closely involved as directors, coordinators and instructors, offers a rare opportunity for anthropology students to gain intensive experience in the field. Anthropology courses provide excellent preparation for students wishing to study on St. Lawrence programs in Africa, Australia, Europe, India 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 must complete all four before participating in an off-campus semester program. We strongly recommend that students go abroad in their junior year.

2. Research Methods (1)
All students must complete a junior-level (300) research methods course, whether the methods include field, laboratory or library research. This category includes anthropology courses numbered 304, 318, 325, 350, 365, and 379. Topical Seminars 347 and 348, 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 might be a seminar, independent study project (488, 489) or 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 anthropology and linguistics). 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.

Combined 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 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 linguistics).

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. Fulfills social science and diversity distribution requirement. 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.

201. Introduction to Human Origins.
This course explores the nature of humanity using a bio-cultural 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.

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? Fulfills social science and diversity distribution requirements.

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. Fulfills social science distribution requirement. 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.

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 yearly.

255. Environmental Perception and Indigenous Knowledge.
People in different cultures perceive their environment in different ways and have bodies of systematic knowledge relating to land, water, soil, plants and
animals upon which they base their use of these resources. This course attempts to show how indigenous people understand the interrelationship of the different elements of their environments and have used them for sustainable livelihood. The impact of Western knowledge systems and commercial interests on indigenous communities is discussed, with reference to African and American case studies. Offered occasionally. Also offered as Environmental Studies 255 and through African Studies and Native American Studies.

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. Also offered through Asian Studies.

290. Bones of Contention.
Curious about the human skeleton? Interested in how the human skeleton can be studied to understand past 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. 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, and health-related fields such as medicine and dentistry. Offered occasionally.

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

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

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. Also offered through African Studies

347,348. Topical Seminars.
These seminars deal with significant topics in anthropology on an advanced level. Recent offerings have been African belief systems, nationalism and the post-colonial experience in South Asia, the anthropology of war and raiding, Apache studies and environmental conservation in Africa. Prerequisites: previous relevant course work to be specified in the Class Schedule or permission of the instructor. Offered occasionally.

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

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.

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 investigations, 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 the fall semester.

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 in the spring semester. 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 on rotation. Also offered through African Studies.

430. Human Evolution.
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 the current issues, methods, and theory in biological anthropology, approached from the following perspectives: paleoanthropology and evolutionary theory, skeletal biology and osteology;
primatology; human biology; and population genetics. We will consider each of these approaches in their larger social, historical and intellectual contexts. Offered occasionally.

We are born, we live and we die. Only humans are aware of the precariousness of life and the inevitability of death, and worry about life here and in the hereafter. Only humans create elaborate symbolic mechanisms to cope with these universal unknowns. This course examines how people cope with the trials and tribulations caused by the uncertainties of life through symbolic systems such as magic, sorcery, religion, myth and ritual by comparing ethnographic examples from non-Western cultures in Africa, the Island Pacific, India and Southeast Asia, with comparative discussion of contemporary Western cultural traditions. Recommended: Anthropology 102 or 205, or permission of the instructor. Offered occasionally. Also offered through African Studies.

447,448. Topical Seminars.
These seminars deal with significant topics in anthropology on an advanced level. Recent offerings have been African belief systems, nationalism and the post-colonial experience in South Asia, the anthropology of war and raiding, Apache studies and environmental conservation in Africa. Prerequisites: previous relevant course work to be specified in the Class Schedule or permission of the instructor. Offered occasionally.

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 advisor. Details of relevant course work to be specified in the Class Schedule or permission of the instructor. Prerequisite: at least two anthropology courses and permission of the instructor.

498,499. SYE: Honors in Anthropology.
Open to anthropology majors with a grade point average of at least 3.5 in all courses taken within the department. Requires completion of a long-term project beginning late in the junior year under the guidance of a faculty advisor. Details are available from the department. Prerequisite: permission of the instructor.

Art and Art History
Major and minor offered

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

Visit the art and art history department webpage 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 or art history, or a combined concentration. Studio art courses provide grounding in the technical, aesthetic and critical aspects of artistic production and exhibition; study in art history provides the methodological and critical tools for the analysis of visual culture and its role in history. The study of art and art history is central to a liberal arts education, especially in a world increasingly shaped by images and seemingly endless visual information.

Creative process, technique and content are taught concurrently throughout all of the studio classes. Courses include digital and traditional artistic media. Art history courses range from the ancient Mediterranean, Asia and Africa through the western world, from the Middle Ages to 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 E. 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 will 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:
- Three courses, Drawing I and two studio art electives: in total, two different media must be represented.

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

*Students may take more than the minimum of 11 courses in art and art history. However, the registrar will not give credit toward graduation for more than 14 courses in a single academic department.
ART AND ART HISTORY

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

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 Drawing I, the pre-requisite for upper-level studio art courses, as soon as possible.

Studio:
-(1) course that emphasizes digital media (AAH269 Digital Media and Culture, AAH270 Collaboration Across the Arts, or other selected courses).
-(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.
-SYE: Senior Seminar Course, offered each spring semester.

Art History:
-(1) non-western art history
-(1) contemporary or modern art history
-(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

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 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. 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.

Honorary Society

The art and art history honorary society offers membership to students who maintain a 3.0 overall average and four art and art history courses with a 3.5 average, or a 3.0 overall and 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. 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 distribution requirement in arts. Also offered through European Studies.

An exploration of painting, sculpture and architecture in Italy from the late 13th to the late 16th centuries. This course focuses on such artists as 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.

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 surveys the changing forms, themes and imagery of Renaissance art, within the larger cultural and political worlds of Florence, Stena, 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.

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 examines 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. 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, archaeologists and conservationists. Students study its synthesis of styles and techniques, discuss the political role of monuments in general, and consider 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.

Topics relate to the history, practice or theory of art. Open to all students, but depending on the topic prerequisites may be required. Specific topics are announced in the Class Schedule each semester, when offered.

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 post-colonialism, 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.

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 art practices with developing technologies or “new media,” globalization and post-colonialism, identity politics and the body, and debates about “postmodernism” and consumer culture. Prerequisite: AAH 116 or 117.

228. Color
This course explores the interaction of color through the classic exercises of Josef Albers and the application of color concepts in art and design. Using Color Aid paper, students will complete Albers’ projects that demonstrate a wide range of unpredictable and elusive properties of color. The course also examines ideas about color through artists’ writings and by studying color-related exhibitions. Students will study contemporary approaches to using color alongside of Albers’ established ideas. Prerequisite: AAH 131. Registration limited.

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. Registration limited.

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

240. Sculpture and Extended Media II.
A continuation of AAH 239. Students are expected to expand their ideas into more fully resolved and conceptually challenging works. Collaboration, casting, fabrication/building techniques using wood and metal, investigation of tactical media approaches and other materials as determined by the student's interest and conceptual direction. Depending upon student interest and experience, this course may be offered in conjunction with AAH 239 by permission only. Prerequisites: AAH 131, 239. Registration limited.

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

247, 248, and 347, 348. Special Topics in Art.
Topics relate to the history, practice or theory of art. Depending upon the topic, prerequisites may be required. Specific topics are announced in the Class Schedule each semester.

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, 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" vs. "craft." Depending upon student interest and experience, this course may be taken as AAH 250 by instructor permission only. Prerequisite: AAH 131. Registration limited.

250. Ceramics II.
A continuation of Ceramics I. Students are expected to expand their ideas into more fully resolved and conceptually challenging works. Fabrication/building techniques such as press molding, slip casting, installation work and mixing media are discussed. More advanced surfacing techniques such as ceramic decals, printing on clay, experimental finishes and glaze chemistry are explored. Depending upon student interest and experience, this course may be offered in conjunction with AAH 249 by instructor permission only. Prerequisites: AAH 131, 249. Registration limited.

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

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

269. Digital Media and Culture I.
A combination studio/seminar that explores the major theoretical issues surrounding the continually evolving culture of digital technology and the effects on various aspects of contemporary life including: aesthetics and perception, creative production, morality, contemporary art discourse, visual culture, entertainment, identity and other forms of social effects/affects. Studio projects will investigate the creative potentials of social media software, digital painting, photography, and video. Projects will respond conceptually to theoretical issues that are being discussed in class. An emphasis on individual voice, creativity, and methods of idea development will be encouraged throughout the term. 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.

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.

284. Book Arts.
Artist's books are works of art that are made real in the form of a book. This course examines the interplay between words and images as well as the sequential movement from page to page that this form offers. Students explore how both original and appropriated texts and images are juxtaposed to create meaning. A variety of binding techniques and formats will be presented. Creative writing and image development will be emphasized, with revision and multiple drafts required for projects. Prerequisite: FAI 31 or permission of instructor.

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, 250. Registration limited.

341. Printmaking II.
A continuation of Printmaking I, with the introduction of lithography, screen-
Asian Studies

Combined major and minor offered

**Professors** MacWilliams (religious studies), McCarthy (philosophy), Sondergard (English); **Associate Professors** Abraham (anthropology), Basu (coordinator; fine arts), Csete (history), Henderson (music), Pai (biology); **Assistant Professors** Desmond (religious studies), Hou (sociology), Huang (government), Jayman (global studies), Wang (education), Zhang (modern languages and literatures).

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

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, 12 departments on campus.

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

**Combined Major**

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

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

1. At least one multi-regional course from the list below.
2. One semester-long course in an Asian language.
3. Five electives, including at least one course at the 300 or 400 level. No more than three of these courses can be selected from a single department or focus on a single region (East Asia / South Asia / Southeast Asia).
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 each in European history, North American history and Asian history.

Two of the five required 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 eight government courses rather than the standard nine. Courses must include Government 103, 105, 290, one international course and one theory course. Students must also take three electives, including Government 322 or Special Topics courses on Asia.

Two of the five required 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 Thai and Southeast Asian studies program at Payap 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
218. Arts of South Asia.

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

Global Studies
222. Asian Political Economy in the Global Age.

Government

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
222. Asian Political Economy in the Global Age.
301. Theories of Global Political Economy.**

Government
273. Special Topics in Comparative Politics.** (East/South Asia)
322. Government and Politics in the People’s Republic of China. (East Asia)

History
292. Modern China. (East Asia)
377. Colloquium in Asian History. (East Asia)
475. SYE: Seminar in Asian History. (East Asia)

Modern Languages and Literatures
232. Cultures of China.* (East Asia)
234. Chinese Literature and Film.* (East Asia)
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.
390. Focus on a Philosopher.** (East Asia)

Religious Studies
221. Religious Life of India. (South Asia)
222. Buddhist Religious Traditions.
223. The Religious Life of China. (East Asia)
224. Islamic Religious Traditions.
226. The Religious Life of Japan. (East Asia)
282. Indian Epics. (South Asia)
370. Asian Religions in the Modern World. (East Asia)
380. Mythology and Popular Religious Thought in India. (South Asia)
450, 451. Directed Studies in Religion.**

Sociology
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
China’s International Relations.

History
Modern Chinese History and Society.

Sociology
Community Studies and Urban Development in 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)

Students take courses offered through the Thai and Southeast Asian Studies program at Payap University in Chiang Mai, Thailand, and receive St. Lawrence credit. The three required courses are Cultural Foundations of Thai Society (3 credits), Thai Language (6 credits) and Intercultural Communication (1 unit). Program electives change each semester. Students normally take 14-16 credits, or 4-5 courses. For more information, visit the Center for International and Intercultural Studies (CIIS) on campus or go to thaistudies.payap.ac.th/course.html.

Biochemistry

Major offered

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

More information on this interdisciplinary major can be found by linking directly to it from the Majors and Programs page at www.stlawu.edu.

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.
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 biochemistry 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 or permission of instructor. Counts toward the neuroscience major (cellular track). Also offered as Biology 309 and Chemistry 309.

**394. Research Methods in Biochemistry.** (0.5 unit)

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

**395. Research Methods in Molecular Biology.**

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

**415. Advanced Biochemistry.**

A variety of topics are covered in depth depending on 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, and photosynthesis. Topics of current interest may also be included. Through both written and oral presentations students develop their abilities to use the scientific literature and communicate in science. Prerequisite: Chemistry 309 or permission of instructor. Counts toward the neuroscience major (cellular track). Also offered as Chemistry 415.

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

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

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

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

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

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

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

Professors Erlichman (co-chair), Hornung; Associate Professors Baldwin, Barthelmess, McKnight, Temkin (co-chair); Assistant Professors Dixon (joint appointment with chemistry), Estvez (joint appointment with psychology), Heckman; Olendzenski, Päi, Schreiber, Willson; General Biology Specialists Harloe, Reardon, Trevett; Microscopy Specialist Pflugheber.

Visit the biology department Web page at it.stlawu.edu/~biology or by linking directly to it from the Majors and Programs page at www.stlawu.edu.

The department is interested in offering biology both to the major and the non-major, 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 with environmental studies is also available. 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. The course offerings are, for a small department, unusually rich and varied and offer 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 such as the Caribbean, Kenya, Malaysia, Peru and elsewhere.

The basic objectives of the department are to provide insight into the rules and relationships governing living systems as learned through our specialty majors or through a student-tailored program in the basic biology major.

Learning Goals

The biology academic program has the following learning goals for students:

1. To learn fundamental concepts in three major areas: cell and molecular biology, organismal biology, and ecology and evolution.
2. To use modern laboratory and field research techniques to conduct research.
3. To integrate content, skills and critical thinking to design feasible independent research projects employing the scientific method.
4. To critique and contextualize the published works of others in the scientific community, including the ability to critically analyze experimental design and data interpretation.
5. To demonstrate quantitative literacy, including the application of statistical methods to analyze and interpret data.
6. To develop scientific writing skills through the writing of papers using scientific conventions of format, succinctness, objectivity and accuracy.
7. To develop oral communication skills within the context of scientific conventions of format, succinctness, objectivity and accuracy through the oral and poster presentations.

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, academia and health care professions.

Many biology majors go on to professional schools in veterinary medicine, medicine, dentistry or physical therapy. Students interested in 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, PCR Machines, spectrophotometers,
Biology

gel electrophoresis units, physiographs, a transmission
electron microscope, a scanning electron microscope and
confocal microscopes as well as GIS labs, plant growth
chambers and tissue culture facilities. All laboratories are
equipped with computers for data analysis and information
retrieval from the Internet and the science library on-line
database services.

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 should
enroll in the first semester of General Biology (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 (102), receiving the
1.25 units of credit for this course as well as the right 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.

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 Biology 101-102 (1.25 units each) plus an
additional six units of biology courses. At least two units
of these courses must be at the 300 or 400 level. Half-unit
biology offerings may also be used to fulfill this require-
ment. Certain courses have no lab or field component (or
other limiting condition) and are designated as “major credit
restricted,” or MCR. Only one such course beyond 101,
102 can count toward the minimum six units of biology
electives. Examples include 261, 309, the non-lab sections
of 360 and 380, and certain 400-level courses (see below).
In addition to the biology course units described above, the
major also requires courses in chemistry (103 and 104) and
statistics (113 or two semesters of Calculus 135 and 136).

Biology comprises many subdisciplines 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.
Research Projects 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 on the federal Public Health Service policy of the Office of Research Integrity (see ori.dhhs.gov/policies/ori_policies.shtml). 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-chair.

Honors in Biology

To graduate with honors in biology, a student must have a minimum 3.50 GPA in all biology courses at the time of graduation and must satisfactorily complete a year-long honors research project. A student wishing to be considered for honors in biology should enroll in Biology 469 or 489 (SYE research) during the first semester of research (usually, but not limited to, the fall semester of the senior year) for .5 or 1 unit of credit. The student, in consultation with the project advisor, should choose a 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 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 advisory 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. The student can then enroll in Biology 499 (SYE: Honors Research) for the spring semester. This course may carry either .5 or 1 unit of credit. Only one unit total can count toward the minimum requirements of the major.

Although most decisions about the requirements for the honors research are determined by the project advisor, all honors students must meet certain minimum project standards, which can be obtained from the department. Criteria for determining the awarding of honors and associated grades are also available from the department.

Honors in the Environmental Studies–Biology Combined Major

To graduate with honors in the environmental studies-biology combined major, students must maintain a GPA of 3.5 or
higher in all biology and environmental studies courses and complete an honors research project having an environmental component or emphasis. The timetable and guidelines are the same as for honors in biology, except that the project must be guided by a project committee comprised of at least one faculty member from both environmental studies and biology. Also, the student is nominated for honors to 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 obtain a University fellowship that provides support for a summer research experience of eight to 10 weeks. Guidelines for fellowship applications are available in the office of the dean of academic affairs in Vilas Hall. 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 Biology 101-102 plus three additional units of biology courses. At least one unit of these courses must be at the 300 level. The minimum course requirements cannot include units of 381/2 or 400-level SYE courses, but may include one “major credit restricted” course. 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 (see the International and Intercultural Studies chapter of this Catalog).

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. (1.25 units)
An introduction to ecology, evolution, biological diversity and comparative adaptation of plants 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, one-hour peer study session and three lectures each week. Offered in the fall semester. Required for biology, biochemistry, conservation biology and neuroscience majors.102. General Biology. (1.25 units)
An introduction to cell biology, genetics and physiology, using an investigative and problem-based approach. Structured, skill-based lab exercises allow students to develop, perform and present an in-depth independent research project. One three-hour lab, one-hour peer study session and three lectures each week. Of-
ferred in the spring semester. Required for biology, biochemistry, conservation biology and neuroscience majors.

121. The Natural World.
A field biology-ecology course with laboratory for non-majors emphasizing the plants and animals of the Northeast. The course focuses on ecological factors and processes affecting individual organisms, communities and ecosystems. Students visit a variety of aquatic and terrestrial habitats to study local ecosystems and to learn the natural history of local plants and animals and how to identify them. Students also learn how to conduct a scientific study and record observational data. This course does not count toward the biology majors but does count toward the outdoor studies minor and the natural science with lab distribution credit. Also offered through Outdoor Studies.

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. Prerequisite: Biology 101, 102. Also offered as Environmental Studies 209 and through Outdoor Studies.

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.

218. Ornithology.
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 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.

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: Biology 101, 102 or equivalent permission of instructor. Also offered through Environmental Studies 221 and through Outdoor Studies.

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 permission of instructor.

227. Mammalogy.
The objectives of the course are to become familiar with the diversity of mammalian species as well as their distribution, morphology, taxonomy and ecology. Students relate this diversity and specific aspects of their ecology to evolutionary history and learn to identify mammals to the family level. Lectures and laboratory (including fieldwork). Prerequisites: Biology 101, 102 or equivalent. Also offered through Outdoor Studies.

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

232. Laboratory Animals: Ethics, Care and Techniques. (5 unit)
An introduction to the techniques, use and care of laboratory animals. Students gain knowledge and hands-on experience in anesthesiology, analgesics, surgical techniques, and proper animal handling and husbandry. The ethical use of animals in research, appropriate and humane care, and the functions of regulatory agencies are covered. Concurrently, students explore the relationships between humans and animals used in teaching and research. Prerequisite: Psychology 100 or 101 or Biology 101 or permission of instructor.

240. Human Anatomy.
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.

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 including 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.

245. Genetics.
An introduction to the principles of the transmission of inherited characteristics and the underlying molecular mechanisms of the regulation of expression of genetic information. Genetic engineering and an introduction to population genetics are included. Three lectures and one laboratory per week. Prerequisite: Biology 101, 102 or equivalent; pre- or co-requisite: Chemistry 101 or 103 or permission of instructor. Counts toward the biochemistry and neuroscience (cellular track) majors.

250. Introduction to Cell Biology.
An understanding of the concepts and processes of cell biology is fundamental to all other disciplines in biological sciences. This course introduces cellular structure and the function of these structures in relation to the physiology of the organism. Lectures introduce cell ultrastructure and the methods of studying it, membrane structure and function, protein structure and function, and the fundamentals of primary metabolism and information storage/transfer (i.e.,...
replication, transcription and translation of genetic material). The material is relevant to animal, plant and microbial organisms. The lab consists of a series of protocols to demonstrate some fundamental methodologies in cell biology and introduces the process of scientific research. Lectures and one laboratory per week. Prerequisites: Biology 101, 102. Recommended: Chemistry 103, 104. Counts toward the biochemistry and neuroscience (cellular track) majors.

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 lives and the influence of human activities on plant populations. Independent projects center around surveys and experiments on socioeconomically important plants. Field trips and labs explore Native American reservations, botanical gardens, greenhouses, nature reserves and plant population survey techniques. Three hours of lecture and one three-hour laboratory per week. Also offered through Asian Studies and as Environmental Studies 258.

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

270. Endocrinology.
Endocrine glands and the messengers they produce can have profound effects on how organisms respond and adapt to their environment. This course examines the production and function of hormones in different organisms. Topics include the types and functions of endocrine glands (e.g., hypothalamus, pituitary, thyroid and adrenal) and the ways hormones act as chemical messengers with various target cells. Three hours of lecture and three hours of laboratory per week. Prerequisites: Biology 101, 102. Counts toward the neuroscience major (cellular and behavioral tracks).

288. Introduction to Neuroscience.
This course provides students with a 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 homoeostatic control mechanisms. Three hours of lecture and three hours of laboratory per week. Prerequisites: Biology 101, 102. Recommended: Biology 245, 246 or 250. 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. Counts toward the neuroscience major (cellular track). Major credit restricted. Also offered as Biochemistry 309 and Chemistry 309.

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.

320. Reproductive Physiology.
This course examines principles of reproductive physiology at the whole animal and cellular levels. Form and function of reproductive systems in a variety of species are explored, with an emphasis on domestic animals and humans. Reproductive behavior, use of technology to improve outcomes and reproductive toxicology are also discussed. Three hours of lecture and three hours of laboratory per week. Prerequisites: Biology 101, 102 or equivalent. Counts toward the neuroscience major (cellular and behavioral tracks).

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

326A. Animal Physiology.
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. Six hours of lecture and one three-hour laboratory every two weeks. Prerequisites: Biology 101, 102 or equivalent.

326B. Human Physiology.
This course is devoted to the general principles and concepts of human physiology. Lecture topics include functioning of the neuroskeletal, muscular, respiratory, circulatory, excretory and endocrine systems. Six hours of lecture and one three-hour laboratory every two weeks. Prerequisites: Biology 101, 102 or equivalent.

The biology of freshwater organisms from a community and ecosystem perspective. Topics include fishery 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 ecological settings. Class projects investigate local and regional lakes and rivers; thus there is a substantial amount of field work. There is also emphasis on the characterization of watersheds using GIS. Prerequisite: Biology 221 or equivalent. Recommended: any of Biology 215, 340, 360 and 380. Also offered through Outdoor Studies.

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.

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

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, their ecological interactions, their adaptations to the dynamic ocean environment and their importance to humanity. Topics include the life histories, behavior, ecology and commercial use of marine organisms, as well as abiotic factors (e.g., salinity, nutrients, water currents and tides, ocean floor spreading) that influence them. The laboratory portion is an end-of-semester (mid-May) 10-day field trip that focuses on snorkeling studies of coral reef ecosystems and incurs extra course fees (see instructor for details). This portion is not available to seniors graduating in May. Prerequisites: Biology 101, 102 or equivalent. Recommended: any of Biology 215, 221, 330 and 380. Also offered through Outdoor 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. Prerequisite: Biology 101, 102. Major credit restricted. Also offered as Environmental Studies 380.

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.

386. Advanced Animal Physiology.
This course deals with the properties, composition and function of living matter and its reactions to internal and external agents. The physiology of the nervous, circulatory, respiratory and excretory systems is considered in detail, as are the basic and applied physiology of the digestive and endocrine systems. Mechanisms of integration of the various physiological systems are stressed. Three hours lecture and one three-hour laboratory per week. Prerequisites: Biology 326 and its reactions to internal and external agents. The physiology of the nervous, circulatory, respiratory and excretory systems is considered in detail, as are the basic and applied physiology of the digestive and endocrine systems. Mechanisms of integration of the various physiological systems are stressed. Three hours lecture and one three-hour laboratory per week. Prerequisites: Biology 326 and 380.

387. Cellular Mechanisms of Memory.
This course examines the molecular mechanisms of neuronal plasticity in order to develop an understanding of how learning and memory occur at the cellular level. 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 genes, genetic pathways and molecules involved in memory formation; and the cellular basis of memory disorders such as Alzheimer’s disease and mental retardation syndromes. Major credit restricted. Prerequisites Biology/Neuroscience 288 or permission of the instructor. Counts toward the neuroscience major (cellular track). Also offered as Neuroscience 387.

388. Drugs and the Brain.
Psychoactive drugs have historically been used for recreational and therapeutic purposes. This course focuses on how they modify nervous system function and human behavior. The neurochemical and behavioral techniques used to study drug action are addressed. Students learn how drugs are metabolized by the body (pharmaco kinetic), act (pharmacodynamics) and affect behavior (psychopharmacology), gaining comprehensive understanding of the neurotransmitter systems of the brain and how different drugs affect these systems. Topics include the major drug classes, including stimulants (such as cocaine, amphetamines and caffeine), opiates and alcohol; drug addiction and abuse; and clinical use of drugs for treatment of mood disorders, anxiety and schizophrenia. The laboratory component employs the nematode C. elegans as a model system to explore drug action; students learn research techniques and carry out independent research. Major credit restricted if taken without the laboratory component. Prerequisites: Biology/Neuroscience 288 or permission of the instructor. Counts toward the neuroscience major (cellular and behavioral tracks). 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. Also offered as Neuroscience 389.

Detailed instruction in the use of a transmission electron microscope (TEM). Most of the learning is accomplished in a laboratory setting where students learn techniques for sample fixation, embedding in plastic resins, ultramicrotomy, glass knife making, thin film preparation and photographic techniques. The theory of instrument operation is stressed. A detailed examination of cell ultrastructure is also offered. Prerequisite: any 200- or 300-level science course or permission of the instructor. Counts toward the neuroscience major (cellular track).

391. Research Methods in Scanning Electron Microscopy. (.5 unit)
Detailed instruction in the use of a scanning electron microscope (SEM) and support techniques such as critical point drying, specimen coating (standard vacuum and sputter coating), specimen fixation, black and white photographic techniques and computer image acquisition and analysis. The theory and practice of energy dispersive x-ray analysis (EDAX) for determining atomic element makeup and element mapping will also be learned. Prerequisite: any 200- or 300-level science course or permission of the instructor. Counts toward the neuroscience major (cellular track). Also offered as Geology 391.

392. Research Methods in Fluorescence and Confocal Microscopy. (.5 unit)
Confocal microscopy allows a fluorescence-labeled specimen to be optically sectioned at magnifications up to 1000X. It is a good bridge between standard fluorescence microscopy and electron microscopy. This course offers students detailed instruction in the theoretical and practical aspects of using a laser scanning confocal microscope. Students learn specimen preparation techniques, fluorescent dye properties and selection, immunocytochemistry, laser physics, optics, and digital image acquisition and analysis. A good knowledge of cell biology and structure is very helpful. As a half-unit offering, the course meets for about half the semester. Prerequisites: any 200- or 300-level science course or permission of the instructor. Counts toward the neuroscience major (cellular track).
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-requirement). Required for the biochemistry major and also carries credit toward the biology major/minor. Also offered as Biochemistry 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 Biochemistry 395.

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 seminar participants 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. The course fulfills a diversity requirement. 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. Counts toward the neuroscience major (cellular track). Major credit restricted. Also offered as Biochemistry 415.

This 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. Prerequisites: Biology 221 or 245/246. Also offered as Environmental Studies 440 and through Global Studies.

447, 448. SYE: Special Topics.
Intended for senior tutorials, these are courses on topics not regularly offered in the curriculum. May be offered for 5 or 1 unit of credit and may include a laboratory. Prerequisites depend on course content and consent of instructor. Major credit restricted.

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. Major credit restricted.

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; otherwise, major credit restricted.

468, 469. SYE: Tutorial Research. (.5 or 1 unit)
Mentored study and research that is not experimental in design yet requires the analysis of primary literature-based data and the integration of this with current knowledge of the subject matter. A thorough understanding of the methodologies used in acquiring the published data is critical for this integration. This research will be presented orally to the mentor's research team and in appropriate written formats (e.g., journal manuscripts, etc.). This experience typically earns one unit of credit toward the minimum major requirements and is at least one semester in duration. If not intending to accomplish honors designation, students may do a full year of research for 5 units per semester or they may elect to earn more than one unit of research credit, though only one such unit may count toward the minimum major requirement. Open to senior students majoring in biology; 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. Results will be presented orally to the mentor's research team and in appropriate written formats (e.g., journal manuscripts, etc.). This experience typically earns one unit of credit toward the minimum major requirements and will be of at least one semester in duration. If not intending to accomplish honors designation, students may do a full year of research for 5 units per semester or they may elect to earn more than one unit of research credit, though only one such unit will count toward the minimum major requirement. Open to senior students majoring in biology; Prerequisite: sponsorship by a faculty member.

499. SYE: Honors Research. (.5 or 1 unit)
Graduation with honors in biology requires exceptional academic accomplishment as demonstrated by a biology GPA of 3.5 or above and the completion of a second semester of SYE honors research according to departmental guidelines. This research will be presented orally to the mentor's research team and will be written as an honors thesis. Open to senior majors in biology. See honors guidelines above or at it.stlawu.edu/~biology/biology_honors.htm. Prerequisite: sponsorship by a faculty member.

Biology–Physics
Interdisciplinary major offered

More information on this interdisciplinary major can be found by linking directly to it from the Majors and Programs page at www.stlawu.edu.

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

- Four biology courses: 101, 102, 326, 386.
- Four units of physics, must include 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. Students should register for Physics 151, 152 and not Physics 103, 104.

**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 variety of problems.

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

**Major Requirements:**

I. A dynamic business leader brings multiple perspectives to bear on business decision-making. To encourage greater depth of knowledge, business in the liberal arts majors are required to complete a second major (i.e., they must double-major in business in the liberal arts and one other field) at St. Lawrence University.

II. All business in the liberal arts majors must complete the following seven courses:

- ECON 100: Introduction to Economics.
- ECON 251: Intermediate Microeconomics.
- ECON 252: Intermediate Macroeconomics.
- ACC 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. Students double-majoring in economics and business in the liberal arts may not take their business electives from courses taught in the economics department. Students may petition the business in the liberal arts program coordinator for additional courses they believe may satisfy one of these elective areas.
but are not listed below. Special Topics courses may not be used as electives in the business in the liberal arts major.

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 May Fill This Elective Include (but are not limited to):

- CHEM 306: Environmental Chemistry and Toxicology.
- ECON 308: Environmental Economics.
- ECON 384: Natural Resources.
- ENVS 101: Introduction to Environmental Studies.
- GOVT 312: Environment Law and Politics.
- GOVT 316: Ethics in Business and the Professions.
- GOVT 343: Ecology and Political Thought.
- PEAC 120: Introduction to Peace Studies.
- PHIL 203: Ethical Theory.
- PHIL 310: Environmental Philosophy.
- PSYC 313: Industrial/Organizational Psychology.
- PSYC 318: Environmental Psychology.
- SOC 124: Dirty Business.

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 May Fill This Elective Include (but are not limited to):

- Any Modern Languages and Literatures course
- BIOL 412: Cross-Cultural Perspectives in Healing.
- ECON 322: International Economics.
- 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.

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 May 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 202: Reasoning.
- 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.
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 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. Also Professor Harris (environmental studies); Associate Professors FitzRandolph (economics), LeClerc (sociology).

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

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 (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 Stoddard (global studies), White (modern languages and literatures); Associate Professors Bass (English), Casanova-Marango (modern languages and literatures), Chew-Sánchez (global studies), Jennings (history), Llorente (modern languages and literatures); Assistant Professors McConnell (government), Willson (biology).

Visit the Caribbean and Latin American studies program Web site at www.stlawu.edu/academics/programs/caribbean-and-latin-american-studies, or link directly to it from the academics page at www.stlawu.edu.

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.

Minor Requirements

The minor serves as a strong foundation for graduate and professional studies and a variety of professional careers by preparing students to be informed and responsible global citizens. The minor consists of six courses. The first four courses of this requirement may be filled in two ways:

a) Taking CLAS 104, Introduction to Caribbean and Latin American Studies, or CLAS/Spanish, Introduction to Hispanic American Literature, or CLAS/History 233 Modern Latin America, or Government/CLAS 228 Latin American Politics, and five additional courses that are cross-listed with Caribbean and Latin American Studies. Under exceptional circumstances and with the approval of the Caribbean and Latin American Studies board, students may carry out an SYE to fulfill one capstone course of the minor.
b) Participating in any SLU-approved Caribbean and Latin American Studies study abroad program. The four electives of the abroad program that fulfill the Caribbean and Latin American Studies requirements will be taken into account for the minor. Most courses offered on Caribbean and Latin American Studies abroad programs are included. Among the two courses at St. Lawrence that are cross-listed with Caribbean and Latin American Studies, one can be an SYE. To ensure breadth, students must count their courses in at least two departments for the minor.

Language Caribbean and Latin American Studies minors are vigorously encouraged to study any of the major languages spoken in the Caribbean and Latin America.

Senior-Year Experience This is a one-semester independent study. It is normally done as an SYE (CLAS 489/490). Students develop a project with a faculty supervisor of their choice and then submit a proposal (usually 2-4 pages plus bibliography) to the Caribbean and Latin American Studies coordinator for approval. This should be done before registration for the semester in which the project will be completed. Upon approval of the proposal, the student will be allowed to register for the capstone course. The proposal must include the following: • A rationale for the project, including research question(s), theoretical framework and methodology. • Information on how the project will enhance the student’s critical thinking, research skills and communication skills. • An explanation of how the project addresses the interdisciplinary nature of the minor. • A description of the ways in which the project reflects the unique academic and experiential journey of the student. • A preliminary bibliography and literature review that informs the project.

Study Abroad CLAS encourages students to immerse themselves in one of the societies of the Caribbean or Latin American region to experience and to test what they learn through classes and readings on campus. Through a study abroad program, students can develop their language skills; live with families; observe from a different location the power exercised by the U.S. over the region; discover the diverse environments, identities, cultures and histories of the people in the host society; and take a full load of CLAS courses that would not be available on campus. Students can study in English at the University of the West Indies in Trinidad and Tobago. Students with additional language skills have several options, depending on their academic interests. One is an approved program in San Jose, Costa Rica, at the Universidad de Costa Rica (requiring Spanish 201). Students highly proficient in Spanish can enroll for a semester or year at one of 17 Latin American and Caribbean universities (in Argentina, Chile, Colombia, Dominican Republic, Mexico, Nicaragua, Uruguay) through the International Student Exchange Program (ISEP). A student proficient in Portuguese could enroll through ISEP in Brazil.

Courses
104. Introduction to Caribbean and Latin American Studies.
This interdisciplinary core course is designed to introduce students to the richness and diversity of Latin American cultures, the region’s turbulent history of conquest and colonization, and the problems of its development. The course familiarizes students with the vitality of Latin American art and literature and relates Latin American culture with cultura latina in the United States. The course provides a framework for more advanced studies on Caribbean and Latin American themes. Also offered as History 115 and as Government 104.

247, 248. Special Topics.
These seminars offer students the opportunity to study specific topics in CLAS when offered by departments.

Departmental Offerings
English
224. Caribbean Literature in English.

Global Studies
102. Introduction to Global Studies II: Race, Culture, Identity.
250. La Frontera: Cultural Identities on the Mexican-U.S. Borderland.
255. Popular Culture.
260. Transnational Migration.

Government
228. Latin American Politics.

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

Modern Languages and Literatures
French
489, 490. SYE: Independent Study.

Spanish
103, 104. Intermediate Spanish.
201. Advanced Spanish.
211. Introduction to Latin American Cultures.
221. Latin America in Film.
247, 248. Special Topics.
444. Introduction to Hispanic American Literature.
446. Oral Expression in Spanish.
447, 448. Special Topics.
489, 490. SYE: Independent Study.

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 Gao, Glazier, Marano (chair), Skeels; Assistant Professors Dixon (joint appointment with biology), Law.

Visit the chemistry department webpage by linking from the Majors and Programs page at www.stlawu.edu.

Chemistry is hailed as the central science, a distinction merited by the role it plays in understanding the functioning of the natural world. The focus is at the atomic and molecular levels, on the structure and function of molecules, their interactions with other molecules, their transformations into new substances and the physical laws that govern these processes. The laboratory-intensive curriculum provides students with hands on experience with modern separation and spectroscopic methods for substance purification, quantitation and identification.

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

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

In addition to the major, a student may opt for a six-course minor in chemistry or a combined major in environmental studies and chemistry. The department also offers a biochemistry major in collaboration with the biology department and a chemical engineering program in which students complete three years at St. Lawrence and two years at an engineering school, receiving bachelor's degrees from each institution. Please see “Pre-Professional Programs” 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 .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 and from 221 to 222 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>Third</td>
<td>Quantum Chemistry and Spectroscopy (341)</td>
</tr>
<tr>
<td>Fourth</td>
<td>Biophysical Chemistry (342)</td>
</tr>
<tr>
<td></td>
<td>Advanced Laboratories (3 half-unit courses)</td>
</tr>
</tbody>
</table>

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

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

Suggested Courses

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

Minor Requirements

A minor in chemistry entails completion of 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.

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.

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 at least six units of chemistry/biochemistry with a GPA of 3.5 or higher and who have an overall GPA of 3.2 or higher.

Courses
103, 104. General Chemistry. (1.25 units each)
An introduction to chemistry for science and non-science majors. Both courses use in-class experimentation, discussion and lecture to ask and answer questions of general chemical interest, including applications in biology, physics, astronomy and geology. Students discuss experimental data using the logic and language of chemistry and are frequently asked to substantiate conclusions using both conceptual and quantitative reasoning. Topics include water and its unique properties, atomic structure and properties, molecular structure, types of chemical bonding and reactions, redox systems and electrochemistry, reaction equilibria, thermodynamics and kinetics. Three class periods plus one laboratory period per week; students may also participate in weekly peer-led team learning workshops. Prerequisites: secondary school algebra or enrollment in a college mathematics course. A grade of 1.75 or higher in 103 is required to fulfill the prerequisite for enrollment in 104. A grade of 2.0 or higher in 104 is required to fulfill the prerequisite for enrollment in 200-level courses. Required for the neuroscience major. Fulfills the natural science with lab distribution requirement.

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. Fulfills the natural science distribution requirement. Offered spring semester in alternate years, may be offered as an FYS.

205. Quantitative Analysis. (1.25 units)
An introductory course dealing with the chemical, physical and logical principles underlying quantitative chemical analysis. Among the broad topics treated are data evaluation, titrimetry, solution equilibria, 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 fall 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 microscopic 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 spring semester in alternate years.

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. 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
342. Biophysical Chemistry.
The foundations of chemical equilibria in thermodynamics are used to ask why
some reactions are always favorable, some are only possible under particular
conditions and others are impossible. We will study reaction kinetics to determine
the timescales and possible reaction mechanisms of favorable reactions, and
read and discuss journal articles relevant to thermodynamic and kinetic ques-
tions of current importance in biochemistry. 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. Class-
room 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, properties and
reactions of inorganic compounds. The experiments may include investigation of
physical, thermodynamic or kinetic properties. Products of inorganic syntheses
will be characterized by a variety of techniques that include ultraviolet-visible,
infrared and nuclear magnetic resonance spectroscopy, and magnetic susceptibility.
Synthesis in an inert atmosphere is presented. Written assignments are designed
to develop rhetorical skills using chemical language, primary literature sources,
practical data processing and presentation software. The course is organized into
two lectures and two laboratories per week. Normally taken in the junior
year. Offered only in the spring semester for the first 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 funda-
mental properties of molecules. Written assignments are designed to develop
rhetorical skills using chemical language, primary literature sources, practical data
processing and presentation software. The course is organized into two lectures
and two laboratories per week. The classroom material presents the theoretical
and practical background material to the laboratory experiments. This course is
normally taken by second-semester juniors. Offered only in the spring semester
for the second seven weeks. Prerequisites: Chemistry 205 and 341 or 342.

389, 390. Research for Juniors. (0.5 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 for the first seven weeks. Also offered as Biology
394 and Biochemistry 394.

403. Advanced Inorganic Chemistry.
The central theme is understanding the periodic trends of the elements. To
conduct this survey of the periodic table, this course draws upon and extends
the skills and knowledge acquired in previous chemistry courses. Topics include
acid-base theories, chemical bonding and molecular structure, descriptive
chemistry of non-transition elements and coordination chemistry. The course
also explores the application of the principles of inorganic chemistry to such
active fields of research as materials/nanoscale, organometallic and bioinorganic
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, oncogenes
and cancer, 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

Professor DeFranza; Associate Professor Harcourt (Chair);
Assistant Professor Torrey.

Visit the mathematics, computer science, and statistics de-
partment webpage at www.stlawu.edu/math or by linking
directly to it from the Majors and Programs page at www.
stlawu.edu.

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 to-
gether 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.
## Computer Science

Computer science majors can take advantage of the sequence of programming courses that lay 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 in the study of languages as mathematical constructs and in 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 computer science courses taught in fully computerized classrooms, networked access to class resources, and the use of advanced machines and capabilities in upper-level courses.

### Major Requirements

The requirements for a major in computer science include 10 courses: four required basic courses, three required core courses, two electives and one mathematics course.

#### 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)
- Computer science courses at the 300+ level

### Advanced Placement

Students who enter St. Lawrence with a 4 or 5 on the Advanced Placement AB 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.

### Mathematics Requirement

The only required mathematics course for the computer science major is Mathematics 280 (A Bridge to Higher Mathematics). Ideally it should be taken no later than the semester in which a student takes Computer Science 256 (Data Structures) and before Computer Science 362 (Algorithm Analysis) and 380 (Theory of Computation). Students are also strongly encouraged to take Mathematics 135 (Calculus I) and should consider other courses in mathematics and statistics.

### Honors Senior Project

Students wishing to receive honors in Computer Science must have a major GPA of 3.5 and complete an honors Senior Project. This project can be an individual research project, an individual programming project or a group programming project. In any case, it must include a substantial written component and an oral presentation of the final product.

### 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.

### Courses

#### 140. Introduction to Computer Programming.

This course gives students an introduction to programming using a high-level language, with emphasis on problem-solving and algorithm development. Computer programming skills are enhanced through individual student projects. Fulfills the distribution requirement in mathematics.


An in-depth look at computing and programming using high-level languages. Topics include advanced programming techniques and efficient algorithms for the solution of problems on a computer. Students complete a large programming project. Prerequisite: Computer Science 140 or the equivalent. Fulfills the distribution requirement in mathematics.

#### 220. Computer Organization.

Topics include data representations, digital circuits, the organization of CPUs, machine language and an introduction to assembly language programming. Prerequisite: Computer Science 219. Offered in spring semester.
250. Computer Science Seminar.
This laboratory-based course covers topics important for a well-rounded computer science education. Topics vary from week to week and may include problem-solving in the context of programming competitions; advanced operating system topics in Linux; practical applications of computer science such as Web, file and database server administration; advanced debugging and profiling techniques; practical cryptography; and computer science history. 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 the course for credit. Prerequisite: Computer Science 219.

256. Data Structures.
Techniques and algorithms for the organization, representation and processing of data on the computer. Topics include strings, lists, stacks, queues, trees and graphs, as well as their applications. Prerequisite: Computer Science 219. Offered in fall semester.

317. Mathematical Logic.
An introduction to modern mathematical logic, including the most important results in the subject. Topics include propositional and predicate logic; models, formal deductions and the Gödel Completeness Theorem; applications to algebra, analysis and number theory; decidability and the Gödel Incompleteness Theorem. Treatment of the subject matter is rigorous, but historical and philosophical aspects are discussed. Prerequisite: Mathematics 280. Offered as interest warrants. Also offered as Mathematics 317.

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.

This course presents an overview of computer networking while focusing on the technological issues which have made the internet successful. Topics include protocols associated at the application level (HTTP, DNS, FTP, BitTorrent, etc.), transport level (TCP/UDP), network level (IP/ATM), and issues related to network security. Students will gain experience with common networking tools; writing programs that operate on the transport layer; and the Linux operating system. Prerequisite: Computer Science 256. Offered as interest warrants.

324. Numerical Analysis.
Topics covered include finite differences, interpolation, numerical integration and differentiation, numerical solution of differential equations and related subjects. Prerequisite: Mathematics 217. Offered as interest warrants. Also offered as Mathematics 324.

332. Web Programming.
This course introduces the terminology of the Web and the Hypertext Markup Language (HTML) as well as concepts of distributed computing, including client-side and server-side programming. Prerequisite: Computer Science 256 or permission of the instructor. Offered every other year.

362. Algorithm Analysis.
Students learn techniques and methods for designing, analyzing and testing the efficiency and performance of computer algorithms. The course includes an introduction to the theory of polynomial reducibility. Prerequisites: Computer Science 256 and Mathematics 280. Offered in fall semester.

364. Programming Languages.
This course consists of two parts: a comparison of various computer languages and their uses, and a study of the concepts and organization of computer languages. Prerequisite: Computer Science 220 or 256. Offered in spring semester.

An introduction to computer system design and use. Topics may include assemblers, interpreters, compilers, loaders, macro-processors and operating systems. Prerequisite: Computer Science 220. Offered as interest warrants.

374. Artificial Intelligence.
This course introduces the concepts and uses of artificial intelligence. Possible topics include search strategies, natural language processing, expert systems, neural nets and robotics. Prerequisite: Computer Science 256. 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. Prerequisite: Computer Science 256 and Mathematics 280. Offered in spring semester. Also offered as Mathematics 380.

Permission required.

489. SYE: Senior Project for Majors.
Permission required.

498. SYE: Senior Honors Project for Majors.
Permission required.

Conservation Biology
Major offered

Associate Professors Barthelmess (coordinator), Baldwin, McKnight, Pai, Olendzenski, Temkin; Assistant Professor 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 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. Biodiversity conservation requires an understanding not only of organisms and their interactions with environments (ecology), but also of how biodiversity changes through time (genetics and evolution), how people value biodiversity (philosophy and ethics), how modern economic systems influence the lifestyle and conservation choices people are willing to make (economics, sociology), how globalization affects the distribution of organisms through space and time as well as the transfer of knowledge, values and cultures, (global studies), how this transfer influences biodiversity (global studies) and the art and science of conservation management and policy (environmental studies, government, biology).
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 minimum 3.5 GPA in all courses required for the major at the time of graduation and must satisfactorily complete a year-long honors research project, supervised by an honors committee comprised of the project advisor and two other faculty members. Students wishing to conduct and 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 complete a significant period of study outside of northeastern North America. This requirement may be met 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 requirement.

Required Courses

I. Introductory 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
- Environmental Studies 101, Introduction to Environmental Studies

II. Allied Science or Math Courses

_Students take one of the following options:_

A) Geology 103, Dynamic Earth, and Geology 104, Evolving Earth
B) Chemistry 103, 104 (or substitute Chemistry 105 for 103 and 104), General Chemistry
C) Any two of the following four:
D) Statistics 113, Applied Statistics and Global Studies 233, GIS with lab

III. 200- and 300-level courses

- Biology 221, Ecology
- Biology 245/245, Genetics or Biology 343, Evolution
- Global Studies 301, Theories of Global Political Economy
- Global Studies 333, Ethics of Global Citizenship

IV. 400-level courses

- Biology 440, Conservation Biology

V. Electives

Students completing the major must take one advanced ecology elective, three biodiversity electives (of which 1 can be about vertebrate animals) and a global perspectives elective. Approved courses are listed below. In addition, students may petition the major coordinator to have other courses fulfill these electives. This option may be particularly relevant for students traveling abroad. Students may count up to two courses taken while abroad toward the requirements for the major.

_The following courses fulfill the Advanced Ecology elective:_

- Biology 330, Ecology of Lakes and Rivers.
- Biology 357, Behavioral Ecology.
- Biology 360, Marine Ecology.
- Biology 380, Tropical Ecology.

_The following courses fulfill the Biodiversity elective. Students must take three, only one of which can be specific to vertebrates:_

- Biology 209, Vertebrate Natural History.
- Biology 215, Invertebrate Biology.
- Biology 224, Biology of Vascular Plants.
- Biology 227, Mammalogy.
- Biology 231, Microbiology.
- Biology 258, Ethnobotany.
- Biology 281, Ornithology.
- Biology 319, Plant Systematics.
- Biology 325, Mycology.

Invertebrate Paleontology may also fulfill a biodiversity elective.

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

- Biology 209, Vertebrate Natural History.
- Biology 215, Invertebrate Biology.
- Biology 224, Biology of Vascular Plants.
- Biology 227, Mammalogy.
- Biology 231, Microbiology.
- Biology 258, Ethnobotany.
- Biology 281, Ornithology.
- Biology 319, Plant Systematics.
- Biology 325, Mycology.

Invertebrate Paleontology may also fulfill a biodiversity elective.
Anthropology 102, Cultural Anthropology.
Anthropology 255, Environmental Perception and Indigenous Knowledge.
Economics 228, African Economies.
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 (or members) but doing so is not a requirement of the major.
Students are also encouraged to study a foreign language, but doing so is not required for the major.

Economics
Major and minor offered

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

Visit the economics department webpage at www.stlawu.edu/economics or by linking directly to it from the Majors and Programs page at www.stlawu.edu.

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). 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.

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. Students who are less confident in their mathematical skills should take Statistics 113 (Applied Statistics) prior to 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 com-
pleted 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 to transfer students in special cases. Courses taken at other universities or as part of off-campus study programs do not normally satisfy the 300-level requirement.

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.

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

Honors

Department honors are awarded to students who have, upon graduation, at least a 3.5 average in economics courses and have successfully completed an honors project. Students who expect to pursue an honors project should consult with their advisor and the department chair as soon as possible in their junior year. Prospective honors students should also take Economics 342 (Econometrics) during their junior year (See also Honors in the Curriculum section of this Catalog.)

Courses

Accounting

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.

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. Students less confident in their mathematical skills should take Statistics 113 prior to Economics 200. 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 Bacherell, 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.

289, 290. Independent Project.
Individual study of a topic under the supervision of a faculty member. Prerequisites: GPA of at least 3.0 in economics and permission of instructor.

305. Industrial Organization and Public Policy.
A theoretical and empirical analysis of the structure, conduct and performance of American industry. Emphasis is placed on the use of microeconomic theory to analyze the effects of public policies on market incentives and resource allocation. Topics include theories of the firm, monopolization, mergers, antitrust law, price fixing, price discrimination and other contemporary problems. Prerequisite: Economics 200 and 251.

307. Law and Economics.
This course analyzes the law using economic principles. In particular, it employs the techniques of microeconomic theory in the study of policy issues and legal rules. Topics such as property rights, externalities, contract law, tort law (accidents), product liability and criminal adjudication are critiqued in terms of how different incentive structures motivate economic actors. The course includes the study of how economic goals conflict with and complement other goals of the law, such as justice and fairness. Prerequisite: Economics 251.

308. Environmental Economics.
An analysis of deficiencies of the market system and existing property rights structure that generates pollution problems. This course applies the theories of externalities, public goods, the second-best, nonmarket valuation, and benefit-cost analysis to environmental policy and regulation. Alternate policy options are considered, including command-and-control and incentive-based approaches. This course discusses local environmental quality issues (such as the management of municipal and toxic waste) and global problems (such as ozone depletion and climate change that require international policy). Students learn tools of economic analysis and their application to environmental issues and problems. Prerequisite: Economics 251. Also offered as Environmental Studies 308.
309. Labor Economics.  
A study of labor markets and the role they play in the determination of wages, employment and working conditions. The demand for labor by employers, leisure-labor supply decisions by households, investment in human capital, distribution of earnings among individuals and the effects of labor unions are discussed. Topics covered may include analysis of the role of government policy in the areas of income maintenance, unemployment, education, and occupational health and safety. Prerequisites: Economics 200 and 251.

311. Banking and Monetary Policy.  
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 251 and 200.

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 the original writings of Adam Smith and Karl Marx. 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 neo-classical 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. Also offered through Statistics.

343. Time Series Analysis.  
Statistical methods for analyzing data that vary over time are investigated. Topics include forecasting systems, regression methods, moving averages, exponential smoothing, seasonal data, analysis of residuals, prediction intervals and Box-Jenkins models. Application to real data, particularly economic data, is emphasized along with the mathematical theory underlying the various models and techniques. Prerequisite: Math 136 or permission of the instructor. Also offered through 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. Topics in American Economic History.  
This course offers an overview of the economic development of the United States. The specific topics covered will vary by instructor, but have included the economic causes of the American Revolution, the evolution of financial markets, the economics of slavery and Reconstruction, the Populist movement, the growth of government in the Progressive Era, the effects of war and other crises on the 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.

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: Economics 200 and 251. Also offered as Environmental Studies 384.

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. (5 unit each)  
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.

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 and 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 Research 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 or a Senior Independent Research project that will satisfy their SYE (Economics 489 or 490). Prerequisites: GPA of at least 3.5 in economics and approval of the department chair for those pursuing Honors; GPA of 3.0 and approval of the department chair for those pursuing a non-Honors SYE.

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

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.

Honors

Honors in the interdisciplinary major are awarded in accordance with University policy on department honors (see Honors in the Curriculum chapter of this Catalog). Students may earn honors in economics-mathematics combined by completing an honors project in either department. Students interested in the economics-mathematics interdisciplinary major should consult the chair in either the economics or mathematics department.
Education

Minors offered (certification or educational studies)

**Professor** Clark; **Associate Professors** Ladd, Sanatullova-Allison (chair); **Assistant Professor** Wang; **Visiting Assistant Professor** Dodd; **Part-Time Visiting Instructors** Boyd, Kennedy.

Visit the education department's webpage at [www.stlawu.edu/academics/programs/education](http://www.stlawu.edu/academics/programs/education) or link directly to it from the Majors and Programs page at [www.stlawu.edu](http://www.stlawu.edu).

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.

Learning Goals

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.

The undergraduate program operates from a premise that the professional semester is a natural extension of the liberal arts tradition where learning is exemplified in its broadest possible sense. Rather than being principally dispensers of knowledge, liberally educated teachers reflect the thinking, exploration and intellectual climate that are the basis of all education at St. Lawrence. The professional semester provides an excellent opportunity to synthesize learning throughout the undergraduate curriculum — coursework in the liberal arts, the major and the minor.

St. Lawrence offers the following teacher certification programs, which are registered and approved by the New York State Education Department for grades 7-12: English, social studies, mathematics, biology, chemistry, physics, earth science, French, and Spanish. The University also offers a registered and approved teaching certification program for K-12 art.

**Requirements for New York State Teaching Certification**

NOTE: The programs described in this Catalog are registered and approved by the New York State Education Department and meet the regulations for initial teaching certification established by the New York State Board of Regents. St. Lawrence University's Teacher Education Program holds full national accreditation by the Teacher Education Accreditation Council (TEAC) for a period of five years, from June 30, 2007, until June 30, 2013. The University will seek continuing accreditation by TEAC in 2013.

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 (or six courses) 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. These courses, which are offered through the intercollegiate athletics and recreation department, are listed under Sport Studies and Exercise Science in this Catalog.

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
203. Contemporary Issues in American Education.
301. Principles of School Teaching.
305. Educational Psychology.
455. Language Acquisition and Literacy Development Across the Curriculum.

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)

Psychology
100, 101. Introductory Psychology.
In addition to the coursework in education, students seeking teaching certification should consider taking Performance and Communication Arts 111 (Rhetoric and Public Speaking).

Educational Studies Minor
The educational studies minor consists of any five courses in education not included in the professional semester (student teaching). Psychology 100 or 101 may be used as one of the five courses. 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. A student completing the four prerequisites for the certification minor with a grade of at least 2.5 in each course is eligible to apply for the professional semester as a post-baccalaureate student.

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 Teacher Education Advisory 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 Teacher Education Advisory Committee
5. Satisfactory completion at the 2.5 level or higher of the four prerequisite courses in education or their equivalents (Education 203, 301, 305 and 455).
6. Recommendation by the department of the academic major, verified by communication from the department chair or designee.
7. Recommendation by the department of education faculty members under whom the student has studied, verified by internal communication with the department chair.
8. A portfolio evidencing successful completion of field experience requirements in the prerequisite education courses.

Students may register for the professional semester once they are admitted to student teaching by the Teacher Education Advisory Committee. Student teaching placements in the schools are arranged only by the University’s coordinator of teacher education and the school administrators. Because weekly seminars during the professional semester are required, student teaching placements are generally made within St. Lawrence County.

Post-Baccalaureate Teacher Certification Program
For St. Lawrence undergraduates who do not complete the certification minor in education, the Post-Baccalaureate Teacher Certification Program offers an alternative route to initial teaching certification. In this graduate program, St. Lawrence students who complete the prerequisite courses for student teaching as part of the educational studies 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 Teacher Education 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.
A multidisciplinary consideration of current issues in education, to serve as a vehicle by which students may explore the idea of entering the teaching profession. The course includes a multi-cultural examination of current educational issues through lectures, readings, research and discussions of position papers prepared by the student. A field experience is required. Students registering for one of the sections of EDUC 203 associated with Community-Based Learning (CBL) must register for one of the 1.5-hour CBL labs to complete the field experience. Registration priority to sophomores and juniors intending to enroll in the professional semester. Also offered through African-American Studies and Peace Studies.

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. Pre-requisite: EDUC 203, 301 or 305.

301. Principles of School Teaching.
This course is designed to help students develop effective techniques for teaching and creating a climate that is safe and conducive to learning in classrooms. Students learn through lectures, readings, field experience in the public schools, videotaped micro-teaching in small groups on campus and exposure to a variety of role models from the University community and the region. The uses of standards and objectives in curriculum development and assessment are examined. Techniques for acquiring and integrating information, refining and extending knowledge and team-teaching are explored. A field experience in the public schools is required. Registration priority to juniors and sophomores intending to enroll in the professional semester. Pre-requisite: Psychology 100 or 101.

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. Pre-requisite: Psychology 100 or 101.

370. Outreach to Schools II.
Outreach to Schools is both a set of courses and a University program. The program seeks to “bridge the gap” between the University campus and the public schools by having college students teach lessons in public schools as requested by the K-12 school teachers. The courses expose college students to research-based educational practice by designing and teaching lessons that apply constructivist learning theory in classroom situations; they are student-run courses tightly structured and monitored by the instructor. EDUC 370 concentrates on advanced teaching skills as well as organizational and evaluative skills important for effective operation of the program. Open only to education minors. Pre-requisite: EDUC 270.

405. The Dynamics of School Teaching.
Student teaching seminar.

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 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 203, 301, 305 and 455 or their equivalents. 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 development in alignment with the New York State learning standards. Prerequisites: Education 203, 301, 305 and 455 or their equivalents. Enrollment by permission only.

436. Individual Differences in Inclusive Classrooms.

This course addresses the need for teachers to facilitate the learning of students with a variety of special needs in inclusive classroom settings. Attention is paid to the special education referral and planning process spelled out by the Individuals with Disabilities Education Act (IDEA), the role of the classroom teacher in meeting the educational needs of mainstreamed students and strategies for helping all students to meet the New York State learning standards. A field experience in the public schools is required. Prerequisites: Education 203, 301, 305 and 455 or their equivalents. Enrollment by permission only.

437. Classroom Organization and Management. (0.5 credit)

This course is designed to assist student teachers in the professional semester to develop successful approaches to classroom management for diverse learners. Students investigate the current theories in classroom organization and behavior management, critically analyzing them according to recent research on learning and school structure. As a part of the professional semester, students have opportunities to apply theories learned in the course in actual classroom situations. Open only to seniors or graduate students approved for the professional semester. Prerequisites: Education 203, 301, 305 and 455 or their equivalents. Enrollment by permission only.

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 counseling. For information about graduate-level offerings in education, refer to the Graduate Studies Catalog, available online at www.stlawu.edu/english or by linking directly to it from the Majors and Programs page at www.stlawu.edu.

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 or 200 level, to include English 250, and four other introductory courses (one of which may be in creative writing).

2. Five courses at the 300 or 400 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 or 200 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 or 400 level. These five courses must include a Senior Seminar (English 450). Two courses must be taken under the Studies in Advanced Writing (AW) rubric, but no more than two courses may be taken from any one of the Studies rubrics.

*Students may take more than the minimum of 10 courses in English. However, the registrar will not give credit toward graduation for more than 14 courses in a single department.

Studies Rubrics for 300-Level Courses

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. Prerequisites: English 250 and one other 200-level course.

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. Prerequisites: English 250 and one other 200-level course.

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. Prerequisites: English 250 and one other 200-level course.

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. Prerequisites: The 200-level introduction to the advanced genre, and one other 200-level course.

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. Prerequisites: English 250 and one other 200-level course.

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 level; and three literature courses at the 300 or 400 level.

2. The English minor in creative writing requires English 250 (Methods of Critical Analysis); two literature courses at the 200 level; three writing courses, one of which must be from the Studies in Advanced Writing (AW) rubric; and one literature course at the 300 or 400 level.

Environmental Studies-English Major

The environmental studies-English major gives students an opportunity to combine seven core courses in environmental studies with eight 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 31 of the semester preceding the beginning of the project.

The project is developed in English 498 (Honors Projects) under the direction of a faculty advisor, and is offered only in the fall semester. Critical projects usually examine the works of a particular writer, or a literary theme or practice that two or more writers share. Creative projects are usually collections of original poetry, fiction, prose essays or screenplays. (See also Honors in the Curriculum chapter of this Catalog.)

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, drama, fairy tales, 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.

201. Introduction to Newswriting.
In this course, students are introduced to the fundamentals of news writing. Through a combination of workbook exercises and reporting assignments, participants learn how to gather news and write it up in an appropriate style. The focus of the course is on the development of specialized writing skills.

212L. 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 213.

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 insights into topics central to African-Third World stud-
ties, such as reaction and resistance to colonialism, and the forging of complex cultural identities, in a post-colonial culture. Also offered through African Studies.

221. Reporting for the Web
This course focuses on two equally important issues: journalistic theory and practice. In the first half of the semester, students learn how to compose 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 these writing and reporting skills in an atmosphere closely resembling the conditions of a professional newsroom, covering actual events of local, state, national, and international importance as they unfold in real time under the pressure of real deadlines. The objective is to produce a weekly update for the existing news website (www.TheHillNews.org).

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: dialog, characterization, dramatic action and others. The course concludes with the writing of a one-act play. Students read exemplary plays from the modern repertoire. Also offered as Performance and Communication Arts 223.

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

225, 226. Survey of English Literature.
These courses provide an overview of British literature beginning with the Anglo-Saxon period and extending into the 20th century. English 225 covers some works in Old and Middle English (e.g., Beowulf, The Canterbury Tales); continues with poetry and drama from the Renaissance, including Shakespearean drama; and extends from the Restoration up to 1700. 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, Naulla O’Paulain, 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.
A survey of major works and writers that have shaped the American literary tradition from its beginnings to the present, with particular attention paid to historical and social backgrounds. English 237 covers writings from the colonial period to 1900; English 238 concentrates on literary texts from the beginning of the twentieth century to the present.

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 skilful-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, intuition, chance and imagination are given as much attention as those analytic skills necessary for clear communica-
tion. All students are required to share their oral and written work for group discussion and critique.

243. Creative Non-Fiction Writing.
An introductory study of basic technical problems and formal concepts of the literary essay. Students read and write essays on various topics, including travel, personal experience, landscape, natural science and politics. Weekly written exercises and student essays are read aloud and discussed in class. Also offered through Outdoor Studies.

244. Techniques of Screenwriting.
An introductory study of basic technical problems and formal concepts of screenwriting. The study of produced screenplays and formal film technique, along with writing scene exercises, builds toward the construction of a short (50-minute) script. Also offered as Performance and Communication Arts 244, and through Film and Representation Studies.

247. Special Studies in Language and Literature.
The content of each course or section of the course is different and is announced in the Class Schedule. Open to all students.

250. Methods of Critical Analysis.
This course introduces students to a range of scholarly methods used to interpret literary works. While each section of the course may focus on a different theme or on a different group of primary texts, all sections aim to encourage students to recognize and to apply a variety of literary critical methods. In addition, students learn the citation and formatting conventions most commonly employed in the field of literary study.

255. African-American Drama.
African-American drama is a tradition that has unique themes and forms with
sources in African ritual, language, gesture and folklore; the Southern Baptist church; the blues; and jazz. Students examine plays, read essays, view videos and listen to music to discover the qualities that make this drama a vital resource of African-American culture and an important social and political voice. Playwrights include Amiri Baraka, Adrienne Kennedy, George C. Wolfe, Alice Childress, Ntozake Shange, Ed Bullins and August Wilson. Also offered as Performance and Communication Arts 255.

263. Native American Fiction.
This course concentrates on Native American fiction in English, most of it produced in the 20th century. It suggests some of the subjects and themes common to Native American literature in general and examines some of the forms and techniques used to treat them. Writers represent a broad spectrum of Native American cultural groups and may include Louise Erdrich, Linda Hogan, John Joseph Mathews, N. Scott Momaday, Leslie Silko and James Welch. Also offered through Native American Studies.

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). Students will draw from nonfiction readings, their CBL work, and past experience, to examine the themes from both a local and global perspective. Also offered as Global Studies 273 and Environmental Studies 293.

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, students will read work by contemporary writers immersed in the experience of local food and local living. Additionally, students will study the strengths and weaknesses of their various rhetorical strategies to understand that effective “environmental” writing is as varied as other forms of creative nonfiction and depends equally on context, venue, subject, audience, and authorial intent. Also offered as Environmental Studies 282.

This course is designed for students who want to explore nature writing — the intersection of self and the natural world. We explore how this genre combines the observational, scientific “eye” with the personal, narrative “I” through readings in non-fiction anthologies, novels and/or memoirs. Students write essays on nature and the environment that reflect different objectives within the genre, such as the political essay, the literary field study and the personal essay. Students also keep a “naturalist’s journal.” Discussion of the readings is interspersed with workshop sessions. Also offered as Environmental Studies 295, and through Outdoor Studies.

306. AW: Advanced Screenwriting Workshop.
An expansion 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. Prerequisites: English 244 and one other 200-level English course. Also offered as Performance and Communication Arts 306 and through Film and Representation Studies.

307. GS: The Short Story.
An exploration of the evolution of the modern short story with special emphasis on the American tradition from World War I to the present. Representative authors include Chekhov, Joyce, Kafka, Anderson, Fitzgerald, Hemingway, Faulkner, Porter, Cheever, Baldwin, Updike, Barthelme, Carver, Oates, Munro, Cisneros, Alexis. Prerequisites: English 250 and one other 200-level English course.

308. AW: Advanced Creative Non-Fiction Writing.
The students’ own writing provides much of the material for this course, although essays by contemporary writers are read and studied. Students are given opportunities to use non-fiction topics and forms of their own choice. Special attention is paid to problems of voice and narrative method, in particular to the role of narrators in mediating what is observed. The revision and editing process is also emphasized. Prerequisites: English 243 and one other 200-level English course. Also offered through Outdoor Studies.

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. Prerequisites: English 241 and one other 200-level English course.

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 arc poétiс or manifesto, and to read from their work in public. Prerequisites: English 242 and one other 200-level English course.

312L. 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.

313. GS: Performing Poetry.
“Milktongue, goutfoot, and twitbird” 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 Performance and Communication Arts 317.

Examines the powerful and enduring artistic influence exerted by the male and female poets of the sixteenth and seventeenth centuries in England. Includes study of narrative, romantic, spiritual and polemical/political poetry, with historical contexts. Prerequisites: English 250 and one other 200-level English course. 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. Prerequisites: English 250 and one other 200-level English course. 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. Prerequisites: English 250 and one other 200-level English course. 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 interact or merge in writings of this period? How do texts fit within these categories? What determines these categories — genre, audience, context? Subject: publication format? Course texts include works by canonical figures such as Pope, Swift and Johnson, women writers and precursors of Romanticism. Prerequisites: English 250 and one other 200-level English course. 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, and one other 200-level English course. Also offered through European Studies and Outdoor Studies.

A study of representative American writers of the Romantic period, including Cooper, Hawthorne, Melville, Emerson, Thoreau, Fuller, Poe and Whitman. Prerequisites: English 250 and one other 200-level English course.

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 writers such as Mark Twain, W.D. Howells, Edgar 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. Prerequisites: English 250 and one other 200-level English course.

The novel is a relatively new genre, a form that emerged in the 18th century and differed from previous ones in appearing only in print. Why did the English novel originate at this time? What did authors imagine it as being and doing? And how did the genre evolve throughout the 18th century? To answer these questions, we situate the novel within its historical contexts, examining English politics and culture. We also survey the century's most influential novels and assess the development of subgenres such as the epistolary novel, the Gothic novel and the novel of manners. Prerequisites: English 250 and one other 200-level English course. Also offered through European Studies.

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 (such as the hilarious Vanity Fair and Barcester Towers) and ending with a few novelistic forms that arose or reasserted at the end of the period (sci-fi, horror, detective fiction). Prerequisites: English 250 and one other 200-level English course. Also offered through European Studies.

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. Prerequisites: English 250 and one other 200-level English course.

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, Cather, 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 Environmental Studies 346, and through Outdoor Studies.

347. Special Studies in Language and Literature.
The content and the Studies rubric area of each section of the course varies, and is announced when the Class Schedule is published prior to registration.

349. GS: Modern British and American Poetry.
A survey of modern poetries from the Anglo-American canon. Major authors include Thomas Hardy, A.E. Houseman, W.B. Yeats, Robert Frost, D.H. Lawrence, Hilda Doolittle (H.D.), Ezra Pound, T.S. Eliot, William Carlos Williams, Wallace Stevens, Robinson Jeffers, e.e. cummings, Marianne Moore, W.H. Auden, Philip Larkin, Robert Lowell, Gwendolyn Brooks, Dylan Thomas and Sylvia Plath. The general aim of the course is to strengthen our capacity to read carefully and experience more deeply the work of a wide variety of poets. Prerequisites: English 250 and one other 200-level English course.

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 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? Prerequisites: English 250 and one other 200-level English course. 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 1930. Prerequisites: English 250 and one other 200-level English course. Also offered through European Studies.

A survey of modern American novelists from Dreiser, Cather and Lewis through Hemingway, Fitzgerald, Faulkner and important writers of the 1930s. Prerequisites: English 250 and one other 200-level English course. Also offered through European Studies.

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, Karao Ishiguro, Doris Lessing, Ian McEwan, Iris Murdoch, V.S. Naipaul, Salman Rushdie, Zadie Smith, and Jeanette Winterson. Prerequisites: English 250 and one other 200-level English course. Also offered through European Studies.
356. LT: Contemporary American Literature.
An introduction to American literary works since 1960 for the purpose of illuminating the variety of forms that contemporary literature has taken and the themes it has addressed. Although the novel is the genre emphasized in most of the course, short stories, novellas, works of creative non-fiction and graphic novels are also included. Authors whose work has recently been studied in this course include Barthelme, Capote, Didion, Elkin, Ellison, Erdich, Geary, Heller, Hogan, McGuane, Millhauser, Morrison, Naylor, O’Brien, Palahniuk, Pynchon, Roth, Spiegelman and Updike. Prerequisites: English 250 and one other 200-level English course.

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 postcoloniality 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 postcoloniality. Prerequisites: English 250 and one other 200-level English course. 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. Prerequisites: English 250 and one other 200-level English course.

A survey of the contributions of women writers to the development of the American literary tradition. Representative writers include Stowe, Jewett, Freeman, Chopin, Cather, Wharton, Porter, Morrison, Godwin and Rich. Prerequisites: English 250 and one other 200-level English course.

360. GS: Special Studies in Literary Nonfiction
Students read and analyze classic and contemporary nonfiction texts, reading widely in theory and criticism. The course has a shifting thematic focus, with recent iterations including "The American Essay," "Memoirs of the American West" and "The History of the Personal Essay." Authors frequently studied include E.B. White, James Baldwin, Joan Didion, Wallace Stegner, Phillip Lopate, Scott Russell Sanders, Annie Dillard, Gayle Pembertron, George Orwell and Virginia Woolf. Prerequisites: English 250 and one other 200-level English course.

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. Prerequisites: English 250, and one other 200-level English course. 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, Armantrout, Wright, Muldoon). While a great deal of attention is given to primary texts, poetic theory and social history are also examined. Prerequisites: English 250 and one other 200-level English course.

Student-initiated projects involving significant study and writing carried out through frequent conferences with a faculty sponsor. Prerequisites: junior standing and a 3.0 GPA in English. Proposals must be submitted to the department and approved by March 31 for the fall semester, or November 1 for the spring semester.

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.

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.

489,490. SYE: Projects for Seniors.
Student-initiated projects involving significant study and writing carried out through frequent conferences with a faculty sponsor. Prerequisites: senior standing and a 3.0 GPA in English. Proposals must be submitted to the department and approved by March 31 for the fall semester, or November 1 for the spring semester. Fulfills SYE requirement for those eligible.

498. SYE: Honors Projects.
This course is offered in the fall semester only and is 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. Prerequisites: senior standing, a 3.5 GPA.

Environmental Studies
Major and interdisciplinary majors offered

Professor Harris; Associate Professor Johns (Chair), Rosales; Assistant Professors Backlund, Lavigne. Also Professors Greene (psychology), Koon, (physics), Singer (English), Thacker (canadian studies), Weiner (English), Young (economics); Associate Professors Assefa (Sociology), Barthelmes (biology), Gao (chemistry), Hussmann (English), Johnson (philosophy), McKnight (biology), O’Donoghue (physics), Pai (biology); Assistant Professors Buck (government), Desmond (religious studies), Evans (economics), Jones (sociology), Skeels (chemistry), Stewart (geology), Willson (biology).

Visit the environmental studies department webpage at envstudies.stlawu.edu or by linking directly to it from the Majors and Programs page at www.stlawu.edu.
The increase in consumption and human population coupled with increasing misuse of natural resources has led to serious degradation of the environment and threatens natural ecosystems and human societies which depend upon them. In order to understand these problems, root causes, contemporary drivers and potential solutions, the environmental studies curriculum incorporates environmental science (both natural and social) and perspectives from the humanities (e.g., literature, philosophy).

In environmental studies, students engage the complex nature of environmental problems. Students learn that study of these problems cannot occur piecemeal. A careful examination of the interrelationships of both natural and social systems is essential if we are to preserve environmental quality and achieve sustainability. The overall aims of the curriculum are to provide specific knowledge of the relationship between traditional disciplines and interdisciplinary perspectives of environmental studies and to foster integrated approaches for environmental problem-solving. Courses explore the holistic nature of environmental issues by analyzing of environmental problems and their solutions. The curriculum includes courses listed with other departments as well as in particular areas of environmental studies.

While many students incorporate off-campus study for at least one semester, most courses focus on the study of rural issues, both inside and outside the classroom, to make maximum use of the Adirondacks and St. Lawrence River Valley.

A student may choose environmental studies as a stand-alone major, a combined major in conjunction with other departments (see below), or as one field in a multi-field major (see Curriculum, Multi-field Major Program). Students can earn a B.S. degree emphasizing environmental science via combined majors with biology, chemistry, geology, mathematics or psychology; or a B.A. degree in the stand-alone major or in a combined major with economics, English, government, philosophy or sociology.

Students enroll in Environmental Studies 101 in their first or second year 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:

1. Gain the capacity to analyze and evaluate how human activities influence the environment on local, regional and global scales;
2. Understand the underlying scientific basis for existing and emerging environmental issues;
3. Utilize interdisciplinary approaches appropriate for the complexity of environmental issues and their solutions;
4. 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;
5. Understand the evolution of environmental thought in North America as a basis for the contemporary environmental movement;
6. Recognize justice and sustainability as key elements in environmental decisions and understand the patterns of unequal responsibility for environmental degradation;
7. Develop the capacity to conduct research and communicate findings to enhance public understanding and to contribute to environmental problem-solving;
8. 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 and all ESP (see page 113) courses 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 and all combined majors, no more than two courses can be counted as electives from other institutions and University-approved abroad/away programs.

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.

Environmental Studies Course Tracks within the Interdisciplinary major

Sustainability Track

It is recommended that students particularly interested in issues of sustainability enroll in at least three of the following ESP courses: 261. Sustainable Agriculture. 263. Global Change and Sustainability. 321. Land-Use Planning and Sustainable Design. 327. Topics in Environmental Sustainability. 357. Industrial Ecology. 375. The Sustainable House.

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:

203. Land Use Change in the Adirondacks.
213. Seeing History: Reading the Natural and Cultural Landscape.
249. Outdoor Recreation and Public Land.
321. Land-Use Planning and Sustainable Design.
326. Once and Future Forests.

SYE options for this track include 421 Directed Readings; 489 and 490 Senior Research; and 499 Honors Project.

Requirements

101. Introduction to Environmental Studies. 1 unit

Environmental Science and Policy (ESP) courses 4 units
Natural Science course (from dual-listed options) 1 unit
Social Science/Humanities course (from dual-listed options) 1 unit
335. Foundation of Environmental Thought. 1 unit
Electives (from environmental studies ESP and dual-listed courses) 3 units
Total 11 units

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:

1. Introduction to Environmental Studies. 1 unit
2. Environmental Science and Policy (ESP) courses 3 units
3. Foundation of Environmental Thought. 1 unit
4. 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**

1. General Biology 3 units
2. General Ecology 1 unit
3. Electives* 5 units

Total 16 units

*Electives that are dual-listed should be taken under the biology number. These electives count toward the biology portion of the combined major. Biology electives must include two 300- or 400-level courses. 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**

1. General Chemistry, or 2.5 units
2. Accelerated General Chemistry 1.25 units
3. Quantitative Analysis 1.25 units
4. Organic Chemistry 2.5 units
5. Environmental Chemistry and Toxicology 1 unit
6. Quantum Chemistry and Spectroscopy, or 1 unit
7. Biophysical Chemistry 1 unit
8. Lab courses, to be selected from: 2 units
9. Advanced Organic Laboratory 2 units
10. Inorganic Chemistry Laboratory 3 units
11. Physical Chemistry Laboratory 3 units
12. Instrumental Analysis 2 units

Total 15 or 16.25 units

**Environmental Studies - Economics**

Interdisciplinary Major Core (listed above) 7 units

**Economics**

1. Introduction to Economics 1 unit
2. Quantitative Methods in Economics 1 unit
3. Intermediate Microeconomic Theory 1 unit
4. Intermediate Macroeconomic Theory 1 unit
5. Environmental Economics, or 1 unit
6. Natural Resource Economics 1 unit
7. Electives* 3 units

Total 15 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:
- 241 and 310 Fiction
- 242 and 311 Poetry
- 243 and 308 creative nonfiction
- 244 and 306 Screenwriting
- 202 Creative Expressions (Adirondack semester)
- 295. Nature and Environmental Writing
- 273. A Literary Harvest

A relevant special topics course in writing or independent study in writing may count as one course.

The following may also count as sequences:
- 243 and 295
- 202 and 295
- 243 and 273

Total 3 units

B. At least three literature courses, which must include:

At least one of the following 200-level survey courses:
- 226. Survey of English Literature
- 237. Survey of American Literature
- 263. Native American Fiction

At least one of the following 300-level literature courses:
- 328. English Romanticism
- 331. American Romanticism: 1830-1860

Or a relevant special topics seminar or independent study in literature.

At least one dual-listed English/environmental studies course:
- 346. American Literature and the Environment
- 352. Contemporary Literature and the Environment

Note: Before enrolling in a 300-level literature course, students must complete one 200-level course in literature, and one 200-level course with ESP designation

C. Students must take a senior seminar in English or
Environmental Studies, or a senior level independent study project in either department. Students who are working on a practicum, internship, or summer research fellowship the summer after their junior year may, with approval of a faculty member, fulfill this requirement by using their summer work or research as the basis of a substantial writing project through an independent study or senior writing seminar in fall or spring of their senior year.  

Total 15 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

*Electives that are dual-listed should be taken under the course number for geology. These count toward the geology portion of the combined major.

Environmental Studies–Government

Interdisciplinary Major Core (listed above) 7 units

Government
103. Introduction to American Politics.* 1 unit
105. Introduction to Comparative Politics.* 1 unit
290. Research Seminar. 1 unit
343. Ecology and Political Thought. 1 unit
Electives* 4 units

Total 15 units

*At least one of these courses must be taken as a writing-intensive course.

**Electives that are dual-listed should be taken under the government number. These dual-listed electives count toward the government portion of the combined major. Government electives must include one international course and one theory course (usually 108 and 206).

Environmental Studies–Mathematics

Interdisciplinary Major Core (listed above) 7 units

Mathematics
135. Calculus I. 1 unit
136. Calculus II. 1 unit
205. Multivariable Calculus. 1 unit
230. Differential Equations. 1 unit
350. Mathematical Modeling. 1 unit

Statistics
113. Applied Statistics 1 unit
213. Applied Regression Analysis. 1 unit
Elective 1 unit

Total 15 units

Environmental Studies–Government

Interdisciplinary Major Core (listed above) 7 units

Philosophy
201. Ancient Philosophy. 1 unit
202. Reasoning. 1 unit
203. Ethical Theory. 1 unit
206. Introduction to Political Theory. 1 unit
208. Modern Philosophy. 1 unit
310. Philosophy of the Environment. 1 unit
Electives* 2 units

Total 15 units

*Electives that are dual-listed should be taken under the philosophy number and count toward the philosophy portion of the combined major.

Environmental Studies - Psychology

Interdisciplinary Major Core (listed above) 7 units

Psychology
100. Introductory Psychology. or 1 unit
101. Introductory Psychology (with lab). 1 unit
205. Research Methods in Psychology. 1 unit
318. Environmental Psychology. 1.25 units
Electives* 5.25 units

Total 15.5 units

*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

Interdisciplinary Major Core (listed above) 7 units

Sociology
110. Global Problems. or 1 unit
112. Inequality. or 1 unit
124. Dirty Business and the Environment. or 1 unit
161. Social Problems and Policy. 1 unit

Other courses may be considered, in consultation with the department chair.
Sustainability and special topics courses. Students help Future Forest, Sustainable House, Topics In Environmental Sustainable Agriculture, Issues in Air Pollution, Once and number of courses, including Energy and the Environment, compensates farmland, wetlands, woods, a barn and farm- house adjacent to the Little River. This working landscape involves students in experiential learning activities in a numerous courses, including Energy and the Environment, Sustainable Agriculture, Issues in Air Pollution, Once and Future Forest, Sustainable House, Topics In Environmental Sustainability and special topics courses. Students help maintain gardens with heirloom crops, a small flock of rare breeds of sheep, a tree nursery and reforestation effort, and permaculture features among other activities. The farm has a seminar room used for teaching classes. Also, the ESL provides space for environmental monitoring equipment for groundwater and the 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 interrelations 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 of the course 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

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 which encompasses farmland, wetlands, woods, a barn and farmhouse adjacent to the Little River. This working landscape involves students in experiential learning activities in a number of courses, including Energy and the Environment, Sustainable Agriculture, Issues in Air Pollution, Once and Future Forest, Sustainable House, 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 environmental monitoring equipment for groundwater and the climate monitoring station in collaboration with other science departments of the University.

Courses

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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.

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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
COURSES OF STUDY

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.

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.

205. Quantitative Analysis. (1.25 units) An introductory course dealing with the chemical, physical and logical principles underlying quantitative chemical analysis. Among the broad topics treated are data evaluation, titrimetry, solution equilibria, potentiometry and absorption spectroscopy. Lectures plus one laboratory per week. Prerequisites: Environmental Studies 101; Chemistry 104 or 105 (with a 2.0 grade or higher) or permission of instructor. Also offered, 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.

213. Seeing History: Reading the Natural and Cultural Landscape. (ESP) How can we study history by looking at our surroundings? How can we interpret the past through what we see at present? Why does such an analysis help us understand contemporary environmental dilemmas? This field-oriented seminar addresses these questions through directed readings and experiential exercises. Students and faculty will construct the history of both natural sites and abandoned farms by identifying flora and fauna, as well as examining ecological relationships and agricultural artifacts. We will also compose the history of cities by looking at urban design and patterns of development. Prerequisite: Environmental Studies 101. Also offered through Outdoor Studies.

216. Climate Change Policy and Advocacy. (ESP) This course focuses broadly on the actions of groups of people in the face of climate change. Major focus is on the way knowledge, worldviews and power are used by governments in climate change decision-making. We also consider how 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 (UNFCCC). The class incorporates climate change science and impacts as they become known, and policy as it happens. Students also get involved with the climate change movement. Prerequisite: Environmental Studies 101. Also offered through Peace Studies.

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

231. Health Effects of Pollution. (ESP) An introduction to the scientific study of environmental agents and their human health effects. Emphasis is on the environmental causes of disease, including biological agents, hazardous waste, radiation, pesticides, flame retardants, drinking water contaminants, food additives, housing, occupational hazards and stress. Case studies illustrate how health effects are investigated by epidemiology and how theories of disease have evolved. Procedures for establishing regulatory policy and health standards are also discussed. Prerequisite: Environmental Studies 101.

249. Outdoor Recreation and Public Land. (ESP) Land managers are often charged with the contradictory responsibilities of allowing for an “unconfined” recreation experience while simultaneously maintaining a high degree of resource protection. This course is an interdisciplinary investigation into the phenomenon of outdoor recreation. Emphasis is given to wildland recreation—activities that are dependent on undeveloped settings. The course examines the biophysical and social science of recreation used to inform policy and planning approaches. Examples of recreation issues are drawn primarily from North America and, where applicable, the course takes advantage of the nearby Adirondack Park for field experience and research. Prerequisite: Environmental Studies 101.

251. Independent Projects in Environmental Studies. For students desiring to do individual research in environmental studies. May be elected only after submission of a written proposal during the prior semester and approval by core faculty of environmental studies. Prerequisites: Environmental Studies 101 and permission of instructor.
253. Race, Class, and Environmental Justice.  
This course focuses on the distribution of environmental degradation and environmental protection, both domestically and globally. The social processes that generate synergistic racism and class stratification, affecting the distribution of ecological costs and benefits, are explored. Substantive topics include the siting of hazardous facilities and thermo-nuclear weapons testing, the socio-ecological conditions of migrant farm workers, extraction of resources from Native lands, and the transnational export of toxic waste to the “Global South.” The course examines the origins and impacts of a distinct environmental justice movement that has emerged in the U.S. Written and oral assignments involve individual and collaborative quests for socially equitable solutions to socio-eco-historical injustices. Prerequisite: Environmental Studies 101. Also offered through Sociology.

255. Environmental Perception and Indigenous Knowledge.  
People in different cultures perceive their environment in different ways and have bodies of systematic knowledge relating to land, water, soil, plants and animals upon which they base their use of these resources. This course attempts to show how indigenous people understand the interrelationship of the different elements of their environments and have used them for sustainable livelihood. The impact of Western knowledge systems and commercial interests on indigenous communities is discussed, with reference to African and American case studies. Prerequisite: Environmental Studies 101. Also offered as Anthropology 255 and through African Studies and Native American Studies.

257. Environmental Problems.  
Environmental problems are increasingly coming to define the times we live in. In this course we consider the nature of those problems by examining the way that human activities disrupt ecological sustainability. Next, we examine the root causes of these problems by examining how our economy and politics are organized. Environmental problems imply the need for environmental solutions. Thus, we examine political and social solutions that have been proposed to these problems as well as models of successful solutions. Prerequisite: environmental studies 101. Also offered as Sociology 257.

258. Ethnobotany.  
Ethnobotany is an interdisciplinary field drawing on concepts from both natural and social sciences to investigate human-plant interactions. This course illustrates the importance of plants in our everyday life and the influence of human activities on plant populations. Independent projects center around surveys and experiments on socio-economically important plants. Field trips and labs explore Native American reservations, botanical gardens, greenhouses, nature reserves and plant population survey techniques. Three hours lecture and one three-hour laboratory per week. Prerequisite: General Biology (101) and Environmental Studies 101. Also offered as Biology 258.

261. Sustainable Agriculture. (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, organic and local 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. It examines how social systems can be organized to lessen their impact on natural systems, lessen inequalities within generations, and ensure the viability of natural resources for future generations. To do this, the course focuses on international policy as developed through the United Nations and affiliated institutions. National policy is considered, where appropriate, as examples of leadership or obstruction in diminishing human impact on the environment. Students consider local case studies that elucidate principles of sustainability. The concept of sustainability in the face of global change is critically examined throughout the course, including issues of ecological integrity and social justice. Prerequisite: Environmental Studies 101.

273. 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.

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.

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 273.

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. (ESP) (1.25)
COURSES OF STUDY

American Studies.

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.

321. Land-Use Planning and Environmental Design. (ESP)

An interdisciplinary approach to land-use planning that both satisfies human needs and protects the environment. Topics include human settlement patterns, urban development and sprawl, farmland preservation, habitat and groundwater protection, and coastal zone management. Procedures of traditional land-use planning and neo-traditional design are emphasized, including zoning, site plan review, preferential tax policies, acquisition of easements and transfer of development rights. The course integrates theory and methods within an applied context. Prerequisite: Environmental Studies 101.

326. Once and Future Forests. (ESP)

This course concentrates on the ecological conservation and restoration of past and future forests in the North Country. Students consider both old-growth forest conservation and new forest restoration. This is an applied, field-oriented, community-service, project-based course. Students work on two ongoing projects: they conduct old-growth forest inventories searching for old forests and continuing the work of the ongoing St. Lawrence County Old-Growth Program; and they work to restore the forest and stream running through the department’s Ecological Sustainability Landscape (ESL). Thus, students are exposed to the complexities and difficulties of contemporary forest ecology and management as they learn how to actively conserve and restore forests. Prerequisite: Environmental Studies 101.

327. Topics in Environmental Sustainability.

A project-based course that utilizes the Ecological sustainability landscape. The specific course content varies from semester to semester depending on the interests of the faculty and students. Possibilities include fiber arts, natural sweeteners, woodlot and orchard management, environmental interpretation and landscape carbon accounting. emphasis is on experiential education in the context of appropriate reading and reflective exercises. Prerequisite: Environmental Studies 101.

335. Foundation of Environmental Thought.

An examination of environmentalism formulated by naturalists and writers in North America. Emphasis is on a historical understanding of attitudes toward the natural world. Format is primarily seminar. A brief review of global environmental history looks at the rise and fall of various civilizations at different times in different parts of the world. Discussion then focuses on the writings of Thoreau, Muir, Leopold, Carson, Abbey and other naturalists of historical significance, as well as contemporary writers emphasizing indigenous knowledge and current issues. Problems of industrialization, limits to growth, sustainability and public land programs are also covered. Prerequisite: Environmental Studies 101. Also offered through Outdoor Studies.

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.

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 “wildness” 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, Carther, 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.

347. Special Topics.
An in-depth consideration of some area of environmental studies not covered in regular course offerings. The specific topic normally is an advanced study of some interdisciplinary problem.

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.

A study of the contemporary literary response to rising national interest in the natural world and rising awareness about the danger to natural resources. Readings are predominantly in prose (novels and essays), with some poetry included. Among the questions the authors ask: as we approach the natural world, how can we move beyond metaphors of dominion? What are the biases of gender, geography and culture that we bring to our inquiry? What is the relationship between the human and the “natural”? What does it mean to fully invest ourselves in our local environment? Prerequisite: Environmental Studies 101. Also offered as English 352 and through Outdoor Studies.

357. Industrial Ecology (ESP)
This course focuses on industrial systems to understand the impacts of products and processes from environmental, social, and economic perspectives. Strategies to reduce the environmental impacts of production and consumption are addressed. Ecological mass and energy flows offer a model for the sustainable development of industrial systems, moving from an open-loop to a closed-loop mentality. This course introduces the tools and techniques utilized in the field of industrial ecology, focusing on life cycle analysis. The methods of industrial ecology are used to study emerging technologies and concepts, such as biomimicry and nanotechnology. Prerequisite: Environmental Studies 101.

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 forests 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.

375. The Sustainable House. (ESP)
A problem-based course focusing on the house at the Ecological Sustainability Landscape (ESL). A small group of upper-level majors take on responsibility for directing the course content and implementing projects that they determine will solve a problem presented by the course facilitator. Each semester, the team will quantitatively assess the ESL house from numerous perspectives, define a realistic budget for residential renovation, and implement a project that will help the ESL house to become more “sustainable.” Prerequisite: Environmental studies 101.

376. Ecosystem-based Environmental Management. (ESP)
Over the past few 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 role 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.

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.

440. SYE: Conservation Biology.
This 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. Prerequisites: Environmental Studies 101; Environmental Studies 221 or Biology 245/246 or permission of instructor. Also offered as Biology 440 and through Global Studies.

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. Also offered as Economics 440.

European Studies
Minor offered

Advisory Board: Professors Limouze (art and art history); Associate Professors Breashears (English), Denaci (art and art history), DeGroat (history), Gabriel (coordinator; history), Jenkins (economics), Llorente (modern languages and literatures), 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 Spain, England, France, Austria, Denmark and Italy 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, grant-funded 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 can form the basis of the capstone 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 either History 205 or 206. Since these courses have few spaces open to upper-class students, early planning is highly recommended.

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 from St. Lawrence’s European study programs are included. Consult 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. Occasionally, special topics courses are offered in various departments. 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. Participation in a continental study abroad program.

IV. Capstone.

There are two options to meet this requirement:

1. EUR 489,490. This option is for seniors, and is a Senior-Year Experience.

2. EUR 485. This option is for students who wish to complete the capstone requirement before the senior year.

For either option, students develop a project with a faculty supervisor of their choice, and then submit a proposal to the European studies coordinator for approval. This should be done during pre-registration. Students initially register for the project with the European studies coordinator, and then are reassigned to their project advisor by the registrar.

This 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.

**Economics**

**English**
- 228. Irish Literature.
- 319, 320. Shakespeare.*
- 324. Elizabethan and Jacobean Drama.*
- 325. Eighteenth-Century English Literature.
- 328. English Romanticism.
- 353. Time and Self in Modern British Fiction.

**Government**
- 206. Introduction to Political Theory.*
- 330. Politics and Governments of Western Europe.

**History**
- 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.*

**Modern Languages and Literatures**

**French**
- 201. Advanced French.

**German**
- 104. Intermediate German.
- 201. Advanced German.
- 202. Advanced German: Special Topics.
- 219. Vienna: Turn of the Century. *Also offered through Film and Representation Studies.

**Spanish**
- 213. Introduction to the Cultures of Spain.
- 423. Introduction to Spanish Literature.
- 439. Literature, Film and Popular Culture in Contemporary Spain.*
- 447. Literature, Film and Popular Culture in Contemporary Spain. *Dual-listed with Film and Representation Studies.

**Literature in Translation**
- 218. The German Film.*
- 219. Vienna: Turn of the Century. *Also offered through German.

**Music**
- 023. Early Music Singers.
- 330. "Isn’t It Romantic?”
- 333. Mozart and the Classical Tradition.
- 335. The World of Clara and Robert Schumann.

**Philosophy**
- 201. Ancient Philosophy
- 206. Introduction to Political Theory.*
- 208. Modern Philosophy.
- 301. Philosophy of Science.

**Physics**
- 110. The Scientific Revolution.*
- 311. Nineteenth- and Twentieth-Century Science.*

**Religious Studies**
- 267. The Holocaust.*
Sociology
203. Foundations of Social Theory.
307. The Sociology of Karl Marx (with CBL component).
*Also offered through Global Studies.

Students uncertain about the appropriateness of courses not listed above should contact the coordinator.

Courses
485. Independent Project.
For students who wish to complete the capstone requirement before the senior year, this requires a major independent research project that draws on experiences across the curriculum and allows students to reflect on and integrate those experiences. If students have studied abroad, they are encouraged to use that experience as context for their research.

489, 490. SYE: Independent Project.
The senior project is a major independent research project that draws on experiences across the curriculum and allows students to reflect on and integrate those experiences. If students have studied abroad, they are encouraged to use that experience as context for their research.

Film and Representation Studies
Minor offered

Professors Papson (coordinator), Caldwell (modern languages and literatures), Sondergard (English); Associate Professors Henderson (music), Jenseth (film and representation studies); Assistant Professor Zhang (Asian studies).

Visit the program’s webpage at www.stlawu.edu/academics/programs/film-and-representation-studies or by linking directly to it from the Majors and Programs page at www.stlawu.edu.

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 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 post-structural, 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. Three of these courses are offered in the film and representation studies program: 211 (Introduction to Film Studies), 251 (History of the Cinema) and 311 (Film Theory). The other three are electives offered either in film and representation studies or in other departments.

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.

FILM 222. Documentary Filmmaking.
Students study style and technique in the documentary film, and make a short documentary film. In looking at documentary films, the course discusses questions of truth and value as they come into play for filmmakers and filmgoers. In making documentary films, we consider how to collect and represent different truths and values.

234. Chinese Literature and Film.
This course provides an overview of Chinese literature and film. The first half surveys traditional Chinese literature with a focus on masterpieces in the golden ages of various genres. The second half introduces modern Chinese literature with a focus on film, including representative works by well-known writers Lu Xun and Ba Jin, and famous film directors such as Zhang Yimou, Chen Kaige, Wang Xiaoshuai and others. The aim is to enhance students’ interests and skills.
in reading and analysis of Chinese literature and film, and improve students' understanding of the history, society and culture of China. All works are read in English translation. Also offered through Literature in (English) Translation in Modern Languages and Literatures, and through Asian 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 construction of a short (30-minute) script. Also offered as English 244 and Performance and Communication Arts 244.

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.

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 indigenous 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; femininity(ity) themes; ethnicity and immigration; revising history and national identity to include Aboriginal peoples; and the emergence of a global postmodern cinema.

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. Offered occasionally.

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.

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.

335. Semiotics of Advertising.
This course blends sociological analysis, semiotics, discourse analysis and theories of representation both to explore the social consequences of advertising and to deconstruct ads and commercials as commodity signs and narratives. The course approaches advertising as a system of signs composed of signifiers, signifieds, referents and relational structures tying these elements together. Students apply a semiotic analysis to both commodity and corporate advertising to explore how representations of race, gender, class and age are constructed in this discourse. Focusing on the effects of advertising on social institutions, gender relations, self-conception, the organization of everyday life and the environment, the course constructs a critical history of advertising from the 1920s to the present.

Dual-Listed Courses Offered by Other Academic Departments

Art and Art History
269. Digital Media and Culture, I.
369. Digital Media and Culture, II.

English
306. Advanced Screenwriting Workshop.
Also offered as Performance and Communication Arts 306

Global Studies
302. Theories of Global Cultural Studies.
340. Blogging the Globe

Modern Languages and Literature
221. Latin America in Film
404. French Film.
439. Literature, Film and Popular Culture in Contemporary Spain.

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), Hansen (philosophy), Llorente (modern languages), Denaci (fine arts), Fordham-Hernandez (performance and communication arts); Visiting Assistant Professor Dorsey (performance and communication arts).

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-
structed, and how these understandings of gender in turn
shape political institutions, law, the economy, education,
work, art, music, literature, religion, sexuality and the fam-
ily. As an interdisciplinary program that encourages students
to explore gender from multiple perspectives, gender and
sexuality studies can help students broaden their under-
standing 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 methodolo-
gies.
5. Encourage reassessment of the gendered social distri-
bution 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)
2. GNDR 290 (Gender and Feminist Theory)

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

1. GNDR 326 (Gender Research and Embodied Research)
or GNDR 301 (Masculinities) or GNDR 367 (Feminist
   Post-Colonial Theory) or GNDR 334 (Feminist Phi-
   losophy) or GNDR 369 (Making Sexualities)

Praxis requirement:
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 chronic-
ing their experience and how it speaks to the minor.

Senior Portfolio
During the first two weeks of the spring semester of
their senior year, students must submit a portfolio to the
chair of the department which includes work (papers, art
projects, video, and/or community activist materials) that
demonstrates how they have met at least three of the five
learning goals of our minor (see www.stlawu.edu/academ-
Students should include a short statement detailing how
the materials provided speak to and reflect the learning
goals. Seniors will meet with the GSS faculty to discuss their
minor and what they have learned during the last two weeks
of the term.
Electives

In addition, minors must take two gender and sexuality studies or cross-listed electives, at least one of which should be at the 300 or 400 level (these courses may also count toward the praxis requirement if they meet the criteria listed above). No more than one of these elective courses may be taken in any single department other than gender and sexuality studies.

*Elective courses are approved for cross-listing by the gender and sexuality studies advisory board, and are listed in the Class Schedule with both gender and sexuality studies and the relevant department or program (i.e., anthropology, art and art history, Canadian studies, English, global studies, government, history, modern languages and literatures, performance and communication arts, philosophy, psychology, religious studies and sociology).

Special Events and Activities

The program regularly sponsors or co-sponsors speakers and performers on campus; we encourage students to learn about gender through these events. Each spring the program also awards the Don Makosky Award, named after one of the founding faculty members of the program, to a senior student who has worked to transform the campus in relation to gender and sexuality issues.

Courses

Because gender and sexuality studies is interdisciplinary, many of its courses are taught in several academic departments. These courses are approved by the advisory board and are listed in the Class Schedule with both gender and sexuality studies and the relevant department(s). Since approximately 15 departmental courses count toward the minor, students are advised to consult each semester’s Class Schedule and secure the listing of gender and sexuality studies cross-listed elective courses from the program coordinator for complete course descriptions.

103. Gender and Society.

This interdisciplinary course examines how being male or female is translated into the social relationships of gender. It explores the ways gender roles, identities and institutions are constructed in relation to race, ethnicity, class and sexuality.

201. Gender in Global Perspective.

Gender constructs cultural, political and socio-economic relations across class and racial lines in the Western world and throughout the rest of the world, although the concepts and structures that define gender roles can and do differ significantly. This course examines the global constructions of gender through examples chosen from indigenous and diasporic communities in Asia, Africa and the Americas; discusses the variable impacts that these constructions have had particularly on women’s lives; and introduces theories of transnational feminism. Also offered through Global Studies and Peace Studies.


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 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.

326. Gendered Research and Embodied Research.

In this course we explore how dance/movement performs, revises or reinscribes notions of cultural identity. The course provides an analysis of the relationship between how individuals experience their bodies and cultural interpretations of the meanings produced by the body. We use dance/movement and choreography as forms of inquiry as we explore the body as a site of knowledge. Students
learn how embodied experience is gendered, raced and sexualized; to design, implement and critique creative movement and performance; to choreograph creative ethnographic movement phrases; to improve their movement quality and body mechanics and establish a positive body language; and to understand the process of choreography as a moment of discovery, while learning to represent what is discovered through performance. Prerequisite: Gender Studies 103 and 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,
Shrady; Assistant Professor Stewart; Visiting Professors
Huntley,Kratzmann.

Visit the geology department webpage at www.stlawu.edu/geology or link directly from the Majors and Programs page at www.stlawu.edu.

Students may major or minor in geology or elect an interdisciplinary combined geology–physics major (see below) or environmental studies–geology major.

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 extinction, seismicity and volcanism. Geology also guides the unending quest for natural resources including ores, minerals, 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.
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. Attendance at department seminars is required of all majors.

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 Environmental Studies - Geology major includes six geology courses, two cognates, and 7 units in environmental studies (15 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 should 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. (MCR)
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 Rivercuts: North Country Landscapes through Geological Field Trips (Special Summer Program)

This special, field-intensive geology course will help you understand and appreciate the geological background of northern New York, from Lake Ontario to Lake Champlain, including the Adirondacks through a synergistic combination of in-class lectures and field-oriented lectures and laboratories. In-class lecture periods will be 3 hours/day/twice weekly (M&W) and cover topics germane to the following day's field-oriented lectures/labs. The twice-weekly (9 hours/day, T&H) field trips will focus on various components of this landscape: landforms, rock outcrops, settlement (including industrial development and mines), energy supply systems, etc. You will learn to collect, record and identify the minerals, rocks and glacial materials that form the basis of this environment and the processes that cause them. 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 centered 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. Paleoecology.

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 paleoecology one aim is to understand how, why and when ecosystems collapse by studying the geologic record of such collapse events in the past. Such understanding may reveal our future. Techniques employed in these studies blend theory with application. The course is appropriate for students who have some paleontology or biology experience. Offered every other year. Prerequisite: Geology 206 or permission of instructor.

210. Optical Mineralogy.

This course involves a study of the nature of light in its interaction with crystalline material. Specifically, it studies the optical characteristics and properties of minerals and how minerals may be identified using the petrographic microscope. Participants gain experience in microscopic mineral identification and in the preparation of rock thin sections. Offered occasionally. Prerequisite: Geology 103.

211. Geomorphology.

Geomorphology, literally "earth-shape-study," is the study of the landscape, its evolution and the processes that sculpt it. The purpose of this course is to enhance the student's ability to read geologic information from the record preserved in the landscape. This is achieved through understanding the relationship between

the form of the Earth's surface and the processes that shape that form. Students combine quantitative description of the landscape with study of landscape-shaping processes into a comprehensive investigation of the dynamic landscape system including glaciation, hills, rivers, mountains and plains. Prerequisite: Geology 103. Also offered as Environmental Studies 211.

216. Sedimentology.

This course explores the processes of sedimentation and their products in different depositional environments. It covers characteristics and origins of sedimentary rock types; processes that erode, transport and deposit sediments; and 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 circulated. (Was Jurassic Park actually Jurassic?) In the setting of vertebrate evolution, this course presents the science of Dinosauria, explains the history of their study, and investigates the origins of the group, its paleoecology, collection techniques, morphology and taxonomy. We consider cutting-edge issues of dinosaur research (are birds simply dinosaurs with feathers?), and confront all manner of misinformation, anachronism and illusion based on dinosaur myths.

241. Field Methods for Environmental Scientists.

This interdisciplinary course is intended for students interested in environmental science (e.g., environmental studies, biology, geology or chemistry majors or minors). Familiarization with experimental design and statistics and training in field techniques includes map and compass work, basic surveying, and water, soil, vegetation and faunal sampling. Introduces students to the use of Geographic Information Systems (GIS) for research in environmental science. Students acquire a working knowledge of ArcView GIS software and gain experience creating and managing GIS projects. Students interested in developing highly marketable GIS and field skills in the context of environmental research should consider taking this course. Also offered as Biology 241.

SPTP 248,348. (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. Consult the current course catalog to determine options for the coming semester.

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.

302. Igneous and Metamorphic Petrology.

Petrology is the study of the origin of rocks, based on detailed observation of rock characteristics (petrography) together with theoretical/experimental approaches. This course provides a review of the occurrence, characteristics and origins of the common igneous and metamorphic rocks. Areas of study include the origin and differentiation of primary magmas, common rock associations, metamorphic zones and facies, the nature of the deep crust, and use of phase diagrams in the understanding of igneous and metamorphic petrogenesis. The relationship of plate tectonics to the formation of these generally holocrystalline rocks is emphasized. Prerequisite: Geology 105 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.

317. Micropaleontology.
Micropaleontology is the branch of the earth sciences that deals with fossil organisms too small to resolve in detail with the unaided eye. This course introduces students to the broad range of micropaleontological techniques and to the numerous groups of fossils on which these are practiced. Microfossils are the basis for most synthesis of global climate change, biorstratigraphy 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 presentation.

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 on rocks on the regional, outcrop and microscopic scale. The genesis, recognition and classification of structures such as folds, faults, joints and microstructures, as well as the mechanical behavior of rocks and stress and strain are studied as important components in deciphering the tectonic and deformational history of an area. The laboratory emphasizes application of theory to field problems. Prerequisite or co-requisite: Geology 103 and 203 or permission of instructor. Also offered through Outdoor Studies.

362. Geochemistry.
Geochemistry is the study of the distribution, concentration and cycling of the elements in Earth materials. The course explores the composition and origin of the solar system and Earth's lithosphere, hydrosphere and atmosphere. It focuses on the tools utilized by geochemists, including major, trace and rare earth element analyses, stable and radiogenic isotopes, geochronology, and sampling methods and retrospective studies, and introduces new and emerging concerns in environmental geochemistry. The use, misuse and presentation of chemical analyses are explored in detail. Prerequisites: Geology 103 and 203, Chemistry 103 and 104 or 105, or the permission of the instructor.

380,381. Directed Studies in Geology. (MCR)
Semester-long studies in appropriate areas of the earth sciences may be designed in consultation with an individual instructor in the geology department. May use seminar format when appropriate. Permission of instructor and junior standing are required.

391. Research Methods in Scanning Electron Microscopy. (.5 unit)
Detailed instruction in the use of a scanning electron microscope (SEM) and support techniques such as critical point drying, specimen coating (standard vacuum and sputter coating), specimen fixation, black and white photographic techniques and computer image acquisition and analysis. The theory and practice of energy-dispersive x-ray analysis (EDAX) for determining atomic element makeup and element mapping is also learned. Prerequisite: any 200- or 300-level science course, or permission of the instructor. Also offered as Biology 391.

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 paleoecologic 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 by linking directly to it from the Majors and Programs page at www.stlawu.edu.

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 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 (chair); Associate Professor Chew Sánchez; Assistant Professors Jayman, Wong.

Visit the global studies department webpage at www.stlawu.edu/global or by linking directly to it from the Majors and Programs page at www.stlawu.edu.

Global studies is an interdisciplinary major designed to prepare students with new analytical frameworks for understanding globalization and for evaluating it critically. In the six 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/or ecologies as embedded in larger global structural, historical, cultural and ecological 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 a problem or theme, which becomes the basis for an independent project in the senior year. The major balances a self-designed concentration with a set of core frames of analysis. Global studies majors are thus well prepared to enter work or graduate study requiring multiple perspectives, self-directed projects and a global perspective.

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.

Major Requirements

The major requires 14 units, plus second language study; some courses are taken in other departments, depending upon choices students make:

I. Core Courses (6 or 7 units for honors)
101. Introduction to Global Studies I: Political Economy.
102. Introduction to Global Studies II: Race, Culture, Identity.
301. Theories of Global Political Economy.
302. Theories of Global Cultural Studies.
489 or 490. SYE: Senior Project. or
498, 499. SYE: Honors Project.

II. Choice of Concentrations (5 to 6 units plus study of a second language). Students have three tracks they can choose from to mold their concentration. These are:

• Comparative area studies: three courses in each of two geographic or cultural areas;

• One-area study: four courses in one geographic or cultural area plus either two semesters of introductory language or one semester of 200-level language related to their area concentration; or

• Thematic study: three courses in one geographic or cultural area, three courses in one thematic area.

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
• Chinese Studies
• European Studies
• Native American Studies
• other areas (e.g., Middle Eastern or Islamic Studies) with the approval of the department chair.

Programs available for students’ thematic area concentrations include:

• Environmental Studies
• Gender and Sexuality Studies
• Peace Studies
• Other areas (e.g., development or media studies) with the approval of the department chair.

III. Two Global Studies Electives

These are normally listed under global studies and should fit in with the student’s concentration. However, students may petition the global studies chair to count other appropriate transnational or comparative courses.

Minor Requirements

The global studies minor consists of six courses: Global Studies 101, 102, either 301 or 302, two electives in global studies, 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; they must complete the United States studies option of the major as well as the educational studies minor. Under the U.S. studies option, the major integrates all required topics for certification in 7-12 social studies. Global studies 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. 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 offered through Peace Studies.

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

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

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-Shiite split, the role of non-Muslims in Islamic 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.

218. Cities and Globalization.
Cities reflect and embody the myriad and complex processes of globalization, challenging the nation-state role in circumstancings people’s life and activities. A few “global cities” are the control points for the organization of new forms of economic, political and social geographies associated with global processes. Other large “world” cities in both the developed and the developing world are incorporated into the global urban system through the economic, cultural and political power they exercise at different scales — local, national, transnational, regional, and global. The objective of this course is to critically understand the relationship between cities and globalization, and to appreciate cities as sites of struggle associated with globalization. When possible, the course includes a field trip to Toronto, Canada.

222. Asian Political Economy in the Global Age.
This course covers the geographical and historical rise of East Asian economies in the context of “quasi-states” in the world economy, the spectacular economic growth of China, and the social and economic crisis gripping South Asia in the context of contemporary debates about neo-liberalism, gender, identity, community and communalism. What are the prospects for East and South Asia in the new global millennium? Topics include regional perspectives on global capital accumulation, global inequalities, human rights discourse, fundamentalism and social movements. Also offered through 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 offered through 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.

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.

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

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

262. Africa and Globalization.
In an increasingly interconnected and interdependent world, Africa appears marginalized or absent from contemporary imaginations and discourses of globalization. Often, we hear about crises, failures and problems. Yet, Africa, a heterogeneous continent differentiated along geographical, historical, social, cultural, religious, economic, and political lines among others, has been and continues to be integral to the global economy. This course seeks to examine and understand how particular global processes intersect with and manifest differently in specific places and social realities in Africa. We explore Africa and the global economy; globalization and technology; African youth experiences; African women’s experiences; and contemporary African diasporas and their transnational activities.

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.

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). 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 273.

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: Global Studies 101. Also offered through Asian Studies and Peace Studies.

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 theories of gender and women's issues in various societies. Prerequisite: Global Studies 101 or 102. Also offered through 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 at Philosophy 333 and through 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 Wave, an online public Intellectual project, by researching and blogging about underreported stories. Prerequisite: Global Studies 101 or 102.

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 offered through 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 postcoloniality 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 postcoloniality. Also offered as English 357 and Philosophy 357.

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 English 367, Gender Studies 367 and Philosophy 367.

390. Independent Study.
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 listed as Religious Studies 412 and Biology 412.

489, 490. SYE: Senior Project.
498, 499. SYE: Honors Project.

Government

Major and minor offered

Professors Exoo (chair), Draper, Kling, Assistant Professors Buck, Huang, McConnell, McKie, Morrisroe, Olesker; Visiting Assistant Professors Vidanage

Visit the government department webpage at www.stlawu.edu/academics/programs/government or link directly from the Majors and Programs page at www.stlawu.edu.

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 open-mindedness that are the hallmarks of lifelong learning.

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 and independent or self-directed study.

Students may complete the government major or elect a combined major of government courses and 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 options, see the sections on Combined Major Programs and Academic Minors in the Curriculum chapter of this Catalog.

Government majors are encouraged to participate in St. Lawrence’s programs in Washington, D.C., Austria, Canada, Costa Rica, Denmark, England, France, India, Japan, Kenya or Spain. For further information on these and related off-campus programs, see the International and Intercultural Studies chapter in this Catalog.

The department maintains close student-faculty relationships through independent study projects, an honors program and a student preceptor program. Student preceptors work directly with the faculty and with underclass students in tutorial and seminar groups.

A major in government provides career opportunities in public service, law, teaching, business, journalism and many other fields. Students considering a government major are strongly advised to elect Government 103 and 105 in their first year. The department also offers a minor.

Major Requirements

Government majors must complete Government 103, 105, 108, 206, 290, and four other courses. A major may elect no more than four out of nine courses in any one sub-field of the discipline (American politics, comparative politics, political theory and international politics).

Government 103, 105, 290, one theory course and one international relations course must be taken in residence on the St. Lawrence campus. The above requirements can be satisfied only through regularly scheduled government courses. Government 290 should be taken in the sophomore or junior year. Students must also complete a departmental writing-intensive course, from among the introductory courses (103, 105, 108 or 206). This should be taken prior to enrolling in 290, the research seminar, which is also a writing-intensive course. Students may count one internship or one independent study among the first nine courses for the major. No fewer than seven government courses must be taken on campus. 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

Government minors must complete two lower-level courses in government (103, 105, 108, 206), a research seminar (290) and two upper-level courses in government (300 or 400 level). The department will credit one upper-level government course taken in a St. Lawrence-sponsored off-campus program; otherwise, all other courses must be taken on campus. 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. (See Honors in the Curriculum chapter of this Catalog.)

Certification to Teach Social Studies

Students seeking initial certification as a 7-12 social studies teacher in New York can major in government. In addition to completing the certification minor in education, students majoring in government must also take one economics course (Economics 100, Introduction to Economics, is recommended if only one course is taken); History 103 (Development of the United States, 1607-1877) and 104 (Development of the United States, 1877-Present); Global Studies 102 (Introduction to Global Studies II: Race, Culture, Identity); and at least one specified course in the major that illuminates U.S. and/or world history and geography. Students are also encouraged to take courses in other social sciences and area studies to round out their preparation for teaching social studies.

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

Courses

Introductory

103. Introduction to American Politics.
Who gets what and how? This course answers that question by introducing the major institutions and actors of the American political system, including the Constitution, parties, interest groups and the legislative, executive and judicial branches of government. The course also examines the cultural, ideological and economic contexts in which American politics occurs, as well as the mechanisms and possibilities of political change.

105. Introduction to Comparative Politics.
Comparative politics analyzes how demands emerge, power is exercised and benefits are distributed in different countries. It uses both historical and contemporary evidence to examine how societies respond to these challenges in order to appreciate and learn from the differences among them. Developing societies, communist and formerly communist regimes, as well as industrialized democracies, are analyzed and compared as a basis for evaluation and judgment.

108. Introduction to International Politics.
An analysis of international relations as a political process with particular emphasis on patterns of conflict and cooperation. Major areas of study include theories concerning the nature of the international system, nationalism, balance of power, collective security, alliance systems, international law and organization, political economy, war, deterrence, arms control and disarmament, the emerging international order, human rights and the environment. Also offered through Peace Studies.

206. Introduction to Political Theory.
A study of the answers that philosophers from Plato to 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 Philosophy 206 and through European Studies and Peace Studies.

American Politics

302. Law and the Courts in the United States.

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.

An examination of the development of the U.S. Constitution through judicial and political processes. Prerequisites: Government 103, 302 and junior or senior standing.

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 relation between public policy and ethical dilemmas in the arenas of corporate life and professional service. The course asks students to examine the sorts of moral dilemmas they can expect to encounter in their chosen fields of work and takes a case-study approach to such topics as employee rights, information disclosure, Affirmative Action, sexual harassment and whistleblowing, and the roles that public policy should — or should not — play in relation to these issues.

317. Sexual Citizenship.
Gay/lesbian/bisexual/trangendered (GLBT) people in the United States continue to be denied full citizenship rights. This course explores how GLBT people organize in order to gain full citizenship. We explore issues that clearly and explicitly affect GLBT people, such as the right to serve in the military, marriage and relationship rights, and recognition and employment rights, as well as those issues that have a less apparent, though no less important impact, such as welfare reform, sex education in schools and Social Security reform.

Comparative Politics
228. Latin American Politics.
This course introduces students to the politics of Latin America. Tracing the roots of current political conflict to the colonial era, the primary focus of the course is on underdevelopment and political change in Latin America today. The course examines the roles of key political actors, including the military, indigenous peoples and the church. It explores patterns of development, introducing theories that seek to explain persistent poverty and inequality as well as the periodic swings between authoritarianism and democracy in the region. The course material emphasizes current pressures for political inclusion, tracking social movements and human rights. Themes are illustrated with case studies. Also offered through Caribbean and Latin American Studies.

An introductory survey of the evolution of power and authority in Africa. The course explores early history; colonialism and conquest; the rise of nationalism and the coming of independence; and the contemporary challenges of development. Especially recommended for students who plan to participate in the semester in Kenya. Prerequisite: Government 105 or 108 or permission of the instructor. Also offered through African Studies and Peace Studies.

This course aims to provide students with basic fluency in the politics of China. It introduces the political geography of China, its current perceived status in the international community, and essential background history for understanding Chinese politics today. It also investigates the nuts and bolts of contemporary Chinese institutions to get a good feel for how the Chinese conceptualize and practice politics. Finally, the course examines important issues and trends facing China today. Prerequisite: Government 105 or 108 or permission of instructor. Also offered through Asian Studies.

An introductory survey of the formal institutions and the processes of Canadian politics. Emphasis is on the federal government and on federal-provincial relations. Topics covered include the parliamentary process, parties and voting.

This course focuses on three questions: Why have a small number of Western countries and Japan emerged as wealthy, industrial societies, while the great majority of countries have not? How have some third-world countries managed to achieve rapid economic development, while others have experienced stagnation or even negative growth in recent decades? The main focus is a comparison between several East Asian and African countries. Third, how has the process of globalization affected countries’ chances for development? Prerequisites: Government 105 or 108 and junior or senior standing.

330. Politics and Governments of Western Europe.
This course focuses on West European governments, political parties and social movements. It seeks to provide students with essential information about West European politics, as well as contemporary theories about advanced capitalist democracies. Comparisons between European and American politics are frequent so that students may better see the distinctiveness of each. Issues examined include the European welfare state, the significance of the European Union, the changing contours of political conflict the emergence of multiculturalism in Europe. Especially recommended for students who plan to participate in an off-campus program in Europe and for students returning from those programs. Prerequisite: Government 290. Also offered through European Studies.

331. Politics of the Middle East
This course examines the political development of the Arab and non-Arab states in the Middle East since the fall of the Ottoman Empire in World War I. 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. Prerequisites: 105. Introduction to Comparative Politics

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, ecosocialism 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.

A survey of the basic elements of Marxist political theory and of the major streams of contemporary thought that have emerged in response to it. Some of the theorists whose work we might examine include Gramsci, Horkheimer and Adorno, Marcuse, Habermas and Foucault. Feminist, African-American and Caribbean interpreters of Marx may also be studied. Also offered through European Studies.

349. American Political Thought: Eighteenth and Nineteenth Centuries.
An examination of the main currents of political thinking from the Colonial period to the end of the 19th century. The course begins with the Puritan Divines and continues through the start of the Progressive era. Thinkers considered might include Paine, the Federalists, Jefferson, Emerson, Margaret Fuller, Thoreau, Frederick Douglass and Charlotte Perkins Gilman.

350. American Political Thought: Twentieth Century.
An examination of the main currents of political thinking in the United States from the Progressive Era through the end of the 1960s. Thinkers considered
include the Social Darwinists, Thorstein Veblen, W.E.B. DuBois, Jane Addams and John Dewey. We also look at both the resurgence of conservative thought in the 1950s and some of the sociological critiques of the post-war era out of which the New Left, civil rights, Black Power, feminist and ecological movements grew.

International Politics
333. Model OAS
Model OAS is an experimental 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.

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.

362. International Law.
A study of the development of the rules and principles of international law and of their current applications. Examination of the contributions of international organization to the development of conventional international law. Preparation of topics for class presentation. Prerequisite: Government 108 or permission of the instructor. Also offered through Peace Studies.

363. International Organization.
A survey of general and regional international organization, with emphasis upon the United Nations and its contribution to international peace and security. With the abeyance of the Cold War, the United Nations has gained an enhanced role in the "new world order." The course examines this new security role and the contributions the United Nations makes to both political security and economic development. Prerequisite: Government 108 or permission of instructor. Also offered through Peace Studies.

364. Terrorism and Human Rights
This course examines the challenges facing democracies combating terrorism in the post 9/11 setting. States tend to become less democratic when combating terrorism, however, the goal of this course is to examine alternative strategies to the "war" on terror; strategies that lean even more towards human rights observance rather than democratic deficits. 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.

Research Seminars and Special Studies
270, 370. Special Topics in American Politics.
Topics may include American political history, political economy, democracy and its discontents, the politics of labor and political action in modern America. 270 also offered through Native American Studies.

273, 373. Special Topics in Comparative Politics.
Topics may include the politics of race and ethnicity, Central American politics, African politics, Asian politics, Latin American politics, Middle East politics and changing values in developing societies. 273 also offered through Asian Studies and Native American Studies.

274, 374. Special Topics in Political Theory.
Topics may include democratic theory, politics of culture, women and politics, politics and psychology, Utopian and anti-Utopian political thought.

276, 376. Special Topics in International Politics.
Topics may include comparative foreign policy, the new economic order, political economy, disarmament and detente, imperialism, terrorism, world federalism and European integration.

290. Research Seminars.
The topics of these seminars vary depending on the interests of faculty and students. Recent topics have included international environmental law, state formation and development in Africa, the world military order, the political sociology of American workers, politics and the media, global democratization, conflict resolution, working class politics, East and Southeast Asia, public opinion and political socialization, law, values and the environment. The seminars are intended to acquaint students with research problems, strategies and techniques relevant to the subject matter at hand. Required for all government majors. Also offered through Asian Studies.

479,480. SYE: Internships.
Swami 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 Regosin (chair); Associate Professors Alvah, Carotenuto, Csete, DeGroat, Jennings, Schems, Smith; Assistant Professors Eissenstat, Ponce-Vázquez (Visiting); Senior Lecturer Fox.

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

History is more than a catalog of events and actors; it is an ongoing process of discovery and interpretation. All facets of human experience have a historical dimension — the power struggles of monarchs and presidents; the working lives of farmers, sailors and seamstresses; the spiritual lives of slaves; the cultural assumptions of colonizers; the intimate relationships of families, to name only a few. Even the telling of history has a historical dimension, since historians often disagree about exactly how things happened and why.

The variety of sources through which we understand history can encompass the full range of human expression as well-written documents, clothing, household items, artwork, advertisements, songs, buildings and public monuments, among others. By studying primary materials and divergent interpretations of history, students acquire and develop analytical and expository skills: they learn to critique and interpret sources, sift through and organize information, formulate persuasive arguments, and express themselves with clarity and elegance. In addition to graduate study, these skills are indispensable for work in law, journalism, education, government, non-governmental organizations and business.

The study of history affords many additional benefits. It expands and enriches our understanding of the diversity of human lives over time across such boundaries as gender, culture, class, race, region and religion. It helps us think about how and why the world we know came to be and about our own places in it.

The history department offers courses in African, Asian, European, Middle Eastern, Latin American/Caribbean and North American history. Additional opportunities are available to students for independent study in areas not directly covered by the curriculum. History majors can build on their interests through off-campus study, by participation in local internships, semester or year-abroad programs, summer travel courses, and fellowships. In addition to working in and teaching languages other than English, many faculty are actively involved in area studies, gender studies and global studies, which offer minor concentrations for history majors.

Major Requirements

The requirements for the major in history are flexible enough to enable a student to pursue personal interests and goals and at the same time foster an appreciation for the diversity of the human experience. To qualify for a major in history the following minimum requirements must be met:

1. A minimum of 10 history courses must be completed.
2. At least four courses (at any level) must be drawn from four of the following broad categories into which the history curriculum is divided: (a) Europe, (b) North America, (c) Africa, (d) Asia, (e) Middle East, (f) Latin America and the Caribbean.
3. At least one of the 10 courses must be a 299 seminar on Historical Research Methods, which must be taken before the senior year.
4. At least one course must be at the 300-level.
5. At least one of the 10 courses must be a Senior-Year Experience (SYE) that 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 introductory 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. At least six history courses, five of which must be at the intermediate or advanced level.
2. At least one of these courses must be a 299 seminar on Historical Research Methods.
3. At least one of these courses must be an SYE course.

4. Only one of these courses may be at the introductory level.

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 courses 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 an average of at least 3.5 in major courses. 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. Work on the honors thesis may earn 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.


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.


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.

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 designed as an introduction to the history 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-Shi, the role of non-Muslims in Islamic 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 level or above.

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.

208. Ottoman Empire and Early Modern Europe.
This course examines the rise and development of the Ottoman Empire from its origins in early 15th-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 theme of Native peoples' creative 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 sweep is broad, from ancient times through the 19th century. The central portion of the course focuses on Spain at the height of its imperial power, from the mid-16th to the mid-17th centuries, with Miguel de Cervantes Don Quijote (in a modern English translation) as an important source. Themes include religious, cultural and racial diversity in Spain and its empire, and the price of empire for Spanish development.

243. Origins of American Foreign Policy (Colonial Era to 1900).
Since its creation, the United States has been connected with the wider world through trade, immigration, territorial expansion, and war. This course examines the roots and characteristics of American foreign policy and foreign relations from colonial times through the nineteenth century, while giving attention to how domestic politics, public opinion, society, and culture responded to and shaped government policies and international relations. We also consider how ideas about race and gender influenced policies and relations with other nations; how the territorial expansion of the United States affected Native Americans; and how the peoples of other nations responded to U.S. policies.

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.

247/248. Special Topics in History.
Topics vary. Consult the department course guide for current offerings.

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 portray? 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.

266. History of the Middle East, 1914-1967.
367. History of the Middle East, 1967-present.
This two-course sequence surveying the history of the Middle East from World War I to the present, examining the collapse of the Ottoman Empire, the rise of Zionism and Arab nationalism, and the development of modern Egypt, Syria, Lebanon, Israel, Iran, the countries of the Arabian Peninsula, and the Palestine Authority. The first course covers the period to 1967; the second continues this study for the period after the 1967 War. The first course is also offered through Peace Studies. The first semester may be taken without continuing to the second but is a prerequisite for admission to the second semester. Dual-listed as Religious Studies 266 and 367. Offered every other year.

267. The Holocaust.
This course focuses on the development of the Holocaust from 1933 to 1945, within the contexts of Christian anti-Semitism, Nazi ideology 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 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 interrelation 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 Iran.
This course covers Iranian history from the Toktagawa to the present. Treatment is thematic, including the rise and fall of the Toktagawa, 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.

283. 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.

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 major 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-Level Courses
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 through Peace Studies and as Physics 319.

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 American Studies and Peace Studies.

334. 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 era. 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.
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 real people. Since the 15th century, when Natives were named “Indians” by a very confused explorer, Natives have been regarded as more historical objects than agents. We discuss the historical construction and use of “Indians” by colonists, modern (non-Native) Americans and Native Americans themselves, and examine Indian stereotypes in the construction of the American ideal in history, art, film, literature, television and music. Also offered through Native American Studies.

362. Topics in American Economic History.
This course offers an overview of the economic development of the United States. The specific topics covered will vary by instructor, but have included the economic causes of the American Revolution, the evolution of financial markets, the economics of slavery and Reconstruction, The Populist movement, the growth of government in the Progressive Era, the effects of war and other crises on the U.S. economy, and the Great Depression. Emphasis is placed on the role economic theory can play in understanding pivotal events of U.S. history and their relevance for current events. Prerequisites: Economics 251 and 252. Also offered as Economics 362.

Topics vary. Consult the department course guide 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.

This seminar examines the construction and transformation of European identity in the 19th and 20th centuries. The impact of the encounters between Europeans and non-Europeans on the culture and society of both old and new Europe is a particular focus. Beginning with the debates on national identity in the early 19th century and continuing with inter-European migration and colonial expansion, the course examines the developing relationship between European and colonial peoples that led to the establishment of significant immigrant communities in the West. The course concludes with an assessment of topics relevant to current European social and political concerns. Also offered through European Studies.

In this course we examine the relationship between Japan and the United States in the 1930s, 1940s and 1950s. We discuss anti-war 151 political activism in the U.S. and Japan, the internment of Japanese-Americans, the role of propaganda in both countries, the bombing of Hiroshima and Nagasaki, and the Allied occupation of Japan after the war. We work on writing and oral communication skills and discuss such concerns as how cultures understand and misunderstand each other. Also offered through Peace Studies.

375. Colloquium in European History.
Topics vary; consult the department course guide for current offerings. Also offered through European Studies.

376. Colloquium in African History.
Topics vary; consult the department course guide for current offerings.

377. Colloquium in Asian History.
Topics vary; consult the department course guide for current offerings. Also offered through Asian Studies.

Topics vary; consult the department course guide for current offerings. Also offered through Caribbean and Latin American Studies.

379. Colloquium in Middle Eastern History.
Topics vary; consult the department course guide for current offerings.

The last two centuries have seen mass violence on a scale unprecedented in human history. Among the most horrifying forms this violence took was the attempt to systematically exterminate whole religious/ethnic/national groups, which Raphael Lemkin coined the term “genocide” to describe. In this course, we examine individual historical cases of genocide (including the 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.

471-480. SYE: Senior Seminars.
Seminars, restricted to senior majors and minors, are normally limited to 10 students and require the production of a substantial research paper. Successful completion of at least one SYE seminar course is required for the major. Odd-numbered courses are taught in the fall, even-numbered courses in the spring. Topics vary; consult the current department course guide for details. Prerequisite: One HIST 299 seminar.

471-472. SYE: Seminars in European History.
Also offered through European Studies.


475-476. SYE: Seminars in Asian History.

477-478. SYE: Seminars in Comparative History.

480. SYE: Seminar in African History.
From political strife to economic and social challenges, contemporary African issues current are often described as primordial conditions or products of recent political failures. However to understand Africa today, one must move beyond these simplistic explanations. This course will challenge students to use an interdisciplinary approach to examine how contemporary issues must be examined within a complex historical framework. As a research seminar a substantial portion of class time and assignments are devoted to producing a
significant research paper. A background in history and African studies is strongly recommended. Also offered as African Studies 480.

481, 482. Internships. These courses provide an opportunity for qualified juniors and seniors to obtain credit for work at local, state or national historical agencies, archives or museums. Supervision is provided by the host agency. Responsibility for evaluating the experience rests with the history department faculty coordinator. The internship must be set up in the prior semester at the initiative of the student, in consultation with one faculty member and the chair. Prerequisite: permission of instructor and chair of the department.

489, 490. SYE: Independent Study. To qualify, students must have a 3.2 GPA in the history department. Normally, students should have senior standing with a major or minor in history. Applicants must demonstrate that the study they wish to pursue has serious intellectual merit and that their objectives cannot be accomplished within the framework of existing course offerings. This course must be set up in the prior semester. Prerequisite: permission of instructor and chair of the department.


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

Associate Professor Strait (director of athletics; chair), Coordinator of Academic Programs Cantfield.

Visit the intercollegiate athletics and recreation webpage by linking directly to it from the Majors and Programs page at www.stlawu.edu.

In addition to intercollegiate athletics and recreation, the 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.

For information regarding intercollegiate athletics, intramural programs, sport and physical activity clubs and instructional programs, visit www.stlawu.edu/athletics.

International Economics and Modern Languages
Four majors offered

Visit the program's webpage at www.stlawu.edu/academics/programs/economics/page/1705 or by linking directly to it from the Majors and Programs page at www.stlawu.edu.

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 (major not available to students who matriculated after 2010), Spanish and multi-language.

Requirements in International Economics for All Majors

Economics

100. Introduction to Economics. 1 unit
200. Quantitative Methods in Economics. 1 unit
251. Intermediate Microeconomics Theory. 1 unit
252. Intermediate Macroeconomics Theory. 1 unit
THREE electives in Economics 3 units

At least two of these electives at the 300/400 level.
At least two of these electives must include:
322. International Economics.

Total 7 units

### Requirements for the International Economics and French Major

**Economics**
Requirements from above 7 units

Modern Languages – French
SEVEN units at the 103 or higher level 7 units

Total 14 units

**Requirements for the International Economics and German Major**

*(major not available to students who matriculated after 2010)*

**Economics**
Requirements from above 7 units

Modern Languages – German
SEVEN units at the 102 or higher level 7 units

Total 14 units

**Requirements for the International Economics and Spanish Major**

**Economics**
Requirements from above 7 units

Modern Languages – Spanish
SEVEN units at the 103 or higher level 7 units

Total 14 units

**Requirements for the International Economics and Multilanguage Major**

**Economics**
Requirements from above 7 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 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. Students less confident in their mathematical skills should take Statistics 113 (Applied Statistics) prior to 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.

### Mathematics

Major and minor offered

**Professors** DeFranza, P. Lock, R. Lock, Melville; **Associate Professors** Bos, Giarrusso, Harcourt (chair), Schuckers, Vandervelde; **Assistant Professors** Chapman, Lee, Look, Ramler, Torrey.

Visit the mathematics, computer science and statistics department webpage at www.stlawu.edu/math or link directly from the Majors and Programs page at www.stlawu.edu.

The department of mathematics, computer science and statistics is proud of the 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 proud of our commitment 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 mathematics. The work of department members involves study in the areas of applied mathematics, pure mathematics, applied statistics and computer science.

The following sentence has appeared in every St. Lawrence Catalog since 1896: “Instruction in this department is intended to aid in the development of exact, concise and independent reasoning, to cultivate the imagination and to inspire habits of original and independent thought.” In the years since 1896, mathematical knowledge has expanded and courses have been drastically changed, yet these words remain appropriate.

Major Requirements

The requirements for a major in mathematics are a total of 11 units of mathematics and statistics, including:
135. Calculus I.
136. Calculus II.
205. Multivariable Calculus.
280. A Bridge to Higher Mathematics.
305. Real Analysis, or 306. Complex Analysis.
315. Group Theory, or 316. Ring Theory.

At least four of the 11 units must be at the 300 level or above. Math 110, 123 and 134 may not be counted toward the major in mathematics. Computer Science 140 may count as an elective toward the major in mathematics.

Students must fulfill a Senior-Year Experience (SYE) requirement either in mathematics/statistics as one of the 11 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 seen some calculus before are encouraged to register for Math 136, Calculus II, or Math 205, Multivariable Calculus. Students starting in Math 136 who receive a grade of 2.0 or higher will receive credit for Math 135. Students starting in Math 205 who receive a grade of 2.0 or higher will receive credit for Math 135 and Math 136. This is true for all students who have taken any calculus course before college. For those students who have taken the AP course, students receiving a grade of 4 or 5 on the AB exam receive credit for Math 135, and students receiving a grade of 4 or 5 on the BC exam receive credit for Math 135 and Math 136. Students unsure of placement within the calculus sequence should talk to any member of the department.

Courses

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. Offered in alternate years.

See description under Statistics.

123. Mathematics of Art.
This course explores the connections between mathematics and art: how mathematics can provide a vocabulary for describing and explaining art; how artists have used mathematics to achieve artistic goals; and how art has been used to explain mathematical ideas. This course is intended for non-majors; it does not count toward either the major or minor in mathematics. Offered in alternate years.

125. Calculus I.
The study of differential calculus. The focus is on understanding derivatives as a rate of change. Students also develop a deeper understanding of functions and how they are used in modeling natural phenomena. Topics include limits; continuity and differentiability; derivatives; graphing and optimization problems; and a wide variety of applications.

126. Calculus II.
The study of integral calculus. Topics include understanding Riemann sums and the definition of the definite integral; techniques of integration; approximation techniques; improper integrals; a wide variety of applications; and related topics. Prerequisite: Mathematics 135 or the equivalent.

205. Multivariable Calculus.
This course extends the fundamental concepts and applications of calculus, such as differentiation, integration, graphical analysis and optimization, to functions of several variables. Additional topics include the gradient vector, parametric equations and series. Prerequisite: Mathematics 136 or the equivalent.

206. Vector Calculus.
A direct continuation of Mathematics 205, the main focus of this course is the study of smooth vector fields on Euclidean spaces and their associated line and flux integrals over parameterized paths and surfaces. The main objective is to develop and prove the three fundamental integral theorems of vector calculus: the Fundamental Theorem of Calculus for Line Integrals, Stokes’ Theorem and the Divergence Theorem. Prerequisite: Mathematics 205. Offered as interest warrants.

See description under Statistics.

217. Linear Algebra.
A study of finite dimensional linear spaces, systems of linear equations, matrices, determinants, bases, linear transformations, change of bases and eigenvalues.

See description under Statistics.

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.

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.

317. Mathematical Logic.
An introduction to modern mathematical logic, including the most important results in the subject. Topics include propositional and predicate logic; models, formal deductions and the Gödel Completeness Theorem; applications to algebra, analysis and number theory; decidability and the Gödel Incompleteness Theorem. Treatment of the subject matter is rigorous, but historical and philosophical aspects are discussed. Prerequisite: Mathematics 280. Offered as interest warrants. Also offered as Computer Science 317.

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 and 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 the other year.

324. Numerical Analysis.
Topics include finite differences, interpolation, numerical integration and differentiation, numerical solution of differential equations and related subjects. Prerequisite: Mathematics 217. Offered as interest warrants. Also offered as Computer Science 324.

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.

326. Mathematical Statistics.
See description under Statistics.

330. Differential Equations II.
This course continues the study of differential equations from Mathematics 320. The study considers higher order equations, systems of equations, Sturm-Liouville problems, Bessel's equation and partial differential equations. Existence and uniqueness theorems and ordinary and singular points are discussed and applications are given. Prerequisites: Mathematics 217 and 230. Offered as interest warrants.

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.

343. Time Series Analysis.
See description under Statistics.

370. Topology.
An introduction to topology. Topics may include the general notion of a topological space, subspaces, metrics, continuous maps, connectedness, compactness, deformation of curves (homotopy) and the fundamental group of a space. Prerequisite: Mathematics 280. Offered as interest warrants.

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 grammar enhances understanding of both proof and language. Prerequisites: Computer Science 256 and 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 Hispanicos (Spanish), German Studies (major not available to students who matriculated after 2010) and Multi-Language. Minors offered in Arabic Studies, Chinese Studies, Francophone Studies, German Studies and Estudios Hispanicos (Spanish).

Professors Caldwell (co-chair), Dargan, White; Associate Professors Casanova-Marengo, Chiba, Csete, Lorente (co-chair), Stipa; Assistant Professors Foteva (visiting), Hopwood (visiting), Reid (visiting), Samb (visiting), Zhang; Instructors Amisi, El Khoury.

Visit the modern languages and literatures webpage at www.stlawu.edu/academics/programs/modern-languages or by linking directly to it from the Majors and Programs page at www.stlawu.edu.

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.

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 educa-
tion. Beyond that, however, it attempts to form graduates who are ready to embark upon careers where competence in another language is crucial. Our graduates have the opportunity to acquire an international awareness and intercultural skills.

The department offers the latest teaching technology, including sound systems, Internet access and video and computer data projection. Two fully equipped computer classrooms in the Language Resource Center double as teaching spaces and language laboratories where students conduct their oral comprehension practice via our VirtuaLab digital video/audio delivery system. The department also subscribes to foreign language television, which is available in all classrooms and student rooms on campus.

In an age when almost instant communication links the peoples of the world, when the relationships among nations are evolving rapidly and when Americans are increasingly aware of the riches of their diverse cultural heritage, the ability to use a second language acquires a new importance. Any level of proficiency in a foreign language supports both international understanding and basic contacts with various language groups in the United States. High-level ability promotes meaningful, accurate communication.

St. Lawrence graduates with foreign language skills have found positions in fields such as banking, education, government, law, retailing, industry and social service. Many now live abroad or have spent time working in other countries.

The department offers courses at several levels in Arabic, Chinese, French, German, Italian, Spanish and Swahili. Language courses are oriented toward achievement of oral and written proficiency. Classes are small to facilitate the acquisition of language skills. Study of the various literatures is also available; these classes are conducted wholly in the language. Some courses in foreign literatures are also taught in English. A seminar-discussion approach is commonly used. All beginning and intermediate courses fulfill the foreign language distribution requirement; others fulfill the humanities or diversity 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 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); it begins with a two-week homestay in the Norman countryside, before moving to the city. 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 is for students who do not yet possess a good command of French; it begins with two weeks of French immersion at Université Laval in Québec. In Rouen, intensive language training continues, while 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 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.

Students participating in spring semester program, Global Francophone Studies, earn two credits toward the Francophone studies major or minor. For participants who do not return to France for further study in the fall semester program, the major consists of nine courses above the 101-102 level, of which three must be taken at the 400-level, while the minor consists of six courses above the 101-102 level.

**German Studies (major and minor; major not available to students who matriculate after 2010)**

Students majoring in German studies are required to complete nine units beginning with German 101 or eight units beginning with 103. They are expected to participate in the SLU Vienna program where they may earn up to three credits toward the major or in an ISEP program at a German or Austrian university where they may earn up to three credits per semester for pre-approved courses. Students may earn two additional credits toward the major by successfully completing two general culture courses selected from the list below.

Students minoring in German studies are required to complete a total of six courses beginning with German 101. A minimum of four units must come from the basic (101 and 102), intermediate (103 and 104) or advanced German courses and two may come from general culture courses taught in English. 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 choose two general culture courses selected from the list below to complete the minor.

**Art and Art History**
117. Survey of Art History II.
203. Art of the Northern Renaissance.
204. Baroque and Rococo Art.
252. History of Modern European Art.

**Government**
330. Politics and Governments of Western Europe.

**History**
205. Nineteenth-Century Europe.
206. Twentieth-Century Europe.
211. Women in Modern Europe.
267. The Holocaust.
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.

**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 Introduction to Hispanic American Literature are required courses for the major.

Students wishing to major in estudios Hispánicos are urged to participate in the Costa Rica (San José) or Spain (Madrid) programs. It is possible to earn four credits toward the major during a semester in Spain or Costa Rica; students who remain a year in Spain may earn seven credits toward the major.

A minor consists of six courses at the 201-202 level or beyond. Estudios Hispánicos minors are encouraged to spend a semester or a year on the Spain or Costa Rica programs. Students on the programs in Spain or Costa Rica may count three courses (semester program) or five courses (year program) toward the Spanish minor.
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.

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
- Global Studies 330 - Palestinian Identities
- Government 290A - Israeli-Palestinian Conflict
- Government 331 - Politics of the Middle East
- History 160A - Intro to the Islamic World
- History 247B - SPTP: 19th Century Middle East
- History 260 - History of the Middle East
- Religious studies 224 - Islamic Religious Traditions
- Religious studies 266 - History of the Middle East, 1914-1967
- Religious studies 367 - History of the Middle East 1967-present

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.

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
- Eng 247A Classic Chinese Heroic Literature: Wushu and Triad Archetypes
- Govt 290 Politics in East Asia
- Govt 322A Politics of China
- Hist 105 Early Asian Civilizations
- Hist 106 Modern Asia
- Hist 292 Revolutionary China
- Phil 223 Asian Philosophy
- Rel 223 Religious Life of China
- Rel 370 Asian Religions in the Modern World
- Soc 248C China's Market Transition

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 www.stlawu.edu/ciis.

Certification to Teach a Foreign Language

Students seeking initial certification as a 7-12 French, German or Spanish teacher in New York must major in the language and also complete the certification minor in education. Francophone studies, German 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, German studies, or estudios Hispánicos major and the educational studies 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 VirtuLab 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.
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 Daoist 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.

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.

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.

French

101, 102. Elementary French.  
This two-semester sequence provides an introduction to basic structures and develops skills in speaking, reading, writing and oral comprehension. In class and in the language laboratory, current materials from France and other French-speaking countries familiarize students with aspects of language and contemporary culture. Open to students with little or no prior study of the French language.

103, 104. Intermediate French.  
This two-semester sequence provides a review of basic structures and practice in the skills needed for communication in speaking and writing. The basic text and literary and cultural readings are supplemented by current material from France and other French-speaking countries in the language laboratory. Designed for students with two or more years of high school French who wish to improve their grasp of basic skills and enlarge their working vocabulary. Prerequisite: French 101, 102 or the equivalent.

201. Advanced French.  
Review and expansion of the four skills with emphasis on the oral and written expression of ideas in French topics of current interest and cultural significance in the French-speaking world. Materials studied include films, journalistic texts, songs and literary texts. For students who have completed French 104, or who have had at least four years of French at the secondary level. Also offered through European Studies.

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.

247, 248. Special Topics.

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.

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, Miodo, 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, Molière, 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-
247. Special Topics.
Courses focus on such specific topics as literature and film representing World War II, the Holocaust, German National identity, the Construction of Masculinity in German culture and Contemporary German issues. These topics are announced prior to registration; while they have no specific prerequisite, it is generally expected that students’ reading knowledge and comprehension ability be at a level that enables them to handle relatively complex texts.

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 VirtuLab materials. Students learn how to integrate available technology into their teaching and create original visual and auditory materials and exercises for use in their own lab sections. Teaching Languages is taught in English and cross-listed among all the languages.

489, 490. SYE: Independent Study.
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.
These courses introduce students to speaking, understanding, reading and writing of German. The text series presents the language in the context of everyday life in modern Germany so that, in addition to acquiring basic language skills, students will also learn the fundamentals of everyday culture of ordinary Germans. Open to students with little or no prior German.

103. Intermediate German.
In this course students further develop the four language skills through grammar review as well as the introduction of more complex grammatical and syntactic forms. Written and oral practice based on an intermediate language textbook which continues the focus on the every-day culture of Germany. The textbook is supplemented by a variety of other cultural texts and a film. Classes meet three times a week and are supplemented by two hours of lab. Prerequisite: German 101, 102 or the equivalent.

104. Intermediate German.
This course completes the introductory and intermediate phases of the German studies major and minor. The reading, writing and speaking assignments are of a more complex nature than in the preceding courses and the grammatical review highlights advanced grammatical and syntactic structures. Students are introduced to some basic facts of 20th-century German history. Films serve as cultural texts and form the basis for class discussions and essay writing. Class sessions plus lab. Prerequisite: intermediate reading and comprehension ability, German 102-103 or equivalent. Also offered through European Studies.

201. Advanced German.
This course is intended to make the transitions from intermediate German to a more advanced level of competence in the basic language skills: oral comprehension and expression, writing and reading comprehension, vocabulary-building. It is intended for students who have completed German 104 or who have excelled in German 103 as well as for students who have successfully completed the intermediate level of high school German. Students work with a variety of short literary and other cultural texts of varying degrees of difficulty; as well as with two films covering a range of primarily twentieth-century topics and themes related to aspects of German political and social history. This work is accompanied by a review of some of the more complex aspects of German grammar. Also offered through European Studies.

202. Advanced German: Special Topics.
This course further improves oral and written communication skills. It is organized around a special topic such as The Holocaust in Youth Literature. Teaching and learning materials are taken from internationally acclaimed works of popular fiction and films portraying young people caught in the nefarious web of the Nazi regime and its racist politics. The course emphasizes discussion, oral presentations and brief essays. Other possible topics: Important Figures in German History, Representations of the Post-war years and The Adenauer Era, After the Fall of the Wall. Prerequisite: adequate reading knowledge and comprehension ability. Also offered through European Studies.

The mood in Vienna around 1900 has been described as “a nervous splendor.” The centuries-old Habsburg Empire was rapidly approaching its end, undermined by the ethnic turmoil that would soon contribute to the outbreak of World War I. But in this atmosphere of impending doom, there was a flourishing of art, architecture, music, literature, psychology and philosophy that made Vienna one of the birthplaces of Modernism. This course examines the developments in all these fields and the connections among them. Attention is also given to the way Vienna still reflects the revolutionary patterns of thought that emerged there a century ago. Also offered through European Studies and Literature in (English) Translation.

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/Independent Study.
See Honors in the introductory section on departmental curriculum. See application procedure on the home page of the departmental Web site.

Study in Austria.
See the International and Intercultural Studies section of this Catalog.

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 (fall semester) is open to students with little or no prior study of the Italian language; Italian 102 (spring) 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 hone 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 VirtuLab materials. Students learn how to integrate available technology into their teaching and create original visual and auditory materials and exercises for use in their own lab sections. Teaching Languages is taught in English and cross-listed among all the languages.

**Spanish**

**101, 102. Elementary Spanish.**

The principal goal is the acquisition of a basic level of communicative ability in Spanish. Video, film, audiotapes and the Internet provide current materials from Hispanic America, Spain and the United States Latino community to enhance language learning and knowledge of the culture. Language laboratory activities advance conversational skills and oral comprehension. Open to students with little or no prior study of the language.

**103, 104. Intermediate Spanish.**

Spoken and written Spanish are reinforced by a review of grammar and idiomatic strategies for self-expression. The course includes use of videos, music, literature, news broadcasts and the Internet as a means for understanding the contemporary culture of Hispanic America and Spain. Materials in the language laboratory facilitate conversation and increased oral comprehension. Prerequisite: Spanish 101, 102 or equivalent. Also offered through Caribbean and Latin American Studies.

**201. Advanced Spanish.**

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

**202. Hispanic Cultural Studies.**

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

**211. Introduction to Latin American Cultures.**

This course presents major topics related to history and culture in Latin America and includes an analysis of cultural pluralism in selected areas of the region. Representative documents in Spanish such as literary works, newspaper articles and videos are studied to illustrate changes in the social patterns of the culture and facilitate the enhancement of language skills. Not open to students who have completed a more advanced course. Taught in Spanish. 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.

**241. Latinos in the United States.**

This course introduces students to the socio-historical, political, economic and cultural elements that shape the Latino identity in the United States. Drawing from the growing body of literature — poetry, fiction, testimonial narrative, theatre, critical essays — by various Latino/a writers, the course explores issues of “race,” immigration policy, class, education, language, religion, cultural identity and representation. The class is conducted in Spanish, although some readings are in English. Course materials also include videotapes, news, documentaries, music, etc.

**247, 248. Special Topics.**

Designed for students who have completed Spanish 201, 202. Special topics courses offer the opportunity to study specific topics in Hispanic culture. Recent examples include seminars on Latin America in film and representations of women in Spanish film. Also offered through Caribbean and Latin American Studies.

**LANG 500. 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 VirtuLab 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.

**423. Introduction to Spanish Literature.**

An overview of the literature of the Spanish people. Readings from the major periods, from the earliest literature to the present. Authors studied include Cervantes, Calderón, Federico García Lorca and Carmen Martín Gaite. The works are treated as representative, thematically and aesthetically, of their respective ages and the traditions of their gene. Also offered through European Studies.

**439. Literature, Film and Popular Culture in Contemporary Spain.**

After the Franco regime (1939-1975), Spaniards began to explore and question cultural, historical and sexual identity. This course examines post-totalitarian Spanish literature, arts and popular culture made possible by the political transition to democracy. The aim is to use the theoretical framework of cultural studies as a means of understanding contemporary Spanish culture. Materials analyzed include films, television programs and commercials, novels, short stories, magazines and popular songs. Also offered through Film and Representation Studies and European Studies.

**440. Poetry, Music and Ethics.**

From the classic song “Guantanamera” to the recent “Los Hijos de las Piedras” (Marwan), intersections between poetry and music in Spain and Latin America have been enriching, stimulating and renovating for both arts. These innovative collaborations also represent powerful ethical commitments to ongoing social struggles. This course studies important works of social poetry and music in relation to the 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.

443. Contemporary Hispanic American Literature.
A study of 20th-century literature in Hispanic America as well as in the United States from diverse genres including poetry, prose fiction, theater and testimonial works. Authors read usually include Rubén Darío, Gabriel García Márquez, Pablo Neruda, Rosario Ferré and Gloria Anzaldúa, among others. Also offered through Caribbean and Latin American Studies.

444. Introduction to Hispanic American Literature.
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. Authors such as Octavio Paz, José Ortega y Gasset, Willis Barnstone, Carol Maier, Walter Benjamin, Tejawini Niranjana and others help illuminate the practice of translation in a variety of genres that include poetry, autobiography, book reviews and subtitling of films. For students with considerable background in Spanish, including, preferably, residence in a Spanish-speaking country. Also offered through Caribbean and Latin American Studies.

446. Oral Expression in Spanish.
Analysis of contemporary oral usage through the study of film, video and audio materials as well as printed texts. Advanced pronunciation practice. Study of techniques of oral presentation. Assignments are designed to promote the development of persuasive skills and include formal debates on contemporary issues and other public speaking activities. Also offered through Caribbean and Latin American Studies.

447, 448. Special Topics.
Designed for students at any level above Spanish 211 and 213, these courses 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. Also offered through Caribbean and Latin American Studies.

489, 490. SYE: Independent Study.
Also offered through Caribbean and Latin American Studies.

497, 498. SYE: Honors Project.
Working closely with a faculty member, the student develops a project related to Spanish-language literature or culture. Projects may include translations from Spanish to English and they may be interdisciplinary. Students are encouraged to use a variety of media in their projects and, if they participate in a St. Lawrence program in Costa Rica or Spain, to relate their projects to that experience. For additional information, see the description of Honors in the introductory section of the departmental curriculum.

Study in Spain

The following Spanish courses are offered in the Madrid program. Courses are also available in anthropology, economics, English, gender studies, global studies, government, history, fine arts and psychology, either as regular offerings or by special arrangement.

Fall

300S. Masters of the Spanish School: El Greco, Velázquez, Goya and Picasso.
A study of the work of four major Spanish painters, each of whom is considered the greatest painter of his period in Spain: El Greco (Renaissance), Velázquez (Baroque), Goya (Neoclassicism/Romanticism), Picasso (20th century). The course includes a weekly class in one of the museums in Madrid such as the Prado, the Reina Sofia and the Thyssen collection.

301S. Advanced Practical Spanish.
A unit course emphasizing spoken and written Spanish skills. The course is designed to help students achieve and maintain the linguistic skills needed for the programs 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.
See description for Spanish 423.

One of the best ways to learn about a country is to travel perceptively through its countryside, villages and cities. Landscapes are a good indicator of natural and cultural diversity. In observing human interaction with the physical environment, students understand better how nature, communities and ways of life developed over time. This interdisciplinary course contextualizes the two major field trips of the spring semester program.

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.
COURSES OF STUDY

303S. History of Spanish Art.
An overview of Spanish art from prehistoric cave painting to 20th century masters such as Picasso and Miró. 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, Martin Gaite, Llamazares) as representative of the principal aesthetic and historical movements of the century.

344S. Survey of Latin American Literature.
See description above for Spanish 444.

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.

247, 248. Special Topics.

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.

489, 490. SYE: Independent Study.
For seniors or for especially qualified students with permission of instructor.

Modern Languages
289, 290. Special Studies.
Work in languages not regularly included in departmental offerings.

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 music.stlawu.edu or by linking directly to it from the Majors and Programs page at www.stlawu.edu.

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.
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 music.stlawu.edu 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.

- **023. Early Music Singers.**
  The Early Music Singers perform music from the medieval, Renaissance and Baroque eras with special attention to historical practices. Also offered through European Studies.

- **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.

**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 (Rehearsal) are exempt from the fee. Go to music.stlawu.edu 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. Fulfills the arts/expression distribution requirement.

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 sights 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. Fulfills the arts/ expression distribution requirement. Prerequisite: Music 100/101, a score of 4 of 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. Offered every semester. Fulfills the humanities distribution requirement and the diversity requirement. Also offered 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. Fulfills the social science distribution requirement and the diversity requirement. Also offered as Asian Studies 244.

245. Musics of Eastern Europe.
In this course, we examine and analyze the music of a region where social and political life has changed dramatically and frequently during the last 150 years. From the revolutions of 1848 to the post-communist struggles of the 1990s, music and musicians often have been drawn into debates about national and regional identities. We proceed from the assumption that notions of identity and difference are evident not only in discourse about musical practices, but also in musical sound itself. Offered occasionally. Fulfills the humanities distribution requirement and the diversity requirement. 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.
300. Musical Structures.
This course is for students who have completed Music 200 or 201 and wish to continue their study of music analysis. It focuses on the study of musical events such as harmony, melody, rhythm, texture and form in order to develop skills in understanding, analyzing, composing and listening to music. We study harmonic, melodic, rhythmic, textural and formal choices various composers have made and the ways those choices affect how music is perceived. Offered every year. Prerequisite: Music 200/201.

This course explores songs from New York City’s “Tin Pan Alley,” selected from such songwriters as the Gershwins, Richard Rodgers and Irving Berlin, and songs from earlier times and places, such as Franz Schubert in early 19th-century Vienna or Thomas Campion in Elizabethan England. Primary focus is on the music and the lyrics, but we also study the social and cultural contexts of these songs. Some required concerts and video screenings outside of class time. Offered occasionally. Prerequisite: Music 100/101, 200/201, or permission of the instructor. Also offered through European Studies.

333. Mozart and the Classical Tradition.
A survey of the developments in Western vocal and instrumental art music during the years 1750 through 1825, with particular emphasis on the life and artistic contributions of Wolfgang Amadeus Mozart. The course seeks to establish ties between contemporary European society and the art it cultivated. Offered occasionally. Prerequisite: Music 200/201. Also offered through European Studies and German Studies.

335. The World of Clara and Robert Schumann.
It was quite possible for a woman musician to “make it” in 19th-century Europe. Clara Schumann achieved and sustained such a success for her entire professional life. By studying the lives and artistic accomplishments of “priestess of the piano” Clara Schumann (1819-1896) and her husband, the deeply imaginative composer Robert Schumann, we seek to understand Romantic music of the Western cultivated tradition. The course will feature works by both the Schumanns — piano compositions, songs and chamber works — and others of their time. Offered occasionally. Prerequisite: Music 200/201. Also offered through European Studies and German Studies.

This course covers music that has been considered experimental, radical or transgressive in classical music, jazz and rock. Through surveying European and American perspectives on the relations between the arts and society in the 19th and 20th centuries, we work toward understanding the ideologies that have motivated musicians to locate their styles and practices outside of an imagined mainstream. In studying influential musical works from the last two centuries, we seek to clarify how musicians have put their ideologies into musical practice. Offered occasionally. Meets the humanities distribution requirement. Prerequisite: Music 200/201. Also offered through Peace Studies.

350. Composition.
The fundamental activity in this course is observation. Having arrived at a formative idea for a composition by means of a close analysis of a generative source, we begin describing that idea by any of several means (for example, a score, a performance or a sound generator), and making sense of that idea in sound. At the discretion of the instructor, students work with acoustic instruments, digital music technology, or both. Offered occasionally. Prerequisites: Music 200/201 and Music 220. May be repeated for credit when course content varies.

Independent research in an area of musical study under the guidance of a member of the music faculty. Students must submit a written proposal to the department chair no later than November 15 for projects to be undertaken in the spring semester or April 15 for projects for the following fall. Prerequisites: Music 200/201, 210, and at least one other course in music.

Native American Studies
Minor offered

Professors
Nyamweru (anthropology, emerita); Associate Professors
Hill (performance and communication arts), Johns (environmental studies), Chew-Sánchez (global studies); Assistant Professors
Pai (biology), Schrems (co-ordinator; history), Papineau (Community-Based Learning).

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

The Native American studies program integrates course work from several fields into an interdisciplinary curriculum which 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. 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 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 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.

Government
270. Special Topics in American Politics.
273. Special Topics in Comparative Politics.

History
229. Introduction to Native American History.
333. The Age of the American Revolution.

Performance and Communication Arts

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 (co-coordinator; biology), Greene (co-coordinator; psychology), Searleman (psychology); Associate Professors DeCoteau (psychology), Ghiraldi (psychology); Assistant Professors Estevez (biology and psychology), Onyper (psychology).

More information on this interdisciplinary major can be found by linking directly to it from the Majors and Programs page at www.stlawu.edu.

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 subdisciplines 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
Senior Research in Neuroscience 1-2 units
Total 11.25-12.25 units

Cellular Neuroscience Track

Biology
One of the following:
245,246. Genetics.
250. Introduction to Cell Biology.
326. Animal Physiology.
Plus three additional units of courses from:
Biology
232. Laboratory Animals: Ethics, Care and Techniques.
245. Genetics.
250. Introduction to Cell Biology.
326. Animal Physiology.
333. Immunology
386. Advanced Animal Physiology.
387. Cellular Mechanisms of Memory.
388. Drugs and the Brain.
391. Research Methods in Scanning
Electron Microscopy

Chemistry
309. Biochemistry.
415. Advanced Biochemistry.

Behavioral Neuroscience Track

Psychology
205. Research Methods in Psychology.
Plus three additional units of courses from:
Biology
270. Endocrinology.
326. Animal Physiology.
386. Advanced Animal Physiology.
388. Drugs and the Brain.

Psychology
232. Laboratory Animals: Ethics, Care and Techniques.
326. Hormones and Behavior.
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.

Senior and Honors Research

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.

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.

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 1.5 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 100.

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. Prerequisites: Biology 101,102. Recommended: Biology 245, 246 or 250.

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 or permission of the instructor. Counts toward the neuroscience major (cellular track). Also offered as Biology 288.

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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 or permission of the instructor. Counts toward the neuroscience major (cellular track). Also offered as Biology 288.

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 (physiopharmacology), 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. Offered with and without a lab. Prerequisites:
Biology/Neuroscience 288 or permission of the instructor. Counts toward the neuroscience major (both tracks). 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. Also offered as Biology 389.

438. Human Neuropsychology.
This 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: PSYC 331 or BIO 101.

489, 490. SYE: Senior Project.
All neuroscience senior majors are required to do a senior research project that normally would earn 1 to 2 units of credit, depending on the scope of the proposed work. The project should integrate acquired research skills and 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.

Outdoor Studies
Minor offered

Associate Professor Shrady (director; geology).

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

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.

Outdoor studies is concerned with nature, ideas about nature and the relationship of humans with nature both actual and ideal. The goals of the minor are:

- To help to prepare students to make the momentous decisions about the natural world and proper human relationships with it that we must confront in the 21st century. This is accomplished through cross-disciplinary study, including field study, as well as through outdoor activities that bring one into close contact with the wild.
- 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. The Outdoor Studies Core Course from the Outdoor Education category of courses
2. One course from the Field Science category
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 100, Outdoor Studies Core Course.

ODST 101, Modern Outdoor Recreation Ethics (“MORE”) (0.5 units)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ODST 115</td>
<td>Introduction to Snow Science and Avalanches</td>
</tr>
<tr>
<td>ODST 248A</td>
<td>SPTP Advanced Topics of Outdoor Leadership and Education</td>
</tr>
</tbody>
</table>

**Field Science**

- Biol 121, The Natural World
- Biol 209, Vertebrate Natural History
- Biol 215, Invertebrate Biology
- Biol 221, General Ecology (*)
- Biol 227, Mammalogy
- Biol 241, Field Methods for Environmental Scientists (dual listed w/Geology)
- 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
- Physics 101/102, 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 213, Seeing History
- Envs 310, Philosophy of the Environment (*
- Envs 335, Foundation of Environmental Thought
- Envs 255, Environmental Perception and Indigenous Knowledge
- 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**

**100. Outdoor Studies Core Course: 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.

**147. SPTP Capstone Internship (Adirondack Semester, .5 units)**

The Adirondack Semester concludes with the Capstone Internship (CI). The CI is a culminating experience that provides an opportunity for students to personalize their learning, expand upon ideas introduced during the semester, thus deepening their Adirondack sense of place and beginning the process of transference of these ideas and ideals beyond the Adirondack Semester. Students seek first-hand experiences that build upon their course work from the semester with individuals and organizations whose work is connected with the Adirondacks, nature and/or sustainable living. The CI consists of two distinct components: a Work Placement and Homestay. With the guidance of an assistant director, each student is responsible for organizing the details of their individualized Work Placement and Homestay, which will be summarized in a proposal. Outside of their Work Placement, students are asked to complete two assignments: a tangible project and daily essays. At the conclusion of the CI, each student will display his/her project and give a final presentation.

**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
202. Creative Expressions of Nature. (Adirondack Semester)

This course looks at our interaction with the natural world through an individual and artistic eye. We consider the purpose of art in general through a look at nature writing, nature journaling, papermaking, sketching, poetry and artistic representation. Students try their hand at various modes of artistic expression and mine their own experiences in the outdoors for raw material, to explore the intersection of self and the natural world, that internal landscape where the ‘eye’ and the ‘I’ meet. Through a series of focused reading and creative writing assignments, art projects, and writing exercises outside, students are encouraged to slow down, observe and reflect on the personal relationship they have with the natural world.

203. Land Use Change in the Adirondacks. (Adirondack Semester)

Using the Adirondacks as a case study, this course examines current activities in land planning and the importance of historical context. Study of Adirondack history begins with 16th-century information from European explorers and Native Americans. Emphasis is then placed on industrial and recreational use in the 19th century. The course highlights formation of the State Forest Preserve and the Adirondack Park, and regulations governing private land use. Study of the present utilizes political theory such as internal colonization and core-periphery. The course employs local examples through discussion and field trips.

247. Knowing Nature (Adirondack Semester)

Students examine and practice a variety of methods and techniques by which humans know nature. In particular, the course engages the western scientific and the shamanic (as practiced by indigenous cultures) paradigms, and asks how our perception of nature affects how we relate to and treat it. The course will explore the concept of nature as knowing and intelligent through the lenses of recent scientific research and traditional knowledge.

248A: SPTP- Advanced Topics of Outdoor Leadership and Education

This intensive, field-based course culminates with a two-week expedition in which students apply the leadership and teaching skills learned through lectures and labs during the semester. This is a student-designed and instructor-facilitated experience, in which students develop risk management plans, course itineraries and outdoor education lesson plans specific to a wilderness expedition, and assume direct leadership roles implementing their developed lesson plans. The course is designed for students who will work as outdoor guides and educators in the St. Lawrence University Outdoor Program and other professional organizations.

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

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 such as Survey of World Religions, or courses in conflict resolution and negotiation.

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 years 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? What are ways to cultivate the inner peace that gives people the strength and insight to deal with conflict creatively and positively? This course satisfies the diversity requirement. Also offered as Philosophy 120.

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; 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

Anthropology
102. Cultural Anthropology.

Art and Art History

Asian Studies
History 106. Modern Asia.
History 292. Revolutionary China.

Canadian Studies
201. Canadian-American Relations.

Caribbean and Latin American Studies
History 234. Modern Latin America.
Global Studies 250. La Frontera: Cultural Identities on the Mexican-U.S. Borderland.

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

Education
203. Contemporary Issues in American Education.

Environmental Studies
216. Climate Change Policy and Advocacy.
261. Sustainable Agriculture.
263. Global Change and Sustainability
310. Philosophy of the Environment. (Dual-listed in Philosophy)
318. Environmental Psychology. (Dual-listed in Psychology)

Gender and Sexuality Studies
201. Gender in Global Perspective.

Global Studies
101. Intro I: Political Economy.
102. Intro II: Race, Culture and Identity.
250. La Frontera: Cultural Identities on the Mexican-U.S. Borderland.
301. Theories of Global Political Economy.
302. Theories of Global Cultural Studies.
333. Ethics of Global Citizenship. (Dual-listed in Philosophy)
350. Global Palestine.

Government
108. Introduction to International Politics.
206. Introduction to Political Theory.
331. Politics of the Middle East.
360. International Relations Theory.
362. International Law.
363. International Organization.
364. Terrorism and Human Rights.

History
104. Development of the United States, 1877-Present.
105. Early Asian Civilizations.
106. Modern Asia.
160. The Islamic World.
229. Introduction to Native American History.
234. Modern Latin America.
235: Origins of American Foreign Policy (Colonial Era to 1900)
244. Twentieth-Century U.S. Foreign Policy.
252. Conflict in Africa. (Dual-listed in African Studies)
256. Slavery and Freedom in the Americas.
267. The Holocaust. (Dual-listed in Religious Studies)
273: The Civil Rights Movement
292. Modern China.
299. Seminar on Historical Research Method when relevant (e.g., Armenian Genocide; World War I)
308: European Imperialisms
319. The Nuclear World. (Dual-listed in Physics)
325. 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
245. Musics of Eastern Europe

Performance and Communication Arts
315. Gender and Communication.

Philosophy
203. Ethical Theory.
206. Introduction to Political Theory.
310. Philosophy of the Environment. (Dual-listed in Environmental Studies)
333. Ethics of Global Citizenship. (Dual-listed in Global Studies)

Physics
319. The United States and the Nuclear World. (Dual-listed in History)

Psychology
313. Industrial/Organizational Psychology.
318. Environmental Psychology (Dual-listed in Environmental Studies)
325. Social Psychology

Religious Studies
267. The Holocaust. (Dual-listed in History)

Sociology
110. Global Problems.
112. Inequality.
161. Social Problems and Policy.
236. Education and Society.
238. Social Services, Agencies and Advocacy (with Community-Based Learning).
275. Medical Sociology.

288. Dilemmas of Development.
307. The Sociology of Karl Marx.
310. Slavery, Race and Culture.
315. Family and Relationship Violence (with Community-Based Learning).
377. Sociology of Consumption.
465. Environmental Sociology.

Performance and Communication Arts
Major and minor offered

Associate Professors Daniels (associate dean of the first year), Fordham-Hernandez (co-chair), Fuoss, Gardinier Halstead, Hill (co-chair); Assistant Professors, Kittler, Prody; Visiting Professors Pepiton, Saltzberg. Production Manager/Lighting Designer Torres; Costume Shop Supervisor French.

Visit the performance and communication arts webpage by linking directly to it from the Majors and Programs page at www.stlawu.edu.

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.

Theater 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 theater 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: theater/performance studies or rhetoric/communication studies. The department’s major is designed to enable students to pursue that interest passionately and in depth. However, we are also committed to a philosophy that emphasizes both depth and breadth of study; accordingly, the curriculum requires majors to enroll in courses that span the various areas of inquiry. Thus, majors explore the rhetorical and communicative dimensions of performance and the performative dimensions of rhetoric and communication.

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 must 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.

Introductory courses in rhetoric/communication studies include:
- 111. Rhetoric and Public Speaking.
- 127. Introduction to Communication Studies.
- 212. Special Topics in Rhetoric/Communication Studies.
- 221. Intercultural Communication.

Introductory courses in theater/performance studies include:
- 103. Stagecraft.
- 113. Introduction to Performance Studies.
- 125. Introduction to Dramatic Scripts.
- 204. Costume History and Construction.
- 213. Special Topics in Theater/Performance Studies.
- 223. Playwriting.
- 230. Introduction to Modern Dance.
- 235. Introduction to Jazz Dance.
- 255. African-American Drama.

Advanced courses in rhetoric/communication studies include:
- 311. Advanced Public Speaking.
- 312. Special Topics in Rhetoric/Communication Studies.
- 315. Gender and Communication.
- 316. Advanced Communication Studies.
- 318. Argumentation and Debate.
- 325. Peer Mentoring in Rhetoric and Communication.
- 328. Interpersonal Communication.
- 331. Presidential Campaign Rhetoric.
- 489/490. SYE: Senior Project.
- 498/499. SYE: Honors Senior Project.

Advanced courses in theater/performance studies include:
- 270. Collaboration Across the Arts.
- 303. Stage Lighting.
- 309. Acting Styles.
- 313. Special Topics in Theater/Performance Studies.
- 319, 320. Shakespeare.
- 323. South African Drama.
- 324. Elizabethan and Jacobean Drama.
- 327. Drama By and About Women.
- 332. Directing.
- 343. Children’s Theatre in the Schools.
- 437. Contemporary British Theatre. (London)
- 489/490. SYE: Senior Project.
- 498/499. SYE: Honors Senior Project.

2. Majors must take three courses from the above lists for 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.

Minor Requirements

Minors choose one of the two areas — rhetoric/communication studies or theater/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 from the above list from 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.

Electives

In addition to the courses listed above that fulfill major and minor requirements, the department also offers the following electives that do not count for major or minor credit:

100. Beginning Ballet.
101. Production Credit.
226. Introduction to Japanese Drama.
244. Techniques of Screenwriting.
306. Advanced Screenwriting.
480. Independent Study.

Honors

To graduate with honors, a major must maintain a 3.5 GPA in the department and a 3.0 GPA overall; the major’s senior project proposal must be approved for enrollment in 498/499 SYE: Honors Senior Project; and the student must earn at least a 3.5 in 498/499.

Courses

100. Beginning Ballet.
Fundamentals of classical ballet including barre, center work and across-the-floor movements with emphasis on body alignment and elements of ballet style. Material is presented in a progression from basic to more complex. Lectures consist of pertinent references to dance history, terminology, movement theory and dance films illustrating related subject matter. Elective only; does not count toward completion of the major or minor.

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. Elective only; does not count toward completion of major or minor.

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; it also fulfills the DIV and AEX requirements.

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, 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 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 news broadcasts.

127. Introduction to Communication Studies.
This course explores the forms, functions, techniques, technologies and institutions of human communication with the goal of enhancing understanding of the complex dynamics of social interaction. Topics include communication and meaning; language, thought and communication; non-verbal communication; gender and communication; intercultural communication; and the mass media.

202. Sound for the Stage.
This course explores artistic and practical aspects of using sound in support of theatrical productions. Also offered as Music 222.

204. Costume History and Construction.
This course explores the artistic and practical aspects of designing costumes for performance. Through a series of projects, students analyze the costume

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requirements for various plays, research period fashions and develop costume designs for specific characters and productions.

212. Special Topics in Rhetoric/Communication Studies.
Introductory courses in rhetoric/communication studies that the department cannot offer on a regular basis.

213. Special Topics in Theater/Performance Studies.
Introductory courses in theater/performance studies that the department cannot offer on a regular basis.

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 English 215.

221. 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.

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, dialog, dramatic action and others. The course concludes with the writing of a one-act play. Students read exemplary plays from the modern repertoire. Also offered as English 223.

230. Introduction to Modern Dance.
This course emphasizes development of basic modern dance concepts and technique, including increase of students’ strength, control, rhythmic awareness and stage presence. Specific techniques touched upon and/or covered in depth include, but not limited to, O’Donnell, Nickolas, Garth Fagan and Graham. The course provides an in-depth knowledge of the history of modern dance. Students will strengthen their choreographic skills and produce an original piece.

235. Introduction to Jazz Dance.
This course is for the elementary dance student interested in developing the basic movement skills of jazz dance. Emphasis is placed on the Jack Cole technique. Course material consists primarily of building a solid technical base, learning isolations, rhythmic difference and dynamics. The course provides an in-depth knowledge of jazz dance, its phenomenon and its changing character throughout the years. Students are exposed to Broadway, concert and commercial jazz styles, strengthen their choreographic skills and produce an original piece.

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 of African-American culture and an important social and political voice. Also offered as English 255.

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

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. Prerequisites: PCA 125 and 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 theater 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.
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.

312. Special Topics in Rhetoric/Communication Studies.
Advanced courses in rhetoric/communication studies that the department cannot offer on a regular basis.

313. Special Topics in Theater/Performance Studies.
Advanced courses in theater/performance studies that the department cannot offer on a regular basis.

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 GNDR 116.

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: Instructor permission.

317. **Performing Poetry.**
“Milk tongue, goat foot, 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 poetry theory and performance theory. Also offered as English 313.

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: Instructor permission.

319, 320. **Shakespeare.**
An intensive study of Shakespeare’s plays; 319 concentrates on Shakespeare’s histories, comedies and romances, while 320 focuses on the tragedies. Prerequisites: 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.

322. **Native American Oral Traditions.**
This course examines the oral literatures of Native Americans and the incorporation of these oral traditions into written texts. Native American oral traditions are examined using written texts, videos and live performances. With a focus on origin stories, mythic heroes, and rituals, the course considers Native American views of storytelling, family, religion/cosmogony and language. Also offered through Native American Studies.

323. **South African Drama: Voices of Protest and Selfhood.**
This course introduces students to theatrical developments in South Africa in the apartheid and post-apartheid era. The purpose is to foster awareness of the potency of drama for political protest and for social change in post-colonial Africa. Issues about gender and racial discrimination, as well as the challenge of technocracy and European values to traditional beliefs and customs, are the primary focuses for study. Also offered as English 323 and through African Studies.

324. **Elizabethan and Jacobean Drama.**
An examination of the vibrant popular genres (the revenge tragedy, the city comedy; the revisionist history, feminist drama, tragi-comedy) practiced 1580-1640 by the finest of Shakespeare’s contemporaries and followers. Performance challenges associated with each play are also discussed. Prerequisites: English 250 and one other 200-level English course. Also offered as English 324, and through European Studies.

325. **Peer Mentoring in Rhetoric and Communication.**
This course is designed to train students who will work as rhetoric and communication mentors in the University’s WORD Studio. Permission of instructor required.

326. **American Public Address.**
A study of American history through examination of the speeches of spokespersons for social, political, legal and religious institutions and movements. From Thomas Jefferson to George Bush, from Susan B. Anthony to Phyllis Schlafly, from George Wallace to Martin Luther King Jr.: a study of the impact of rhetorical strategies upon ideas and events and of ideas and events upon rhetorical strategies.

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: English 125 or permission.

328. **Interpersonal Communication.**
This course examines the social situations in which people create and maintain interpersonal relationships, exploring the myriad social and cultural factors that impinge upon the success of these relationships. Topics include identity, relationship formation, family, friendship, intimacy, gender and sexualities, relationships at school and work, conflict, and digitally mediated interpersonal communication. Prerequisite: English 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.

330. **Ritual Studies.**
This course examines the nature of rituals, how humans use rituals, the various types of rituals, and how rituals evolve over time. Students explore the origins, histories, and methods of analysis of rituals as well as learning how we produce them.

331. **Presidential Campaign Rhetoric.**
This course examines the forms and functions of rhetoric within the context of presidential election campaigns. Students engage in a variety of formal and informal oral and written exercises related to the persuasive strategies that candidates, the media and independent organizations use to advance their political agendas.

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: English 125 and English 107 or English 113, or permission of instructor; English 103 is recommended.

338. **Twentieth-Century Avant-Garde.**
Students are exposed to theoretical writings, dramatic texts and performances that reflect the continuing experimentation in the theater 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 theater practitioners have grappled with finding new ways of articulating what it means to be human in an industrialized world. Prerequisites: English 125 or English 215 or permission of instructor. Also offered through European Studies.

340. **Performance Art.**
Students read essays about the historical tradition of performance art and the relationship between performance art, theater, dance and the visual arts, and consider the work of contemporary performance artists such as Karen Finley, Spalding 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: English 107 or English 113 or permission.
PHILOSOPHY

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.

400. Independent Study in Ballet.
Supervised research or project on an independent basis. Prerequisite: permission of instructor. Elective only; does not count toward completion of major or minor.

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. Elective only; does not count toward completion of major or minor.

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. Students are assigned a senior project advisor who is solely responsible for overseeing the execution and evaluation of the project.

498/499. SYE: Honors Senior Project.
The senior project is a capstone designed to allow students to demonstrate their ability to synthesize the analytical and practical skills associated with the discipline. Only those students who have had their senior project proposal approved by the department may register for this course. Proposal guidelines are available in the Arts Office. Students are assigned a three-person honors project committee, one of whom will be designated as the student’s primary senior project advisor, with the other two serving as readers. Students must orally defend their project.

Philosophy
Major and minor offered

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

Visit the philosophy webpage at www.stlawu.edu/philosophy or by linking directly to it from the Majors and Programs page at www.stlawu.edu.

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, vs. 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 some 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

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levels, there is no recommended sequence. There is, for instance, no reason to take Philosophy 203 before 223, or 301 before 302.

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. Only one 100-level course counts toward the major. Students are strongly encouraged to begin their philosophical studies with 100 or 103, since one or the other is a prerequisite for several 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; 208, Modern Philosophy; 203, Ethical Theory; 202, Reasoning; 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. This course is open to students without previous work in philosophy. This course satisfies the humanities distribution requirement.

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 texts and arguments critically, develop writing skills and ask and answer questions in a philosophical manner. This course satisfies the diversity and humanities distribution requirements. Also offered through Asian Studies.

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? This course satisfies the diversity distribution requirement. Also offered as Peace Studies 100.

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: Philosophy 100 or 103, or permission of the instructor. Also offered through European Studies.

An introduction to argument and logic. Attention is given to both deductive and inductive logic and to methods of determining the reliability of arguments of both types. Additional topics may include scientific thinking, informal evaluation of arguments and composition of arguments.

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: Philosophy 100 or 103, or permission of instructor. This course satisfies the diversity and humanities distribution requirements. 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. This course satisfies the humanities distribution requirement. Also offered as Government 206 and through European Studies and Peace Studies.

208. Modern Philosophy.
An introduction to the philosophical thinking of representative modern European philosophers in the rationalist, empiricist and critical traditions. Primary emphasis is on Descartes, Hume and Kant. The course explores both the systematic thinking of the philosophers on central topics concerning theories of knowledge and of reality, and the historical development of the different viewpoints on these topics. Prerequisite: Philosophy 100 or 103, or permission of the 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 Sport Studies and Exercise Science.

223. Asian Philosophy.
An introduction to some of the major thinkers and themes of the philosophies of India, China and Japan. The major themes—self and ethics—require us to think in a different framework from that of the Western tradition: for instance, whereas the East emphasizes the ethical, the West stresses the logical and epistemological; whereas the West seeks out a methodology, the East inquires after a path. Students are encouraged to think in these non-Western frameworks; however, we also make reference to ideas and themes in Western philosophy to aid understanding of the traditions. This course satisfies the diversity distribution requirement. Also offered through Asian Studies.

232. Africana Philosophy.
This course engages two interrelated bodies of philosophic literature—African philosophy and African-American philosophy—in order to consider whether the two should comprise an inclusive category of African diaspora thought (or Africana philosophy). We read African thinkers on the question “What is African philosophy?” and several philosophers of the African diaspora, and end with a section devoted specifically to epistemological and moral questions related to race. This course satisfies the diversity distribution requirement. Also offered through African Studies and African-American Studies.

290. Gender and Feminist Theory.
This course examines theoretical explanations of gender, gender difference and gender inequality in society. It includes introductions to some of the questions that shape contemporary feminist theory, feminist writings in multiple disciplines and feminist movements inside and outside the academy. The focus is on how an awareness of intersections of race, class, sexuality, gender and ethnicity is vital for disciplinary and interdisciplinary study in feminist theory. Theoretical works are drawn from the humanities, arts and literature and the social sciences. Prerequisite: Gender and Sexuality Studies 103. Also offered as Gender and Sexuality Studies 290.

301. Philosophy of Science.
Why does science produce such reliable knowledge? Is there really a “scientific method”? Does science get at truth, or is scientific knowledge socially constructed? In addition to these questions, we consider whether science advances according to a steady and rational process, or whether it advances according to radical “scientific revolutions.” We also try to identify what (if anything) distinguishes scientific knowledge from other kinds of knowledge, and reflect on whether scientific knowledge is comprehensive enough to constitute a complete worldview. Prerequisite: Philosophy 100, 103 or 202, or permission of the instructor. This course satisfies the science studies distribution requirement. Also offered through European Studies.

302. Symbolic Logic.
A study of elementary symbolic logic. Topics include sentential and predicate logic. Prerequisite: Philosophy 202 or permission of instructor.

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 that? 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: Philosophy 100 or 103, or Environmental Studies 101, or permission of the instructor. Also offered as Environmental Studies 310 and through Peace Studies.

327. Existential Philosophy.
Freedom, responsibility, the nature of being, the individual, community and communication are all themes of existential philosophy. Taking a comparative approach, students investigate existential philosophy as it appears in the Western tradition with, for example, Heidegger and Sartre, and also examine Asian philosophical approaches to existential questions. What are the different ways of approaching basic questions about human existence? Are these basic questions the same across traditions? Students are encouraged to explore critically both the commonalities and differences across traditions to begin to develop their own views of what it means to be human. Prerequisite: Philosophy 201, 203, or 208, or permission of the instructor. Also offered through European Studies.

331. Free Will, Responsibility and the Person.
In most cases we believe that a person is responsible for an action only if he or she acted “of his or her own free will.” But what do we mean by free will? If all of our choices are caused by previous events, would that imply that no one has free will, or show that no one is ever really responsible? What picture or concept of a person is implied by the answers to these questions? Prerequisite: Philosophy 100 or 103 or 202, or permission of the instructor.

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.
An introduction to some of the questions that shape feminist philosophy today. What connections are there among 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 Gender and Sexuality Studies 334.

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 postcoloniality 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 postcoloniality. Also offered as English 357 and Global Studies 357.

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 English 367, Gender and Sexuality Studies 367 and Global Studies 367.

390. Focus on a Philosopher.
This course gives students the opportunity to engage in in-depth study of the works and life of a single philosopher. The philosopher chosen varies depending on faculty and student interest. Treatment includes close reading of one or more of his or her works, and often also the study of the ideas of other philosophers he or she was responding to, as well as the historical/cultural context in which the philosopher was working. Prerequisite: Philosophy 201, 203 or 208, or permission of the instructor.

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. Members of the philosophy faculty visit to share their perspectives and methods. Students practice and reflect on a variety of philosophical methodologies and are encouraged to clarify their own philosophical identities. Prerequisite: Philosophy 201, 203 or 208, or permission of instructor; limited to majors and minors. Offered in spring semester only.

402. Philosophy Tutorial.
Under faculty supervision, the student assists in the teaching of an elementary course in philosophy. Limited to majors.

Intended for students who have shown aptitude in philosophy and who, in the opinion of the staff, would benefit from faculty-guided research in philosophy. Prerequisite: permission of instructor.

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.
A student who wishes to take Metaphilosophy as an SYE but is unable to take the seminar version, which is offered only in the spring, can take the 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 requirements through research and thesis. Under the guidance of a faculty member, students will conduct original research and write a thesis. Prerequisite: permission of instructor.

Physics
Major and minor offered

Professor Koon; Associate Professors Jahncke (chair), Johnson, O'Donoghue, Watson; Lab Coordinator Miller.

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

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 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, physics of fluids 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 course unit at the 400 level make up the other nine course units. Majors contemplating graduate study in physics should take Physics 401. Since physics students make extensive use of computers, potential majors are advised to enroll in Computer Science 140 during the sophomore year. The three-course calculus sequence (Mathematics 135, 136, 205) should be completed as soon as possible. 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

101, 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. This course fulfills the natural science with lab distribution requirement. Physics 101 is taught in a lecture format, and fulfills the natural science distribution requirement. 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 it serves as the appropriate physics course for students in the life sciences, it is designed to be accessible to all who have an interest in the subject. It fulfills the natural science with lab distribution requirement. There is one laboratory period per week in addition to class work.

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 Environmental Studies 105, 107.

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. The course fulfills the science studies distribution requirement. 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 satisfying the natural science with lab distribution requirement. 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. They satisfy the natural science with lab distribution requirement. 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 265.

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. This course satisfies the science studies distribution requirement. 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.

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 fission 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 study and discuss both the scientific and the historical sides of the issue through scholarly accounts, primary documents, biography, fiction and film. This course satisfies the science studies distribution requirement. Also offered through Peace Studies and as History 319.

333. Mathematical Methods of Physics.
Important problems in the physical sciences and engineering often require powerful mathematical methods for their solution. This course provides an introduction to the formalism of these methods and emphasizes their application to problems.
drawn from diverse areas of classical and modern physics. Representative topics include the integral theorems of Gauss and Stokes, Fourier series, matrix methods, selected techniques from the theory of partial differential equations and the calculus of variations with applications to Lagrangian mechanics. The course also introduces students to the computer algebra system Mathematica as an aid in visualization and problem-solving. Prerequisites: Physics 152, Mathematics 205. Also offered as Mathematics 333.

401, 402. Quantum Mechanics.
Intended for physics majors preparing for graduate study in physics and closely related areas, this course applies methods of advanced analysis to quantum mechanics and other topics. Prerequisite: Physics 307, 308 or permission of the department.

403, 404. Topics in Advanced Physics.
Seminars, projects or participation in faculty research designed to meet individual needs of advanced students. Offered on demand. Prerequisite: Physics 307, 308 or permission of the department.

(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, 498. 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 is the honors version of this course. Prerequisites or co-requisites: Physics 308, 317 and 318, or permission of the department.

Psychology
Major and minor offered

Professors Greene (Chair), Searleman; Associate Professors Crosby-Currie, DeCoteau, Estevez, Ghiraldi, Sigmundi, Stuntz, Thacher, Wallace; Assistant Professors Oakes, Onyper; Teaching Emeritus Professor Cunningham.

Visit the psychology department webpage at it.stlawu.edu/-psychology or link directly from the Majors and Programs page at www.stlawu.edu.

The primary objectives of the psychology department are to discover and teach the factors that underlie behavior. Our scientific approach to understanding behavior 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 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, students are also offered opportunities to use their knowledge of psychology in practical settings. These opportunities vary from semester to semester, but include courses of an applied nature in environmental psychology, community psychology, clinical psychology, independent study and independent research projects designed by the student in collaboration with a faculty member.

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 also operates a pre-school playgroup through which students, primarily in the developmental psychology course, may observe child behavior and relate it to their in-class learning.

The department strongly encourages and rewards meritorious achievement. Students 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 national 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 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 (about 45 percent) 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, social work and other areas.

Major Requirements
A major must complete at least eight psychology courses worth at least 1.0 unit each, including Psychology 100 or 101 (Introductory Psychology), which is a prerequisite for admission to all other psychology courses. Majors and minors must also take Statistics 113 (Applied Statistics) and Psychology 205 (Research Methods). Students who double-major with economics may count Economics 200 as a substitute for Statistics 113.
The department wants students who graduate from St. Lawrence with a degree in psychology to have a comprehensive background in the discipline's various subfields. Thus, to complete the major, students are required to take courses from each of the following groups:

I. Biological/Acquisition Processes (two courses)
   326. Hormones and Behavior.*
   327. Sensation and Perception.*
   331. Physiological Psychology.*
   401. Fundamentals of Learning.*
   402. Memory and Cognition.*
   432. Animal Behavior.*

II. Developmental/Social Processes (one course)
   207. Developmental Psychology.
   253. Personality.
   325. Social Psychology.*

III. Applied Areas (two courses)
   255. Sport Psychology.
   313. Industrial/Organizational Psychology.
   317. Abnormal Behavior.
   318. Environmental Psychology.*
   413. Community Psychology.
   443. Introduction to Clinical Psychology.

At least two courses beyond 101 and 205 must be taken for laboratory credit. Options include the courses indicated by (*), which are credited as 1.25 units. If a course is taken with laboratory, 205 or the instructor's permission is required.

It is also recommended that each major explore topics that may result in independent study (471,472) or research (496,497), which require at least a 2.5 overall GPA. Seniors may enroll in the Senior-Year Experience (SYE) version of independent study (489, 490) or independent research (468, 469).

To receive laboratory credit in a course, a student must receive 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.

No more than one psychology unit in a St. Lawrence international program may be counted toward the minimum requirements for 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 above 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 for laboratory credit must be taken at St. Lawrence.

**Minor Requirements**

A minor must complete at least six psychology courses worth at least 1.0 unit each. Required courses include Psychology 100 or 101 (Introductory), Statistics 113 and Psychology 205 (Research Methods). At least one course from two of the three groups of courses listed above (under requirements for the major) must be completed satisfactorily. At least one course beyond 101 and 205 must be taken for laboratory credit. If a course is taken with laboratory, 205 or the instructor's permission is required. No more than one psychology unit in a St. Lawrence international program may be counted toward the minimum six-course minor.

**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 499. 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.

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 499).

5. Give a formal colloquium or a 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

100. Introductory Psychology.

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 the laboratory section (101) 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 100 or 101 is a prerequisite for all other courses, and is also required for the neuroscience major.

205. Research Methods in Psychology.

This course presents students with various techniques for applying the scientific method to behavioral research. It also emphasizes effective communication through scientific writing. Students learn about observational, correlational and experimental research designs. They 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. For this reason it is required that the student take a course in statistics (Statistics 113) prior to or concurrent with 205. The course counts toward the minor in statistics and the neuroscience major (behavioral track). Prerequisite: Psychology 100 or 101. Also offered through Statistics.

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 100 or 101.

220 through 225. Seminars for Non-Majors.

These seminars are offered occasionally in specific areas of psychology at an intermediate level between Psychology 100/101 and advanced-level courses. Topics and formats vary depending upon the instructor. Consult the Class Schedule for descriptions of courses offered in a given semester. First enrollment priority is given to first-year students and sophomores. Prerequisite: Psychology 100 or 101.

232. Laboratory Animals: Ethics, Care and Techniques. (0.5 unit)

This half-unit course introduces students to the techniques, use and care of laboratory animals. Students gain knowledge and hands-on experience in the areas of anesthetics/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 100 or 101 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. Topics include expert testimony in the courtroom, eyewitness identification, child witnesses, the insanity defense, jury behavior and capital punishment. Prerequisite: Psychology 100 or 101.

248. Special Topics in Psychology.

These courses cover special topics not regularly offered in the curriculum. The courses are designed for first-year students and sophomores and are taught in a regular class format. Refer to the Class Schedule for course descriptions. First enrollment priority is given to first-year students and sophomores. Prerequisite: Psychology 100 or 101.

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 100 or 101.

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 skill 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 100 or 101.

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 100 or 101. 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 100 or 101.

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 100 or 101; if taken for psychology credit, Psychology 205. Also offered as Environmental Studies 318 and through Peace Studies.

325. Social Psychology.

This lecture-laboratory course introduces the theory and research that relates the behavior of individual humans to factors in the social environment. Topics, chosen to represent the scope of social psychology, include attitude formation and change, conformity, affiliation and attraction, altruism, aggression, prejudice and group dynamics. Prerequisite: Psychology 100 or 101; if taken for laboratory credit, Psychology 205. Also offered through Peace Studies.

326. Hormones and Behavior.

This lecture-laboratory course provides an introduction to the field of behavioral
endocrinology. Current knowledge derived from human and animal research concerning the interplay between hormones and behavior is reviewed. Topics include the influence of hormones on reproductive behavior, parental behavior, aggression, sexual orientation, moods and emotions, psychiatric disorders and perceptual and cognitive abilities. Environmental and experiential influences on endocrine function are also examined. Counts toward the neuroscience major (behavioral track). Prerequisites: Psychology 100 or 101; if taken for laboratory credit, Psychology 205.

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 100 or 101; if taken for laboratory credit, Psychology 205.

331. Physiological Psychology.
This lecture-laboratory course is designed to show how neural structure and activity is related to behavior. The course follows an evolutionary approach and covers a variety of species, including humans. Prerequisites: Psychology 100 or 101; if taken for laboratory credit, Psychology 205.

348. Special Topics.
These courses cover special topics not regularly offered in the curriculum. The courses are designed for juniors and seniors and are taught in a regular class format, possibly with laboratory. Refer to the Class Schedule for course description. Prerequisite: Psychology 100 or 101.

A lecture-laboratory course dealing with the concepts involved in learning as derived from experimentation with both human and nonhuman subjects. Topics include the laws of classical and operant conditioning, biofeedback, token economies, observational learning, learned helplessness, biological constraints on learning, behavior modification techniques and ethics of behavioral control. Counts toward the neuroscience major (behavioral track). Prerequisite: Psychology 100 or 101; if taken for laboratory credit, Psychology 205.

402. Memory and Cognition.
This lecture-laboratory course 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, language processing, problem-solving and metacognition. 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 includes some applications, in areas such as repressed memories, eyewitness testimony and aging. Counts toward the neuroscience major (behavioral track). Prerequisite: Psychology 100 or 101; if taken for laboratory credit, Psychology 205.

413. Community Psychology.
This seminar-internship course has two objectives: to provide an introduction to some basic issues, concepts and methods in community psychology; and to offer experiential learning through an internship placement in a community setting (approximately 80 hours over the course of the semester). Topics include the ecological perspective, stress and coping, and prevention and evaluation research. Possible internships include Headstart, nursing homes, crisis intervention centers and mental health-related hospital units; 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 registering, and generally, internships are arranged with assistance from the instructor. In the semester prior to enrollment. Prerequisites: Psychology 100 or 101, Psychology 205 and permission of instructor.

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 100 or 101; if taken for laboratory credit, Psychology 205.

438. Human Neuropsychology.
This 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. Prerequisite: PSYC 331 or BIO 110. Also offered as Neuroscience 438.

An examination of developmental disabilities such as intellectual disability (also known as mental retardation), autism, epilepsy and cerebral palsy, with primary emphasis on intellectual disability. 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 100 or 101 and Psychology 207.

443. Introduction to Clinical Psychology.
This course examines the field of contemporary clinical psychology, focusing on the problems and procedures related to psychological diagnosis, the interaction between theory and practice, and important aspects of research in clinical populations. Prerequisites: Psychology 100 or 101 and Psychology 317.

452. Infancy.
A peek-a-boo at the evolutionary and environmental influences on human development from conception until about two years. Topics include (1) research methods; (2) prenatal influences and birth; (3) perceptual, motor, cognitive and language abilities; (4) social development, including sex and personality differences, and theories of attachment; (5) historical changes in child-rearing practices for infants. Prerequisites: Psychology 205, 207 and permission of the instructor. Interested students who do not have the recommended background are encouraged to consult with the instructor.

455. Highlights and Connections.
This seminar, designed for senior psychology majors, attempts to enhance the student's knowledge of concepts and facts from a broad range of subfields in psychology, and to aid the student in discovering how the various areas, findings and courses are 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.

468, 469. SYE: Independent Research.
An opportunity for seniors to engage in empirical research. Prerequisites: Psychology 100 or 101, Psychology 205, senior status and permission of instructor.
471, 472. Independent Study in Psychology.
This course offers students the opportunity to engage in in-depth documentary investigation of a particular topic in psychology. Prerequisites: Psychology 100 or 101 and permission of instructor.

480 through 485. Seminars in Psychology.
These seminars involve group study and investigation of psychological topics not regularly offered in the curriculum. Refer to the Class Schedule for descriptions of offerings. Prerequisites: Psychology 100 or 101 and permission of instructor.

496, 497. Independent Research in Psychology.
This course offers students the opportunity to engage in empirical and/or experimental research in psychology. Prerequisites: Psychology 100 or 101, Psychology 205, and permission of instructor.

489, 490. SYE: Independent Study.
This course offers senior students the opportunity to synthesize, integrate and expand their knowledge in the field of psychology by engaging in detailed documentary investigation of a particular topic in psychology. Prerequisites: Psychology 100 or 101, Psychology 205, senior status, and permission of instructor.

498, 499. SYE: Senior Project.
In this two-semester capstone course, students integrate acquired research skills and/or subject knowledge. Students are credited with 0.5 units in 498 and 1.0 unit in 499. Requirements include a proposal presented to faculty and other senior project students; a final colloquium on the project and/or 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 100 or 101, Psychology 205, and permission of instructor.

Religious Studies

Major and minor offered.

Professor MacWilliams; Associate Professor Greenwald (chair); Assistant Professors Desmond, Self.

Visit the religious studies webpage at www.stlawu.edu/relstudies or by linking directly to it from the Majors and Programs page at www.stlawu.edu.

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, Hebrew and Sanskrit language 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.

To accomplish these goals, the department offers introductory courses in the study of religion as well as several upper-division courses that cover a wide range of religious traditions. These include courses that use a variety of analytical tools. In addition, majors are required to 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. 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 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.

7. No more than one of the department’s 100-level course offerings may be counted toward the major.

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 chapter of this Catalog.

Courses

Introductory

100. Mystery and Meaning: An Introduction to the Study of Religion.
This general introduction to both the subject matter and the study of religion calls attention to the fact that, although human beings have been religious in enormously varied ways, the study of religion is a recent development. What is there about the modern West that has led it to study religion on a global scale? Attention is given to the wealth of material that may be regarded as religious: past and present, literate and non-literate, Eastern and Western. Finally, we consider the place of the study of religion in the contemporary liberal arts curriculum, the discipline’s relationship to adjacent disciplines and the distinction between the study and practice of religion.

200. Explaining Religion.
This course serves as a general introduction to the study of religion, with an emphasis on introducing its methodological and theoretical tools and their intellectual historical background. This entails exploring a selection of readings that have been and are influential in the study of religion, 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.

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 re- vision traditional religion to make it relevant for a contemporary audience; (2) films that are not explicitly religious (with no obvious symbols, personages, sacred histories in the plot) but nonetheless explore themes and questions that are central to religion; (3) the religious documentary.

102. Religion and Science.
Religion and science are two different ways of knowing and understanding the world that usually ask very different questions. Sometimes, however, the answer that one or the other discipline gives to its understanding of reality brings the two into conflict with each other. Nevertheless, for most of human history, the two have been able to accommodate each other quite amicably. In this course, we examine the role that each discipline plays in society, and some points where the two have come into conflict (creation, evolution, bioethics, for example). Finally, we ask whether religion and science are reconcilable or are ultimately hostile to each other.

103. Religion and Ecology.
How does religion shape human understanding of, and participation in, ecological systems? This course samples widely from a range of religious traditions to come to a better understanding of the diverse ways that people have developed for interacting with animals, plants, water and the land, and how those behaviors work in tandem with systems of knowledge and practice. The class has a substantial focus on environmental ethics, and thinks hard about how different religious systems might contribute to either or both environmental degradation and solutions to environmental problems. Traditions sampled may include Islam, Christianity, Hinduism, Daoism, Judaism, Buddhism, Native American religions and Wicca/Neo-Paganism. Also offered as 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.

The goals of this course are identical to those of Religious Studies 205, although that course is not a prerequisite. The same forms of analysis that were used to understand the Hebrew Bible are used to understand the New Testament. The course emphasizes the different ways Christian communities understood the Christian message and how these different understandings came to be embodied in a single collection of documents. Offered every spring. Also offered through European Studies.

This seminar studies one or more of the gospels using any or all of the techniques of modern biblical scholarship. It examines how the author(s) understood the ministry of Jesus and how they communicated that understanding to readers. The format is a combination of lecture and seminar. Religious Studies 206 or permission of the instructor required.
Surveys of Religious Traditions

221. Religious Life of India.
This course introduces the history and diversity of some of the major religions of South Asia, including Hinduism, Buddhism, Jainism, Islam, and Sikhism. It considers religious ideas and practices that both define and dissolve the boundaries between these traditions, including techniques of bodily and spiritual perfection; visual practices; eroticism and asceticism; hierarchies of class, caste and gender; purity and impurity; and violence and nonviolence. Offered every fall. Also offered through Asian Studies.

222. Buddhist Religious Traditions.
An introductory exploration of the various classical and contemporary forms of Buddhism. The initial task is to understand the Buddha in the context of India in the sixth to fifth centuries BCE, then to examine the emergence of a sophisticated philosophical and psychological literature, the meditational techniques of Tantra and Zen, the different forms of monastic life, lay practice and more. The course enables students to follow the historical spread of Buddhism into Sri Lanka, Southeast Asia, Tibet, China, Japan and, more recently, the West. Offered every other year. Also offered through Asian Studies.

223. The Religious Life of China.
An introduction to China’s unique religious heritage through a selective survey of major thinkers, texts and cultural expressions. The primary emphasis is on the historical development and mutual influence of the “three teachings”—Confucianism, Daoism and Buddhism—with special attention given to the relationship between philosophy and popular practice, and to the interaction among political and religious institutions. Topics include gods and the sacred, ritual, ethics, human nature, meditation, mysticism and salvation. Offered every other year. Also offered through 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 through 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 dominant faith worldwide, neither is Judaism. Emphasis is placed on the development of Rabbinic (modern) Judaism and its evolution in the modern world. The course also covers recent movements and events such as the emergence of new forms of Judaism, Zionism, the Holocaust and the birth of Israel. Offered every other spring.

A historical and topical introduction to the complex inter-mingling of indigenous and foreign traditions that gave rise to Japan’s unique religious heritage combining kami worship, Buddhism and Confucian traditions. Major topics include religion and the arts (haiku poetry, gardening, the tea ceremony, etc.), monasticism and meditation practices, Pure Land and Zen Buddhism, State Shinto, new religious movements, and spirituality in Japanese popular culture. Course materials consist of canonical and secondary texts as well as autobiographical accounts, works of fiction and film. Offered every other year. Also offered through 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 the Christian tradition or traditions from New Testament times to the present. Roman Catholicism, Eastern Orthodoxy and the major streams of Protestantism are considered. Special attention is given to a sampling of significant Christian writers, both men and women, of the past and present. Offered annually. Also offered through European Studies.

Additional 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.

This two-course sequence surveying the history of the Middle East from World War I to the present examines the collapse of the Ottoman Empire, the rise of Zionism and Arab nationalism, and the development of modern Egypt, Syria, Lebanon, Iraq, Iran, the countries of the Arabian Peninsula, Israel and the Palestine Authority. The first course covers the period up to 1967; the second continues this study for the period after the 1967 War. The first course satisfies the Div requirement and is also offered as History 260 and through Global Studies and Peace Studies; the second is also offered as History 367. The first semester may be taken without continuing to the second but is a prerequisite for admission to the second semester. Offered every other year. Religion 266 dual-listed as History 260 and 367 as History 367.

267. The Holocaust.
This course focuses on the development of the Holocaust from 1933 to 1945, within the contexts of Christian anti-Semitism, Nazi idees 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 visibility 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 religious traditions including Hinduism, Islam, Buddhism, Vodou, Christianity and Neo-Paganism, with possible forays to Papua New Guinea, the Central Desert of Australia and West Africa.

282. Indian Epics.
To convey the foundational importance of India’s two best-known epics, the scholar A.K. Ramanujan once remarked, “In India and Southeast Asia, no one ever reads the Ramayana or the Mahabharata for the first time. The stories are there, ‘always already.’” In order to understand their significance in South Asia and beyond, and to appreciate their richness and depth, this class examines the Mahabharata and the Ramayana in their classical Sanskrit tellings (abridged and translated) as well as in oral, vernacular, performed and artistic versions. Also offered through 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?

331. Pilgrimage as a Spiritual Journey.
This course explores the experiences, rituals, stories, beliefs, temples/shrines, images and traveling communities associated with the religious phenomenon of pilgrimage. What kind of travel is pilgrimage? Does it have a particular structure? Are there different kinds of pilgrimages? What kind of religious experience does pilgrimage provide? These and other questions are examined through a close study of selected pilgrimages in Christianity, Hinduism and Buddhism.

333. Goddesses.
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 Brazil 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 deities and the roles and status of human women.

A seminar that examines the transformations that the religious traditions of Asia — Islamic, Indian, Chinese and Japanese — have undergone during the past century. Attention is paid to (1) institutional and ideological changes in the Asian traditions themselves and (2) the increasing presence of Asian religious motifs in Western culture. Also offered through Asian Studies.

380. Mythology and Popular Religious Thought in India.
This seminar has two goals: (1) to familiarize students with the great myths of India and the variety of ways they have been woven into the fabric of Hindu culture; and (2) to explore some contemporary theories about the nature of myth. Emphasis throughout is on student discussion and research, on engagement with the values of Indian culture, and on seeing those values in relation to the concerns of modern Western scholarship. Also offered through Asian Studies.

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 listed as Global Studies 412 and Biology 412.

Special Courses
247, 248. Special Topics.
347, 348. Special Topics Seminars.
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 through Asian Studies.

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.

Sanskrit
This introduction to Classical Sanskrit begins with learning to read and write the Devanagari script, understanding the grammar of the language, and acquiring a basic vocabulary. By the second half of the second semester, students should be able, with the help of a dictionary, to read simple, narrative Sanskrit. Offered occasionally by request.
Sociology
Major and minor offered

**Associate Professors** Assefa, LeClerc, O’Neil (chair);
**Assistant Professors** Hou, Jones, Rohlfsen.

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

The sociology curriculum is intended to provide an understanding of the interactions and workings of societies, their institutions, organizations and groups. Through an introduction to the basic concepts, theoretical perspectives and methodological approaches of the discipline, students are familiarized with the sociological imagination, encouraging a deeper understanding of the relationships between personal experience (one's own and others') and the social world.

Courses not only acquaint students with diverse cultures and social structures but also emphasize the dynamics of power and inequality on local, national and global levels, as they operate through race, ethnicity, class, ability, gender, and sexuality. Our curriculum emphasizes the concepts and practice of social justice and public sociology. Built into courses and the curriculum are opportunities for students to develop a sense of social responsibility by critically engaging the social world outside the classroom. The experiential focus of the curriculum includes participation in international study, community-based service and learning, and internships.

The department emphasizes the active engagement of students in sociological inquiry. Toward that end, many courses are designed to teach students the basics of theory construction and methodological processes. Our courses encourage students to make their own discoveries about human social experiences, and all majors are required to synthesize and apply what they have learned in the completion of an upper-level research-based, topical seminar or faculty-mentored independent research project.

While the department's curriculum provides a strong foundation for graduate work in the discipline, our strength is in the development of strong critical and analytical skills as well as our support of writing and oral presentation skills and computer and visual literacy, all of which are important for success in any chosen life course.

In the tradition of a liberal arts education, the sociology curriculum is designed to promote a sense of curiosity about the diverse ways humans create, transform and adapt to their surroundings, self-reflection and appreciation of perspectives and experiences outside their own, and public intellectualism through attentive, creative, articulate engagement with community affairs and social issues.

The department has partnered with community-based learning programs to offer a variety of courses through which students engage in organized service activities that address community needs while offering structured opportunities to reflect on those activities in ways that promote active learning and personal development. Our campus-community programs have offered sociology majors the chance to work with children, seniors, persons with disabilities and local farmers, as well as participate in programs designed to advocate for the poor, the environment, and victims and survivors of violence.

**Sociology Major Requirements**

Courses are in the sociology department unless noted otherwise.

1. 9-12 units of credit.
2. One course at the 100 level. Majors may take additional courses at the 100 level, but a maximum of two such courses can be counted toward the major.
3. 203, Foundations of Social Theory.
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 SPTP seminars. These seminars have significant individual research components and opportunities for collaborative work, critical thinking, synthesis, and practice in a variety of communication skills.
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.
Any Sociology course with a CBL (Community Based Learning) component

SOC 309 Internship

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: 203 Foundations of Social Theory, 300 or 301 Research Methods, any 300 or 400 level topical seminar, and Capstone Project Application submitted to the Sociology Department for approval prior to preregistration the semester before the start of the project.

OR

(b) 495/496 Capstone Honors Project (2.0 credits, 2 semesters, 495 in Fall and 496 in Spring). Prerequisites: 3.5 major GPA, 203 Foundations of Social Theory, 300 or 301 Research Methods, any 300 or 400 level 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.

8. Electives: requirements noted above + electives must TOTAL 9-12 units of credit

Sociology/Environmental Studies Combined Major

1. Combined Major Core Courses:

1 unit ENVS 101. Introduction to Environmental Studies
3 units Environmental Science and Policy (ESP) courses
1 unit ENVS 335. Foundation of Environmental Thought
2 units Electives*
7 units Total

* One elective must be a dual-listed natural science course for B.A. students or a social science course for B.S. students. Some combined majors require a Capstone/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.

2. 1 unit SOC 110. Global Problems or SOC 112. Inequality or SOC 124. Dirty Business and the Environment or SOC 161. Social Problems and Policy

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

3. 1 unit SOC 203. Foundations of Social Theory

4. 1 unit SOC 300. Qualitative Research Methods or SOC 301. Quantitative Research Methods

5. 2 units socio-environmental dynamics courses SOC 235. Earning a Living
SOC 253. Race, Class and Environmental Justice.
SOC 257. Environmental Problems.
SOC 267. Environment and Society
SOC 278. China’s Market Transition
SOC 288. Dilemmas of Development
SOC 314. Nomads in World History
SOC 377. Sociology of Consumption.

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

6. 2 units Electives*

7. Capstone: one additional 300/400 capstone course, with a research project on a socio-environmental dynamics topic

15 units total

*Electives that are dual-listed should be taken under the sociology number and count toward the sociology portion of the combined major.

Sociology Minor Requirements

1. A minimum of six units of credit.

2. Of these courses, one must be at the 100 level, one at the 200 level and one at the 300 or 400 level.

A minor must be declared by the end of a student’s junior year.

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, 203 Foundations of Social Theory, 300 or 301 Research Methods, any 300 or 400 level topical seminar, and a Capstone Project Application submitted to the Sociology Department for approval prior to preregistration the semester before the start of the project.

Alpha Kappa Delta Sociology Honorary

The department sponsors a chapter of Alpha Kappa Delta, the national honorary society in sociology. Membership is open to all students who meet its requirements: a 3.3 overall GPA (exclusive of the first year) and a 3.5 average in four or more sociology courses. Information and application forms are available from the Sociology Department secretary.

Certification to Teach Social Studies

Students seeking initial certification as a 7-12 social studies teacher in New York can major in sociology. In addition to completing the certification minor in education, students majoring in sociology must also take History 103 (Development of the United States, 1607-1877) and 104 (Development of the United States, 1877-Present); Global Studies 102 (Introduction to Global Studies II: Race, Culture, Identity); one economics course (Economics 100, Introduction to Economics, is recommended if only one course is taken); one government course (Government 103, Introduction to American Politics, is recommended if only one course is taken); and at least one course in the major that illuminates U.S. and/or world history and geography. Students are also encouraged to take courses in other social sciences and area studies to round out their preparation for teaching social studies. Sociology majors intending to complete courses in other social sciences and area studies must complete their major/minor. Information and application forms are available from the Sociology Department secretary.

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/away programs. Permission from the department chair is required for transfer.

2. Majors and minors may count no more than one 390 Independent Study toward their major/minor.

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

4. No more than a total of two 290/390 Independent Study courses can be applied to the major/minor.

5. Core courses for the major (theory, research methods, and Capstone seminars/projects) must be taken in the department.

Courses

In addition to the courses listed below, special topics courses are often offered. These appear on APR, the Registrar’s website, and the Department’s website.

   - 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. Not open to seniors.

   - 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. Not open to seniors. Also offered through Peace Studies.

112. IntroSoc: 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. Not open to seniors. Also offered through African-American Studies and Peace Studies.

   - 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. Not open to seniors. Also offered through Peace Studies.

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 understand theory in its historical location. Students are encouraged and expected to reflect on the explanatory models themselves as political and cultural constructions located in time and place and consider the role of power in definitions of reality. Required of all majors. Also offered through European Studies.

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. Also offered through Gender and Sexuality Studies.

224. Family, Community and Globalization (w/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.

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 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. Also offered through African-American Studies.

231. Sport and Society: Criticisms and Controversies.
This course examines sport as an evolving social institution using sociological perspectives to understand problems, dimensions, and criticisms of sport. A key aspect of the course focuses on how sport can be changed to improve society and the lives of those living within it. Topics covered include competition, deviance, violence, youth sports, intercollegiate sports, racial, ethnic, gender, and social class inequalities in sport. Students are encouraged to connect their own experiences as participants and spectators to larger social issues involving sports. Students will be asked to think critically about sports, the organization of sports, and how sports relate to society.

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. Also offered through Peace Studies.

236. Education and Society.
This course provides a critical examination of the structure and consequences of one of our society’s major institutions: the formal system of education. It is through participation in this institution that individuals access societal rewards. The course examines the structure of the formal system of education, the processes that maintain this structure, and the consequences of both for individuals and for larger society. Also offered through Peace Studies.

238. Social Services, Agencies and Advocacy. (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. Also offered through Peace Studies.

246. What’s So Bad About Aging. (w/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 through Environmental Studies.

257. Environmental Problems.
Environmental problems are increasingly coming to define the times we live in. In this course we consider the nature of those problems by examining the way that human activities disrupt ecological sustainability. Next, we examine the root causes of these problems by examining how our economy and politics are organized. Environmental problems imply the need for environmental solutions. Thus, we examine political and social solutions that have been proposed to these problems as well as models of successful solutions.

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, especially Canada. An additional 0.5 credit in Independent Study in the community is optional with this course. This course fulfills the experiential component requirement of the major if taken together with SOC 290, Independent Study (0.5 unit). Also offered through Canadian Studies and Peace Studies.

267. Environment and Society
This course begins with the premise that the environmental crisis is about humans’ relation with nature. Thus, the problem, at root, is about how humans organize themselves socially. How does social, political and economic organization affect the environment? What role does social justice, the media and social movements play in this process? What role does culture play in the actions taken to protect the environment and to protect ourselves? Finally, what are the prospects of social change to end the environmental crisis?

278. China’s Market Transition
Is the 21st century the Chinese century? Since the adoption of the reform and opening-up policy in 1979, China has embarked on a path of miraculous economic growth. Although still 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 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.

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 through Asian Studies and Peace Studies.

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. 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.

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.

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.

307. The Sociology of Karl Marx (Community-Based Learning component).
This seminar provides students with a solid grounding in the sociology of Karl Marx, from the philosophical roots of Marx’s theoretical conception of history in the work of his predecessors Hegel and Feuerbach to Marx’s understanding of historical materialism and the genesis of modern capitalism. Working from this base, the course examines the social relations of capitalism and capitalist exploitation, the nature of the commodity, the relationship between economic relations and social relations, the role of the state, the function of ideology in capitalist social and economic formations, and applies the relevance of Marx’s thought in an understanding of contemporary global capitalism. Through the Community-Based Learning component, we will (1) explore the consequences of these structural/historical forces as they impact life in our local North Country communities and (2) engage Marx’s notion of praxis, advocacy, and grassroots empowerment. Also offered through European Studies and Peace Studies.

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. Permission of instructor is required. Students interested in exploring internship opportunities must contact the instructor prior to course registration during the preceding semester. Not open to first-year students. Prerequisite: at least 2 sociology courses. This course fulfills the Experiential Component requirement for majors.

310. Slavery, Race and Culture.
The purpose of this seminar is to familiarize students with the world of slavery and its relation to the wider world of capitalism. Long a part of the global capitalist economy, slaves and slavery have been critical historical agents in shaping various aspects of social relations. The history of slavery has laid the foundation for race formations. Far from being a peculiar institution, slavery is indeed central to the making of the modern age. Also offered through African-American Studies, African Studies and Peace Studies.

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. Also offered through Peace Studies and Environmental Studies.

315. Family and Relationship Violence. (Community-Based Learning component)
In this seminar we examine the culturally relative and historically changing definitions of family violence, 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 requirement for majors. Also offered through Peace Studies.

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 postmodernity. Also offered through Peace Studies and Environmental Studies.

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 is required.

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 how societies identify them as social problems, then 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. Also offered through Peace Studies.

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). Permission of instructor required. Prerequisites: 203 Foundations of Social Theory, 300 or 301 Research Methods, any 300- or 400-level topical seminar, and a Capstone Project Application submitted to the Sociology department for approval prior to preregistration the semester before the start of the project. Fulfills the Capstone Experience requirement for the major.

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. Permission of instructor required. Prerequisites: 3.5 major GPA, 203 Foundations of Social Theory, 300 or 301 Research Methods, any 300- or 400-level topical seminar, and a Capstone Project Application submitted to the Sociology department for approval prior to preregistration the semester before the start of the project. Fulfills the Capstone Experience requirement for the major.

Sports Studies and Exercise Science
Minor offered

Associate Professor Strait (director of athletics; chair), Coordinator of Academic Programs Canfield.

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

Sport is deeply embedded in our national consciousness, both reflecting and shaping our daily lives. Since the middle of the 20th century, sport has emerged as a rapidly expanding scholarly endeavor that offers students a logical forum for the study of the traditional liberal arts disciplines and sub-disciplines found in the humanities, natural sciences and pedagogy. Most courses are introductory in nature and therefore do not have prerequisites. Thus, some students will be taking courses framed in a particular liberal arts perspective for the first time while others enter with experience. For students without prior experience in the theories, conventions and methodologies of the traditional discipline, courses are successful if they develop a solid understanding of the relationships between the disciplinary perspective and sport and physical activity. For students with disciplinary experience, courses are successful if they exit with an understanding that the study of sport and physical activity is another relevant dimension that can deepen their ability to analyze the constructs associated with the discipline.

Requirements for Minors

Students who are interested in the sports studies and exercise science minor must complete a five-course sequence from among any course listed below except 100A-F and 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. (1 unit)
This course is intended to expand the student’s awareness of the potential of physical activity to establish and sustain physical fitness and to enrich one’s quality of life. The course is designed to provide each student with conceptual and practical exposure to principles of fitness and wellness that will be useful throughout the adult years. It does not count toward the SSES minor.

100S. Aquatics. (1 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.

107. Functional Anatomy. (1 unit)
The primary focus of this course is on human anatomy and physiology. Lectures and laboratory experiences emphasize the musculoskeletal, articular, nervous and vascular systems. It also introduces the student to career opportunities associated with exercise science. Laboratory sessions supplement the course. It is recommended that this course be taken during the spring semester of the first year.

115. Introduction to Kinesiology. (1 unit)
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. (1 unit)
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. (1 unit)
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.

234. Human Exercise Physiology. (1 unit)
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.

248. Principles of Health and Wellness. (1 unit)
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.

306. Human Growth and Motor Development. (1 unit)
This course traces human growth and motor development from the prenatal stage through old age. Infancy, childhood and adolescent development are explored in the dimensions of motor skill acquisition, social/emotional development and cognition through the context of physical activity. The adult years are then studied in physical, social/emotional and cognitive perspectives with focus on the impact of physical activity on the aging process.

319. Sport Medicine. (1 unit)
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. (1 unit)
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.

390. Independent Study. (1 unit)
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. (1 unit)
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. (1 unit)
Advanced study on topics and issues evident in contemporary sport and exercise science. Permission required. Available to SSES minors only.

490. SYE: Independent Study. (1 unit)
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
Minor offered under the auspices of the mathematics, computer science and statistics department.

Professors P. Lock, R. Lock; Associate Professor Schuckers; Assistant Professors Chapman, Ramler.

Visit the mathematics, computer science and statistics department webpage at www.stlawu.edu/math or by linking directly to it from the Majors and Programs page at www.stlawu.edu.

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 can be selected from the general statistics courses offered by the mathematics, computer science, and statistics department and various disciplinary methods courses offered by the departments of biology, economics, psychology, and sociology. 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 217, Math 305, and CS 140 in addition to minoring in statistics.

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 courses 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. Stat 113 and Econ 200 may not both be counted toward the statistics minor.

Statistics
325. Probability.
326. Mathematical Statistics.
343. Time Series Analysis.

Disciplinary Methods Courses
Biology
Economics
342. Econometrics.
Psychology
205. Research Methods in Psychology.
Sociology
301. Quantitative Research Methods.
SYE
An independent study/honors project that involves substantial statistical analysis may also be used as one of the five courses toward an applied statistics minor.

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.

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.

A continuation of Stat 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: Stat 113 or Econ 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: Stat 113 or Econ 200 or permission of instructor.

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: Math 205. Offered in the fall semester. Also offered through Mathematics.

326. Mathematical Statistics.
Following Stat 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: Stat 325. Offered in the spring semester.

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: Math 136 or permission of the instructor. Offered every other year. Also offered as Econ 343.

Permission required.

450. SYE: Senior Seminar.
Permission required.

489. SYE: Senior Independent Project.
Permission required.

498. SYE: Senior Honors Project.
Permission required.