The listing of a course in this catalog is not a guarantee that the course will be offered in any particular semester. Course offerings are subject to change in response to student enrollment, faculty availability, changes in program requirements and other circumstances.

Graduate information is available in the Graduate School Catalog which may be obtained in the Graduate Office or online at www.worcester.edu/graduate.

This catalog was prepared by WSU Publications & Printing Services.
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General Information

Prologue
From its founding in 1874, Worcester State University has been dedicated to educational programs that lead to self-enrichment and to careers in the professions, government, business, and industry.

As a public, state-supported university governed by a local Board of Trustees under the direction of the Massachusetts Department of Higher Education, Worcester State University is empowered to award baccalaureate and master’s degrees in education and in the arts and sciences. While continuing its tradition of serving the residents of the Commonwealth, Worcester State University has earned a reputation for quality teaching by dedicated faculty in classes of moderate size, and for programs responsive to its students’ and society’s changing needs.

Mission
Worcester State University, a public metropolitan institution of higher learning located in a culturally vibrant region of the Commonwealth, affirms the principles of liberal learning as the foundation for all advanced programs of study.

Worcester State University offers programs in the traditional liberal arts and sciences disciplines, while maintaining its historical focus on teacher education. It has expanded its offerings with professional degree programs in biomedical sciences, business, and the health professions. Through its curricula, Worcester State University addresses the intellectual and career needs of the increasingly diverse citizenry of central Massachusetts.

Worcester State University is dedicated to offering high quality, affordable undergraduate and graduate academic programs and to promoting the lifelong intellectual growth, global awareness, and career opportunities of its students. To this end, Worcester State University values teaching excellence rooted in scholarship and community service; cooperates with the business, social, and cultural resources of Worcester County; collaborates with other institutions of higher learning in the region; and develops new programs responsive to emerging community needs.
General Information

Accreditation

Worcester State University is accredited by the New England Association of Schools and Colleges, Inc., a non-governmental, nationally recognized organization whose affiliated institutions include elementary schools through collegiate institutions offering post-graduate instruction.

Accreditation of an institution by the New England Association indicates that it meets or exceeds criteria for the assessment of institutional quality periodically applied through a peer group review process. An accredited school or college is one which has available the necessary resources to achieve its stated purposes through appropriate educational programs, is substantially doing so, and gives reasonable evidence that it will continue to do so in the foreseeable future. Institutional integrity is also addressed through accreditation.

Accreditation by the New England Association applies to the institution as a whole. As such, it is not a guarantee of the quality of every course or program offered, or the competence of individual graduates. Rather, it provides reasonable assurance about the quality of opportunities available to students who attend the institution.

Inquiries regarding the status of an institution’s accreditation by the New England Association should be directed to the administrative staff of the school or college. Individuals may also contact the Association:

New England Association of Schools and Colleges
The Sanborn House, 15 High Street
Winchester, Massachusetts 01890
(617) 729-6762

The following programs are accredited by their respective professional organizations:
Nursing, The National League for Nursing; Speech-Language Pathology, the American Speech-Language-Hearing Association; Occupational Therapy, Accreditation Council for Occupational Therapy Education; and Nuclear Medicine Technology, the Joint Review Committee on Educational Programs in Nuclear Medicine Technology. Please refer to department chapters for addresses and telephone numbers of the accrediting organizations.

Policy on Nondiscrimination

Worcester State University is committed to a policy of nondiscrimination, equal employment opportunity, and affirmative action in its educational programs, activities, and employment practices. Worcester State maintains and promotes a policy of nondiscrimination on the basis of race, creed, religion, color, sex, sexual orientation, age, disability, veteran status, marital status, and national origin. This policy incorporates by reference the requirements of Federal Executive Orders 11246 and 11375 as amended; the Civil Rights Act of 1964 as amended; Title IX of the Higher Education Act of 1972 as amended; Sections 503 and 504 of the Rehabilitation Act of 1973, as amended; Section 402, Vietnam Era Veterans Readjustment Assistance Act of 1974; the Civil Rights Restoration Act of 1988; and pertinent laws, regulations, and executive orders; directives of the Massachusetts Department of Higher Education, the Board of Trustees, the Commonwealth of Massachusetts, and other applicable state and federal statutes.

The Director of Diversity, Inclusion and Equal Opportunity may be contacted at 508-929-8117 regarding Worcester State University’s policy of nondiscrimination and affirmative action (including compliance with Section 504 of the Rehabilitation Act of 1973, as amended).
Family Educational Rights and Privacy Act

Worcester State University complies fully with the provisions of the Family Educational Rights and Privacy Act of 1974 as amended. This federal law protects the privacy of education records and establishes the rights of students to:

1. Inspect and review their education records within 45 days of the day Worcester State receives a request for access.

   Students should submit to the registrar, dean, head of the academic department or other appropriate official, written requests that identify the record(s) they wish to inspect. The Worcester State University official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the Worcester State University official to whom the request was submitted does not maintain the records, that official shall advise the student of the correct official to whom the request should be addressed.

2. Request the amendment of the education records that the student believes are inaccurate or misleading.

   Students may ask Worcester State University to amend a record that they believe is inaccurate or misleading. They should write to the Worcester State University official responsible for the record, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading.

   If Worcester State University decides not to amend the record as requested by the student, Worcester State University will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3. To file a complaint with the U.S. Department of Education concerning the alleged failures by Worcester State University to comply with the requirements of FERPA, the name and address of the office that administers FERPA is:

   Family Policy Compliance Office
   Department of Education
   Independence Avenue, SW
   Washington, DC 20202-4605

Worcester State University accords all the rights under the law to students who are declared independent. No one outside the institution shall have access to nor will the institution disclose any information from students’ education records without the written consent of students with the exception of the following:

- Worcester State University officials within the institution
- officials of other institutions in which students seek to enroll
- persons or organizations providing students’ financial aid
- accrediting agencies carrying out their accreditation function
- persons in compliance with a judicial order
- persons in an emergency in order to protect the health or safety of students or other persons.
All these exceptions are permitted under the Act. A Worcester State University official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility. A Worcester State University official is:

- a person employed by Worcester State University in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff)
- a person or company with whom Worcester State University has contracted (such as a consultant, contractor, volunteer or other party to whom Worcester State University has outsourced institutional services or functions)
- a person serving on the Board of Trustees
- a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks.

At its discretion the institution may provide directory information in accordance with the provisions of the Act to include:

- student’s name
- address
- photograph
- date and place of birth
- major field of study
- grade level
- degree
- recent school attended
- enrollment status
- date of attendance
- participants in officially recognized activities and sports
- weight and height of athletic teams
- honors/awards.

Directory information does NOT include a student’s social security number or student identification number.

Currently enrolled students may withhold disclosure of directory information by notifying the registrar in writing of the request prior to the end of the first week of classes in the Fall. Such requests will be honored for the duration of the academic year—September through August; therefore, authorization to withhold directory information must be filed annually with the registrar. Worcester State University assumes that failure on the part of the student to specifically request the withholding of categories of directory information indicates individual approval of disclosure.

A request to withhold the above data in no way restricts internal use of the material by Worcester State University.

In compliance with the Family Educational Rights and Privacy Act of 1974, as amended, Worcester State University reserves the right to disclose information to parents of a student under 18 and/or the parents of a student who is dependent upon such parents for federal income tax purposes.
General Information

Campus

Worcester State University's 58 acre campus is nestled in the residential west side of Worcester, the second largest city in Massachusetts and New England and a dynamic college city with over 30,000 students. We're a short drive from tranquil forests, hiking trails and beautiful vistas and even an even shorter distance from a vibrant city life that offers popular entertainment venues, award-winning restaurants, cultural museums, historic parks, and so much more. Directions are available on page 456 or at www.worcester.edu/directions. The physical facilities of the Campus include the following:

Helen G. Shaughnessy Administration Building

Extensively renovated from 2007 to 2009, the Helen G. Shaughnessy Administration Building combines modern convenience and efficiency with much of the charm of the old Teachers College. In addition to Enrollment Management (which includes admissions, financial aid, registrar, and marketing), it houses streamlined student services in an “academic mall” on the first floor. The Admissions Office is located on the second floor and Academic Affairs can be found on the third floor. Also on the second floor are the President’s Office (including public relations, and international, community and government affairs), the Fuller Theater, and University Advancement (which includes alumni relations, and development). The third floor is also home to Administration and Finance, Institutional Research and Assessment, Human Resources, Payroll and Benefits, and Diversity, Inclusion and Equal Opportunity. The Division of Graduate and Continuing Education, as well as the Intensive English Language Institute, are located on the fourth floor. The building first opened in January 1932 as Worcester State Teachers College, and was designed to accommodate 300 students with spacious classrooms, a gymnasium on the second floor, and a library on the fourth floor. Helen G. Shaughnessy was affiliated with Worcester State for 64 years—as a member of the Class of 1943, associate professor, chair of the Education Department, director of student teaching, director of personnel and labor relations, associate dean of Academic Affairs, and acting executive vice president.

Gymnasium

The Gymnasium contains indoor athletic and recreational facilities, including the Oscar Larsson Fitness Center. It also houses Health Services and Athletics administrative offices.

Kalyan K. Ghosh Science and Technology Building

Opened in fall 2000, the Science and Technology Building is a state-of-the-art building designed to house the sciences including: Communication Sciences and Disorders, Occupational Therapy, Computer Science, Biology, Biotechnology, Chemistry, Geography and Earth Sciences, Geology, Natural Science and Physics, Health Science, and Nursing. The building contains 30 science, therapy and computer labs; offices for faculty and staff; conference/seminar rooms; and student discussion areas. This facility also houses a 200-seat multimedia classroom and Worcester State University's art gallery.

Learning Resource Center

The newly refurbished Learning Resource Center (LRC) houses the University Library, a welcoming venue for study and research. The Library collection contains over 210,000 volumes and 130 indexes with online access to 42,000 full text journals. The well-trained and friendly Library staff welcomes students during the 77 hours of operation each week. Reference librarians are on duty to provide high quality service to students as they pursue their academic work. They also meet with students individually by appointment. Library computers provide access to the entire array of content within the Library collections. The totally wireless environment also enables students to access these resources from any of their own devices. The Library is a member of the Academic and Research Collaborative (ARC), a consortium of 19 Worcester area libraries. Worcester State University students, faculty, and staff have full reciprocal borrowing privileges at each of these libraries.
via individually issued ARC cards. A book delivery system also provides daily delivery service of books, journal articles, and media among the ARC Libraries. The Worcester State University Library is also a member of the Massachusetts State Library System and is a full participant in the Massachusetts Conference of Chief Librarians. The Library also participates in national library consortia, such as OCLC. An inviting, modern café serving beverages and light meals is located near the Library entrance and has become a popular study and gathering place for Worcester State University students and faculty. Other services available in the LRC are Facilities, Publications and Printing, Mail Center, Central Receiving, and on the third floor, University Technology Services (which includes the laptop repair depot).

**Outdoor Facilities**

Worcester State University has the advantage of naturally attractive surroundings. Among its outdoor facilities are an artificial turf athletic field and an eight-lane synthetic track, baseball and softball diamonds, field hockey, and tennis courts.

**Residence Halls**

Residence Halls at Worcester State University provide housing to approximately 1,200 full-time undergraduate students. Chandler Village is a unique living area with 63 apartments in 26 interconnected townhouses. The apartments accommodate four, five, eight, nine, ten, or eleven persons and include furnished common living and kitchen areas.

Dowden Hall, more traditional in style, is a five-story residence hall that includes single, double, and triple rooms with study and recreational lounges. There is a convenience store on the first floor and a fitness center in the basement. It is named for Vera Dowden Baldwin ’34, M.Ed. ’53, whose connection with Worcester State University spanned 70 years. She joined the faculty in 1957, and she also served as supervisor of student teachers, dean of women, and the first dean of students in 1970.

Wasylean Hall is a six-story, apartment-style building with multiple study and common rooms throughout. The apartments are designed to accommodate four and six people. Each unit has single and double occupancy bedrooms with furnished common living and kitchen areas. There is a sandwich shop on the first floor. Wasylean Hall is home to the Office of Residence Life and Housing and the University Police. It is named for Phillip M. Wasylean II ’63.

**Student Center**

The Student Center is available as a resource for the entire Worcester State University community and is conveniently situated at the geographical center of the campus. The first floor of the Student Center contains the following resources: Food Court and dining area, Worcester State University bookstore, Information Desk, and the Print Center. The first floor also has several meeting/programming spaces including the North/South Auditorium, Blue Lounge, Exhibit Area and One Lancer Place. The second floor houses the Student Center/Student Activities Office, Conference and Event Services, and Commuter Services/Weekend Programming. Small meeting rooms, WSUR Radio Station and Student Government offices, and the Living Room—a lounge for commuters and residents with pool tables, ping-pong, video games and several TV’s, are also located on this floor. The third floor holds several Student Affairs offices including the Vice President of Student Affairs, Career Services, Counseling Office, Dining Services, Judicial Affairs and Multicultural Affairs. Student organization offices, including the Student Senate, Student Events Committee, Third World Alliance, the student newspaper, and more, are also located on this floor as well as the main dining hall and additional meeting space.

**Sullivan Academic Center**

Named for Eugene A. Sullivan, Worcester State president from 1947 to 1970, the Sullivan Academic Center is a primary instructional center on campus. It contains faculty and academic department offices, a large lecture hall (Eager Amphitheater), classrooms, and
a large attached auditorium. The Sullivan Auditorium provides the setting for a number of formal ceremonies including the annual Senior Capping. Also located in the Sullivan Academic Center are the Center for the Study of Human Rights, the Center for Teaching and Learning, and the Women's Studies Program office.

Community Relations

Worcester State University values its connections with the greater community, which include partnerships with numerous individuals and organizations. The professional staff participates in events sponsored by the Commonwealth of Massachusetts, the City of Worcester, and the local Chamber of Commerce; hosts conferences, legislative meetings, and community breakfasts; sponsors seminars, lectures, and workshops; and supports a variety of initiatives in the arts and multi-cultural events. Worcester State University’s calendar includes numerous programs and events to which the public is welcomed.

The Office of University Advancement is responsible for fund development and alumni relations. Annually, the office coordinates a number of special activities for Worcester State University alumni including Reunion Weekend, Homecoming, and chapter events. Fund-raising campaigns provide an array of benefits and services to current students, alumni, and friends. Contributions are used primarily for scholarships, academic awards, laboratory and classroom equipment, educational seminars, faculty research grants, and other support services to promote quality education. The office publishes a donor newsletter, manages an online alumni community, and works in partnership with both the Marketing and Public Relations departments to produce the Worcester Statement.

Both Marketing and Public Relations work collaboratively to develop and implement Worcester State University’s marketing and public relations initiatives. The offices oversee all media relations, including the creation of press releases and news stories, and promotes various community outreach activities. They are responsible for developing content and managing production of the Worcester Statement, the President's Annual Report, Quick Facts, and various brochures and informational pieces. The offices also oversee editorial content for Worcester State University's website.

Change of Catalog Information

This catalog was prepared in the summer of 2013, with information available at the time of preparation. Provisions of this catalog are subject to change by order of the Massachusetts Department of Higher Education or the Worcester State University Board of Trustees. It is the policy of Worcester State University to provide advance notice of changes whenever it is reasonable and practical to do so.
Undergraduate Studies

Degree Programs

Worcester State University is authorized to Award the Bachelor of Arts (BA) and the Bachelor of Science (BS) degree in 25 academic programs. Worcester State University also offers Minors in 29 academic disciplines as well as 8 Interdisciplinary Minors or Concentrations.

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>MAJOR</th>
<th>MINOR/IC**</th>
<th>SPONSORING DEPARTMENT</th>
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<td>IC</td>
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MINOR/
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<td>History</td>
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<td>Women's Studies</td>
<td>IC</td>
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</tr>
</tbody>
</table>

*Majors that are also offered in the evening.

**Interdisciplinary Concentration (IC)
Admissions

Worcester State University seeks to enroll students who will succeed academically, thrive socially and contribute meaningfully to the campus community.

First-Year Student Admission

A student's high school academic record is the single most important factor in our evaluation process for first-year student admission. The quality and level of courses, grade point average, and grade trends are all important factors. SAT and/or ACT scores are required. Work experience and extracurricular activities may strengthen overall credentials for admission. SAT II test scores, a personal essay, and recommendation letters are not required but may add support to an application. The TOEFL or IELTS is recommended for students who are not native speakers of English. Specific requirements for competitive majors such as, nursing and occupational therapy are described in the application materials.

Worcester State determines first-year and transfer student admission eligibility in accordance with the published standards established by the Massachusetts Department of Higher Education (MDHE). Meeting these minimum standards does not guarantee admission to Worcester State.

MDHE Massachusetts High School Unit Requirements (College Prep)

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<td>English</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics*</td>
<td>3 (Algebra I &amp; II and Geometry or Trigonometry, or comparable coursework)</td>
</tr>
<tr>
<td>Natural Science**</td>
<td>3 (including 2 with lab)</td>
</tr>
<tr>
<td>Social Science</td>
<td>2 (including U.S. History)</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>2 (in a single language)</td>
</tr>
<tr>
<td>Electives</td>
<td>2</td>
</tr>
</tbody>
</table>

*Beginning with the entering Class of fall 2016, four years of high school math, included one in the senior year will be required.

**Beginning with the entering Class of fall 2017, three years of lab-based science, including natural/physical sciences or technology engineering courses, will be required.

Minimum Grade Point Average in Required Courses

The grades earned in college preparatory courses are re-calculated into a grade point average (GPA). In re-calculating GPA, extra credit is received for honors and Advanced Placement courses. Non-college preparatory courses are not included; therefore, the GPA calculated by Worcester State may be different than the GPA calculated by a high school.

Grades will be converted to a 4.0 scale, where “A” = 4.0, “B” = 3.0, “C” = 2.0, and “D” = 1.0. On this scale, a 3.0 GPA is equal to a “B” average. A 3.0 minimum GPA is required unless the student attains one of the GPA/SAT combinations listed in the chart on page 17.
SAT or ACT Test Requirement

For students with a GPA of 3.0 or above, Worcester State reserves the right to establish additional criteria, such as a minimum SAT or ACT score and/or minimum class standing.

For those students with a GPA below 3.0, a clear-cut SAT/ACT score will be applied as a minimum standard in accordance with the Massachusetts Department of Higher Education Scale below.

<table>
<thead>
<tr>
<th>GPA</th>
<th>SAT*</th>
<th>**</th>
<th>ACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.51-2.99</td>
<td>920</td>
<td></td>
<td>19</td>
</tr>
<tr>
<td>2.41-2.50</td>
<td>960</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>2.31-2.40</td>
<td>1000</td>
<td></td>
<td>21</td>
</tr>
<tr>
<td>2.21-2.30</td>
<td>1040</td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>2.11-2.20</td>
<td>1080</td>
<td></td>
<td>23</td>
</tr>
<tr>
<td>2.00-2.10</td>
<td>1120</td>
<td></td>
<td>24</td>
</tr>
</tbody>
</table>

* Based on highest Critical Reading score and highest Math score.

** The Occupational Therapy program requires a 3.00 and 1000 SAT or 21 ACT minimum.

*** The Nursing program requires a 3.20 and 1050 SAT or 22 ACT minimum.

No applicant with a high school GPA less than 2.00 will be admitted to a state university.

NOTE: The Massachusetts Department of Higher Education Scale is subject to change. Students who have graduated from high school more than three years ago and have never attended college should apply as non-traditional students (see section on page 18) and may present SAT/ACT scores at their option.

GED Recipients

Candidates for admission who have completed the high school diploma requirement by earning the General Equivalency Diploma (GED) must submit official GED score reports with a minimum attainment in the 75th percentile in all subject areas and an official copy of their high school transcript showing work completed and/or attempted with grades earned. GED applicants must also submit official SAT score reports if their high school class would have graduated within the last three years.

Transfer Applicants

Students who do not enroll as first-year students may attend a community college or other college or university and then transfer to Worcester State. To do so, one of the following requirements must be met:

1) 12-23 transferable college credits and a minimum 2.5 college GPA;

2) Up to 23 transferable college credits, a minimum 2.0 college GPA, and a combination of high school grades and SAT/ACT scores that meet the admission standards for first-year applicants; OR

3) 24 or more transferable college credits and a minimum 2.0 college GPA.

If college credits have been earned while enrolled in high school, the admission standards outlined above for first-year student applicants must be met.

If you have attended college/university:

Complete, official transcripts of all work taken at any other institution must be submitted as part of the application process, whether or not credit for such work is desired or expected. Students who fail to acknowledge attendance at any college or university in which they have been enrolled automatically waive the right to have that work considered for transfer credit. They may also be subject to denial of admission, loss of course credit, and/or suspension from Worcester State.
Admissions

Non-Traditional Applicants

If a student applies to Worcester State more than three years after high school graduation and has never attended a college or university, they do not need to meet the admission standards for first-year students. Instead, they must show that they are capable of succeeding at Worcester State based upon their high school transcript grades. Standardized test scores and other factors may be used as part of the admission process. A current resume or personal statement outlining life experience, career goals and specific reasons for applying to Worcester State may be submitted with the application.

Special Admission

If standards for first-year, transfer or non-traditional students are not met, acceptance may still be possible based upon other signs of potential for academic success in a four-year college or university program. Possible signs of success include steadily improving high school grades, high school class ranking, special talents, and strong recommendations.

International Applicants

Worcester State welcomes qualified international applicants. All of the documents listed below must be submitted before April 1 for the Fall semester (January 15 for Fall only Nursing and Occupational Therapy Majors). No international applicants will be considered for the Spring semester unless:

• They are currently enrolled in an ESL program in the U.S. or in native country.
• They are currently attending a U.S. college or university.
• They currently have a visa status that legally allows them to change to F-1.
• They were accepted for a previous semester but deferred attendance due to being refused a visa.

1) Official high school/secondary school transcripts or national exam reports. Transcripts not in English must be accompanied by a notarized English translation.

2) Official college or university transcripts accompanied by a course-by-course formal evaluation by a professional evaluating agency in the U.S. (for courses taken outside the U.S.).

3) Official results of the TOEFL or IELTS; minimum TOEFL score of 550 (paper exam), or 79 (internet-based test) or minimum IELTS score of 6.5 is required. All TOEFL or IELTS scores must be submitted directly from the Educational Testing Service (ETS). For additional information, you may access www.toefl.org or call the Intensive English Language Institute (IELI) at Worcester State, 508-929-8120. The IELI is an official TOEFL internet-based test site.

TOEFL or IELTS is a requirement for all applicants who have studied in a country where English is not the native language.

Applicants who have earned an Associate of Arts or Associate of Science degree from a regionally accredited U.S. college or university are not required to submit a TOEFL or IELTS score.

4) Official results of the SAT are required for all first-year student applicants who have graduated from a secondary school within the past three years.

5) Original bank statement, showing the most current six months of financial activity from a financial institution or agency indicating that adequate funds are available to cover
all educational expenses incurred while at Worcester State for one academic year (currently a minimum of $26,000 U.S. dollars).

6) Original Worcester State Certification of Finances form from a person or people sponsoring your education in this country.

7) International applicants, who have attended another college or university or secondary school in the U.S., must forward a copy of their I-20 Form with their application.

Transcripts and other documents submitted in languages other than English must be accompanied by an English translation and course-by-course evaluation (if applicable) from a recognized agency or organization. For a list of approved evaluating agencies, please contact the Admissions Office.

Please note: Worcester State will not issue an I-20 Form to international applicants until the tuition deposit is paid. The tuition deposit deadline for the Fall semester is May 1st. There will be no exceptions to this deadline.

Exceptions

Learning Disabled

If you have a documented learning disability, you do not have to take tests such as the SAT or ACT for admission to Worcester State. However, you must submit educational testing and assessment completed within the last three years and a copy of the IEP. You must still complete the required 16 college prep units with a minimum GPA of 3.0. First-year student applicants with a language-based learning disability may substitute two alternate college prep electives for the foreign language course requirements. Applicants on a 504 must meet all Department of Higher Education requirements.

English as a Second Language (ESL) Students

If you are an ESL student, you are eligible for exceptions to the admission requirements. For example, ESL students may substitute two course electives for the two required foreign language courses. You must take the Test of English as a Foreign Language (TOEFL) or IELTS and SAT and should contact your guidance counselor or the Admissions Office for more information.

Vocational-Technical Students

Vocational-technical students must complete 16 college preparatory courses, distributed in the same manner and with the same minimum grade point averages required of other high school graduates, with the following exceptions:

- Two vocational-technical courses may be used to fulfill the two required electives.
- Vocational-technical high school graduates who do not complete the two required college preparatory foreign language courses must complete an additional elective college preparatory course for a total of three such courses, and satisfy one of the following options:
  1) Complete at least one Carnegie unit of foreign language;
  2) Complete a fourth Carnegie unit of mathematics or science, which need not be a laboratory course; or
  3) Complete one Carnegie unit of computer science.

Note: A Carnegie unit represents a full academic year of study or its equivalent in a specific subject.

This requirement will remain in effect until the Department of Education (DOE) implements its requirements regarding foreign language study for vocational-technical students. At that
Admissions
time, vocational-technical applicants for admission to UMass and the state universities will
be required to meet DOE requirements for foreign language study.

Application Process

Directions for First-Year Student Applicants
Students can obtain applications from their guidance counselors. Applications may
also be obtained from the Admissions Office, Worcester State University, 486 Chandler
Street, Worcester, MA 01602-2597, 508-929-8040. Students may also apply online at
www.worcester.edu/admissions.

Each applicant must submit the following materials:
- an official copy of the high school transcript including first-quarter senior grades
  (Transcripts are deemed official only when sent directly to the Admissions Office
  from the high school.)
- an official copy of SAT, ACT, TOEFL, or IELTS (Test results should be submitted
directly to Worcester State from the testing agency.)
- a completed Worcester State application form
- payment of an application fee: $40 for all applicants.

NOTE: The SAT includes a student-written essay and multiple choice writing section. Worcester
State requires official scores of all SAT results.

High school students must request an official high school transcript that includes at least the
first marking period of the senior year. Also, a final high school transcript must be requested
at the time of graduation that indicates successful completion of the requirements to graduate
from high school. The Admissions Office must receive this official, final high school transcript
before registration for courses and the final award of financial aid is approved. All transcript
materials requested by the applicant become the property of Worcester State and cannot
be released to the applicant or to other institutions, agencies, or individuals.

First Year

Priority Application Filing Dates: All materials should be submitted as early as possible.
Preferred postmarked filing dates are as follows:

- Fall Semester Early Action (first year applicants only) November 15
- Nursing (BSN) and Occupational Therapy (BSOS) - fall only January 15 (firm)
- Fall Semester Regular Decision (September entrance) March 1
- Spring Semester (January entrance) November 15

After these dates, contact the Admissions Office to determine if applications are still
being accepted. Please note that certain majors may not be available to students
completing their applications after the priority filing dates.

All pertinent deposits and the orientation fee are due on or before May 1 for those students
who meet the priority deadlines.

No spring applications will be accepted for Nursing (BSN) or Occupational Therapy (BSOS).
Directions for Transfer Student Applicants

Transcripts from colleges or universities previously attended are the primary factor in determining acceptance to Worcester State. To be considered a transfer applicant, a student must have successfully completed the requirements listed on page 17 of this catalog at a regionally accredited college or university. The following materials must be supplied:

- An official final high school transcript, indicating proof of graduation from an accredited high school or a high school equivalency certificate indicating the test scores received. These must be received by the Admissions Office before clearance for registration or the award of financial aid is approved.

- An official transcript of all courses completed at each post-secondary institution attended (transcripts are deemed official only when sent directly to the Admissions Office from the previous colleges or universities).

- A completed Worcester State application form.

- Payment of an application fee: $40 for all applicants.

To qualify for a degree from Worcester State, transfer students must complete at least 30 of the last 40 semester hours of credit and more than half of their major courses while matriculated at Worcester State. Credits earned elsewhere will be evaluated with respect to curricular requirements of Worcester State and a Degree Audit of acceptable transfer courses will be included upon deposit.

Worcester State will transfer a maximum of 65 credits from two-year colleges and a maximum of 90 credits from four-year colleges/universities. If a transfer applicant has previously attended a combination of two-year and four-year educational institutions, a maximum of 90 credits, including no more than 65 credits from the two-year college(s), will be transferred. In order to be considered transferable, a course must be college-level, and the student must have received a grade of C– or better. Remedial/developmental courses taken on a pass/fail basis, internships, practica, colloquia, and cooperative education experiences will not transfer. Worcester State does not transfer life/career experience as college credit. All materials submitted become the property of Worcester State and cannot be released to the applicant or any other agency. Anyone seeking AP credit must have the official test scores sent to the University Registrar's Office.

Transfers

Priority Application Filing Dates: All materials should be submitted as early as possible. Preferred postmarked filing dates are as follows:

- Fall Semester (September entrance) May 1
- Spring Semester (January entrance) November 15
- Nursing (BSN) and Occupational Therapy (BSOS)* January 15 (firm)
  (Fall enrollment only - limited space into the first year level)
- LPN to BSN (September entrance) April 1
- RN to BSN (September entrance) May 1

*Students accepted for fall transfer into Occupational Therapy (BSOS) must begin taking courses in Summer Session I.

After these dates, contact the Admissions Office to determine if applications are still being accepted. Please note that certain majors may not be available to students completing their applications after the priority filing dates.

All pertinent deposits and the orientation fee are due on or before May 1 for those students who meet the priority deadlines.
MassTransfer

Students planning to transfer to one of the Massachusetts state-supported universities or UMass campuses are eligible for MassTransfer. MassTransfer provides community college graduates who complete designated associate’s degrees with the benefits of the full transfer and applicability of credit, (2.0 GPA or higher if admitted), guaranteed admission (2.5 GPA or higher), and a partial tuition discount (3.0 GPA or higher).

MassTransfer integrates and replaces the Commonwealth Transfer Compact, the Joint Admissions Program, and the Tuition Advantage Program.

Community college students who matriculated prior to fall 2009 and who participate in the Commonwealth Transfer Compact and/or Joint Admissions programs will be required to complete their associate degrees by August 2013 and must matriculate at a Massachusetts state college or University of Massachusetts campus by fall 2014 to receive the benefits of these programs.

Students who matriculated/beginning in fall 2009 as well as currently enrolled students may accumulate courses leading toward the completion of an approved associate degree under MassTransfer or the MassTransfer Block. The policy benefits will apply to students who complete either an approved associate degree or the MassTransfer Block beginning fall 2010, regardless of initial date of enrollment.

Benefits for students who complete associate’s degrees under MassTransfer are:

<table>
<thead>
<tr>
<th>Minimum Final GPA</th>
<th>Benefits</th>
</tr>
</thead>
</table>
| 2.00 GPA          | • No admission fee or essay  
|                   | • Guaranteed full transfer of a minimum of 60 credits applied to the bachelor’s degree, if admitted  
|                   | • Satisfaction of the general education/distribution/core requirements at the receiving institution, with the receiving institution able to add no more than six additional credits/two courses, if admitted |
| 2.50 GPA          | Guaranteed admission, plus all of the above benefits |
| 3.00 GPA          | A one-third tuition discount, plus all of the above benefits  
|                   | *(must be used within one year after date of graduation)* |

Stipulations:

- If students change their majors or if the linked baccalaureate programs require a higher grade point average or specific courses which are required of native students, MassTransfer students must meet these additional requirements.
- If, because of space or fiscal limitations, the receiving institution does not admit all qualified applicants to a given major or program, the receiving institution will use the same criteria for MassTransfer applicants as it does for its native students.

MassTransfer also provides students in the Massachusetts public higher education system the intermediate goal of completing a portable general education Transfer Block that will satisfy the general education/distribution/core requirements across institutions. Students completing the Transfer Block without earning a degree at any Massachusetts higher education institution with a 2.0 or higher grade point average if admitted will earn the 34 credit hours outlined below, exclusive of developmental coursework.
Transfer Block

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition/Writing</td>
<td>6</td>
</tr>
<tr>
<td>Behavioral and Social Sciences</td>
<td>9</td>
</tr>
<tr>
<td>Humanities and/or Fine Arts</td>
<td>9</td>
</tr>
<tr>
<td>Natural or Physical Science</td>
<td>7</td>
</tr>
<tr>
<td>Mathematics/Quantitative Reasoning</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>34</strong></td>
</tr>
</tbody>
</table>

Benefits for students who complete the Transfer Block are:

<table>
<thead>
<tr>
<th>Minimum Final GP</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0 GPA</td>
<td>Satisfaction of the general education/distribution/core requirements at the receiving institution, with the receiving institution able to add no more than six additional credits/two courses, if admitted</td>
</tr>
</tbody>
</table>

Stipulations:

- Students enrolled in a specific major or degree program may be required to take additional courses if these courses are specifically required for the major or program and are required of native students.
- Completion of the Transfer Block does not guarantee admission to the college or university

Commonwealth Transfer Compact *(policy valid through August 2014)*

The Commonwealth Transfer Compact applies to students transferring from Massachusetts community colleges to public colleges and universities offering the baccalaureate degree. Students shall be eligible for transfer compact status if they have met the following requirements: a) completed an associate degree with a minimum of 60 credit hours exclusive of developmental coursework; b) achieved a cumulative GPA of not less than 2.0 (in a 4.0 system) at the community college awarding the degree and c) completed a minimum 35 credits in general education, exclusive of developmental coursework. The general education core consists of English composition/writing (6 credits), behavioral and social sciences (9 credits), humanities and fine arts (9 credits), natural or physical sciences (8 credits) and mathematics (3 credits).

For students eligible under the compact, the 35 credits in general education will be applied toward the fulfillment of Worcester State’s general education requirements. A minimum of 25 additional credits will be accepted as transfer credits by Worcester State. These credits may be transferred as free electives, toward the student’s major, distribution course work or any combination, as Worcester State deems appropriate.

To complete the baccalaureate degree, students who transfer under this compact may be required to take no more than 68 additional credits unless they change their program upon entering the receiving institution, or the combination of additional general education requirements and the requirements of their major total more than 68 credits. Under these circumstances, transfer students will be subject to the same requirements as native students. A transfer student may not be held to any degree requirements at Worcester State that were established less than three years prior to transfer admission.
Admissions

Joint Admissions (policy valid through August 2014)
Worcester State participates in the statewide Joint Admissions program between Massachusetts community colleges and state colleges. Joint Admissions provides barrier-free movement from the community college to Worcester State. Additional information is available from the Admissions Office at Worcester State and the Academic Deans at the community colleges.

Pre-entrance Immunization Requirements
New first-year and transfer students must submit required health forms before registering for courses. For additional information refer to Health Services on page 65.

Admission Following Withdrawal from Worcester State or Leave of Absence
Matriculated students who fail to take a course during a calendar year will be administratively withdrawn from Worcester State. Students who wish to permanently withdraw from Worcester State or take a temporary leave of absence must complete appropriate forms in the Academic Success Center. If the withdrawal or leave of absence is filed prior to the last day to withdraw from courses for the term, “W” will be recorded on the student’s record. Students who file for leave of absence or withdrawal after the last day to withdraw from courses for the term may petition if they feel circumstances warrant the recording of “W” for all courses enrolled for that term. Normally, a leave of absence is for one semester; however, a student may have up to one year to return to Worcester State. Failure to return at the specified time will result in an administrative withdrawal from Worcester State.

Re-activation of Degree Status
There are two procedures in which students can reactivate their matriculation status at Worcester State after withdrawal/non-continuous attendance/dismissal: readmission and reinstatement.

Readmission:
Students who have attended other colleges/universities since their withdrawal and wish to have these credits evaluated for transfer to their Worcester State program, will need to be readmitted through the Admissions Office. Also, students re-applying for the following majors must do so through the Admissions Office: Education (Elementary and Early Childhood), Nursing, and Occupational Therapy. Applications are available in the Admissions Office (Administration Building, Room 248) and online at www.worcester.edu/admissions.

Reinstatement:
If students have not accumulated any college level courses prior to seeking reactivation of their degree status and are not applying for the following majors: Education (Elementary and Early Childhood), Nursing and Occupational Therapy, they should apply for reinstatement directly through the Registrar’s Office (Administration Building, Room 107). It is the students’ responsibility to supply and update the following documents if not already on file. Deadline for fall-July 1; spring-November 1; summer-April 1.

- final high school transcript
- completed proof of residency form
- official transcript of all courses completed at each post-secondary institution attended (excluding Worcester State).

Upon completion of any missing data, the student's file will be reviewed and a plan for academic persistence and success will be developed. Students then must meet with an advisor in the declared major in order to register.
Academic Progress after reinstatement/readmission
It is expected that students must attain a minimum GPA of 2.0 for each semester following their return. Failure to maintain a 2.0 overall average will result in a second separation from Worcester State not subject to appeal.

All reinstated students follow the degree, program, and graduation requirements from the catalog in effect at the time of their reactivation, not those in effect at the time of their withdrawal. Students need to attend Worcester State at least for one semester prior to graduation certification.

Special Non-Matriculated Students
Students classified as Senior Citizens, College Academic Program Sharing (CAPS) and Colleges of Worcester Consortium may enroll as Special Students. Others may enroll up to a maximum of 11 credit hours on a space available basis at a time designated by the Registrar. Others who wish to enroll for more than 11 credit hours in state-supported courses must be admitted to Worcester State through the Admissions Office before taking courses.

Admission to Non-Degree Programs
Applicants who have already earned a bachelor’s degree and wish to complete a second major, Elementary, Middle or Secondary Education should specifically request an undergraduate application form. Applicants who have completed a Non-Licensure program in Early Childhood Education may apply for a Non-Degree Licensure Education program. Applicants with an Early Childhood Non-Licensure degree must have a minimum of three (3) years teaching experience or have completed the equivalent of a second major in liberal arts and sciences.

Second Baccalaureate Degree
Applicants who have already earned a bachelor’s degree may apply for a second baccalaureate, excluding Occupational Therapy (BSOS) and Undeclared. Requirements for this degree are found on page 35.

Evening Undergraduate Course Offerings
Evening undergraduate course offerings are designed primarily to meet the needs and interests of adult learners and other non-traditional students who pursue study primarily on a part-time basis. The evening schedule of courses offered by Worcester State is especially convenient for students whose job and family commitments prevent enrollment in day programs. Instruction in evening courses is provided by Worcester State faculty and qualified adjunct faculty.

All degree seeking students must follow the procedures for admission to Worcester State outlined above. Students are advised that there is no guarantee that all courses necessary for completion of degree requirements will be available exclusively in evenings/summers.

Post-Baccalaureate Pre-medical and Health Professions Program
This program is expected to meet the needs of students interested in medical, dental and veterinary school as well as those interested in pharmacy, physician’s assistant, physical therapy, and optometry programs. Each student's history is evaluated and appropriate courses are advised based upon his/her specific needs. Students have access to Worcester State's Pre-medical and Health Professions Advisory Committee and, if necessary for a program, the recommendation letter process.
Students who complete thirty credits of the basic core sciences and/or other elective science courses at Worcester State University will receive a certification of completion of the program. Up to eight transfer credits will be allowed to contribute to the thirty credit total. Students will be required to maintain a 3.0 GPA to remain eligible for the program.

This program is designed for students who need the basic science curriculum either as new courses (career changers) or as repeat attempts (GPA enhancement). Students wishing to take an advanced curriculum are advised to seek a second baccalaureate degree through the undergraduate school. The basic courses are offered throughout the academic year, primarily in the evening. Summer courses are also available. Interested students should contact the Office of Graduate and Continuing Education or Dr. Margaret Kerr, the coordinator of the program. Additional information and application materials are available at www.worcester.edu/premed.

Below is a list of the basic core courses and available electives. Since health professions programs differ in their requirements, students should contact Dr. Margaret Kerr prior to registration to make sure they are taking the correct courses.

### The Basic Core

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH 120</td>
<td>General Chemistry I (including lab)</td>
<td>4</td>
</tr>
<tr>
<td>CH 121</td>
<td>General Chemistry II (including lab)</td>
<td>4</td>
</tr>
<tr>
<td>BI 140</td>
<td>Introduction to Organismal Biology (including lab)</td>
<td>4</td>
</tr>
<tr>
<td>BI 141</td>
<td>Introduction to Cellular and Molecular Biology (including lab)</td>
<td>4</td>
</tr>
<tr>
<td>CH 201</td>
<td>Organic Chemistry I (lecture)</td>
<td>3</td>
</tr>
<tr>
<td>CH 202</td>
<td>Organic Chemistry II (lecture)</td>
<td>3</td>
</tr>
<tr>
<td>CH 203</td>
<td>Organic Chemistry I (lab)</td>
<td>2</td>
</tr>
<tr>
<td>CH 204</td>
<td>Organic Chemistry II (lab)</td>
<td>2</td>
</tr>
<tr>
<td>PY 221 or PY 241</td>
<td>Physics I (including lab)</td>
<td>4</td>
</tr>
<tr>
<td>PY 222 or PY 242</td>
<td>Physics II, (including lab)</td>
<td>4</td>
</tr>
</tbody>
</table>

### Science and Math Elective Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA 200</td>
<td>Calculus I</td>
</tr>
<tr>
<td>MA 201</td>
<td>Calculus II</td>
</tr>
<tr>
<td>MA 150</td>
<td>Statistics</td>
</tr>
<tr>
<td>BI 203</td>
<td>Genetics</td>
</tr>
<tr>
<td>CH 410</td>
<td>Biochemistry (including lab)</td>
</tr>
<tr>
<td>BI 161</td>
<td>Anatomy and Physiology I</td>
</tr>
<tr>
<td>BI 162</td>
<td>Anatomy and Physiology II</td>
</tr>
<tr>
<td>BI 204</td>
<td>Microbiology</td>
</tr>
</tbody>
</table>

### Student Right-to-Know Act

The Student Right-to-Know Act of 1990 requires Worcester State to make available to prospective and enrolled students the graduation or persistence rates of selected groups of students. This information is available for review through the Assistant Vice President of Enrollment Management (Administration Building, Room 355), Undergraduate Admissions Office (Administration Building, Room 248).
Academic Honesty

Academic integrity is an essential component of a Worcester State University education. Education is both the acquisition of knowledge and the development of skills that lead to further intellectual development. Faculty are expected to follow strict principles of intellectual honesty in their own scholarship; students are held to the same standard. Only by doing their own work can students gain the knowledge, skills, confidence and self-worth that come from earned success; only by learning how to gather information, to integrate it and to communicate it effectively, to identify an idea and follow it to its logical conclusion can they develop the habits of mind characteristic of educated citizens. Taking shortcuts to higher or easier grades results in a Worcester State University experience that is intellectually bankrupt.

Academic integrity is important to the integrity of the Worcester State University community as a whole. If Worcester State University awards degrees to students who have not truly earned them, a reputation for dishonesty and incompetence will follow all of our graduates. Violators cheat their classmates out of deserved rewards and recognition. Academic dishonesty debases the institution and demeans the degree from that institution.

It is in the interest of students, faculty, and administrators to recognize the importance of academic integrity and to ensure that academic standards at Worcester State University remain strong. Only by maintaining high standards of academic honesty can we protect the value of the educational process and the credibility of the institution and its graduates in the larger community.

What Constitutes Academic Dishonesty?

Academic dishonesty includes intentional violations of accepted standards of ethics and academic integrity as well as negligent violations of standards that the individual reasonably should have known and followed. The following is not an exhaustive list of violations but provides guidelines for evaluating common areas of concern, such as cheating, plagiarism and falsification of information. Violations of academic honesty include:

1. **Cheating**, including but not limited to:
   a. traditional cheating methods including copying on exams or assignments, letting other students copy one’s own work, using crib sheets in quizzes and tests, glancing at other students’ work, or giving answers to other students
   b. giving or receiving unauthorized assistance in exams, laboratory exercises or other academic assignments or attempting to do so, or using unauthorized materials or information sources on tests or assignments, including communication via cell phones or computers or use of materials stored on or accessed by computer or other digital media, or collaboration between or among more than one student on an assignment that is supposed to be done individually
c. submitting someone else’s work as one’s own or allowing others to claim one’s own work as theirs including misrepresenting one’s identity in an online course or allowing others to do so

d. obtaining from any source an unauthorized copy of a test or assignment or portion of a test or assignment, and/or disseminating such material through any means including cell phone or computer.

2. Plagiarism, including but not limited to:

a. use of other people’s ideas, words, research or artistic creations without giving credit
   i. submitting any work, including homework, not done by the person who hands it in and whose name is on it
   ii. submitting papers or other work purchased, copied or obtained free in whole or part from another source, including papers from the internet or from another person, including a friend or a relative
   iii. using another person’s unpublished ideas without permission, taking credit for another person’s unpublished ideas, or taking sole credit for the product of joint efforts with another person.

b. improper or inadequate citation of material from books, professional periodicals, magazines, websites, unpublished reports, personal communications, images, graphic materials or other citable sources
   i. use of facts, data, or specific ideas without citing the source
   ii. inaccurate or incomplete citation of sources
   iii. quoting another’s words without indicating it is a quotation
   iv. using extensive quotations in place of one’s own ideas, even when cited.

Note: standards and forms for citation vary among disciplines and even among teachers. Students should ask their teachers about the expectations for any particular course or project.

3. Misrepresentation or falsification of information, including but not limited to:

a. intentionally misrepresenting information to help make a point not supported by the work including misquoting or taking ideas out of context

b. falsifying the collection or interpretation of data in a research project

c. citing sources not used

d. falsifying one’s qualifications, including academic background or other experience.

4. Seeking credit for the same work in more than one course, including but not limited to:

a. submitting the same paper or project, or significant parts of the same paper or project, to two or more different courses without getting permission from the professors who give the grades

b. using the same internship or fieldwork experience for two or more different courses without prior permission from the professors and internship supervisors involved.

5. Other academic misconduct, including but not limited to:

a. forging, damaging or changing examinations, grades or other academic material or records including written and/or electronic material and records

b. interfering with or damaging another student’s work including homework, papers, laboratory assignments, artistic creations or research projects
c. removing or damaging academic material or equipment, including electronic data, belonging to Worcester State University or any other member of the Worcester State University community

d. deliberately making a false report of academic misconduct or covering up an incident of academic misconduct.

What Are Possible Sanctions?

If the instructor chooses to resolve this issue without referring it to the Academic Judicial Board, he or she has the power to give the student penalties such as a warning, a new assignment or test to replace the one which was not done honestly, or a failing grade on the work in question or in the class. Instructors do not have the power to assign community service or to expel the student: those penalties are in the power of the Academic Affairs Office/Academic Judicial Board only.

Typically, instructors will use these powers to deter the student from cheating in the future without branding the student as dishonest in any official record; they may warn the student that they will come forward with proof of this infraction if they hear that the student has repeated the offense. Instructors may choose to give warnings, require new work, and/or give failing grades on assignments will do so the first time a student turns in dishonest work; a failing grade in the class is usually reserved for repeat offenders and serious, deliberate offenses such as turning in work done by another student as one’s own, using electronics to get answers during in-class exams, or stealing exams or answer keys before a test.

The student has the right to appeal any instructor’s decision to the Academic Judicial Board which may uphold or change the instructor’s decision.

The Judicial Board may assign penalties ranging from a warning to expulsion. Comprised of faculty, students, and administrators, its membership is designed to be aware of the differences between different kinds of academic dishonesty and of the strains and temptations that may lead to bad decisions.

Unless it is dealing with repeat offenders, the Judicial Board will probably respond to minor infractions with failing grades on the particular assignment in question or in the course. Deliberate dishonesty, such as use of answer keys or electronic aids during exams, theft of examination papers prior to the test, submission as one’s own of work done by another student or found or purchased online, etc. should be grounds for a failing grade in the course, with community service hours in addition as a possibility.

Repeated infractions would put offenders at risk of expulsion, as would extremely serious offenses, like stealing an examination and sharing it with other students before the test or having another student take a test in one’s place in an online course.

Students at risk of expulsion will be given a written warning, which they will be required to sign and return within 10 working days.

Acts that are not only dishonest, but criminal, like changing a grade through illegal access to Worcester State University computers, can be punished by expulsion without prior warning.

Undergraduate Policies and Procedures for Handling Cases of Academic Dishonesty

1. Students’ Rights

a. Students will have the presumption of innocence until proven guilty.

b. Students will continue their student status unless and until sanctions are imposed at the conclusion of judicial sanctions which would limit or remove this status.

c. Students are allowed to have an advisor of their choosing at hearings of the Academic Judicial Board. The advisor may counsel the student during the hearing but may not address the Board.
d. Students are allowed to view evidence against them.

e. Hearings at the Academic Judicial Board will proceed even if the student does not appear. However, the student’s absence cannot be the reason a student is found guilty.

f. Students will be notified via certified mail if a report is being made concerning them in the Central File.

g. Students may review their records in the Central File within 45 days of the day Worcester State University receives a request for access, as stated in FERPA.

h. Students may ask Worcester State University to amend a record that they believe is inaccurate or misleading. They should write to the Provost/Vice President for Academic Affairs, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading.

Students should submit to the Provost/Vice President for Academic Affairs written requests that identify that they wish to view their record(s) in the Central File. The Provost/Vice President for Academic Affairs will make arrangements for access and notify the student of the time and place where the records may be inspected.

If the Provost/VP for Academic Affairs decides not to amend the record as requested by the student, Worcester State University will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

2. Initiation

In cases involving the violation of academic integrity, students and faculty are strongly encouraged to resolve matters without resorting to official judicial proceedings. If the faculty member and student are unable to resolve the issue themselves, the chair of the department in which the course was taken should be asked to mediate. If resolution is not possible at this level, the case will go to the Academic Judicial Board (refer to 3 below).

Faculty members and appropriate administrators are strongly urged to report any violations of academic integrity to the Academic Central File.

3. Academic Central File

An Academic Central File of students proven to have violated Worcester State University’s Academic Honesty Policy will be kept in the Office of Academic Affairs. Only the Provost/Vice President for Academic Affairs or his/her designee will have direct access to the Central File. A file will only be created for a student upon a case’s final resolution with a faculty member, with a department chair, or with the Academic Judicial Board.

Faculty members have the option of reporting students to the Academic Central File. Reports, which are statements of resolutions of cases and not allegations, that are sent to the Academic Central File must be supported with proof of some kind. For example, the instructor may submit a copy of a plagiarized paper along with a printout of the same paper from the internet. A faculty member who reports a student for the kind of cheating that can’t be proved without a camera (copying from the person in the next chair, sneaking a peak at the book in a closed-book test, asking a classmate for an answer) must provide the reasons for the accusation in writing. Students who are added to the Academic Central File will be informed of the fact in writing.

Reporting a student is not necessarily linked to a disciplinary action; the faculty member still has discretion over whether to take the case to a judicial hearing. In special cases, when the Provost/Vice President for Academic Affairs notices that a student has two
or more significant violations in the Central File, he or she can refer the case to the Academic Judicial Board, which may then initiate disciplinary proceedings against this student.

Faculty members who provide evidence that a student in their course has violated the Academic Honesty Policy may meet with the Provost/Vice President of Academic Affairs or his/her designee to find out if a student has a file, and if so, how many times he/she has been reported to the Academic Central File. Relevant information limited to the student’s name and number of times he/she has been reported to the Central File may be disclosed to a faculty member to assist in making decisions regarding cases of academic honesty. The procedures by which students access these files will be the same as those for accessing their academic records. The Academic Judicial Board, in the course of deciding a case of academic dishonesty, may access a student’s file. A student’s files are purged according to current FERPA rules. Students’ files are purged upon graduation, withdrawal, dismissal or transfer from Worcester State University. When a student’s file(s) have been purged, the student will be notified in writing by certified mail.

4. Academic Judicial Board

At any point beyond the departmental level, either the student or the faculty member may elect to take the issue to the Academic Judicial Board following the procedures outlined below.

a. A student may request an Academic Judicial Board hearing:
   i. because she or he has been unable to resolve an accusation of academic dishonesty with a faculty member or the chair of that faculty member’s department
   ii. in response to a notice that an Academic Central File posting is to be made.

   The student makes this request, in writing, to the Chairperson of the Academic Judicial Board, in care of the Office of Academic Affairs.

b. Any member of the Worcester State University community may report any student to the Academic Judicial Board for violations of the Academic Honesty Policy. Reports shall be prepared in writing, directed to the Chairperson of the Academic Judicial Board (in care of the Office of Academic Affairs), and submitted as soon as possible after the incident takes place, preferably within 30 days. The Chairperson has the authority to extend this timeframe on a case-to-case basis.

c. The Chairperson will determine if the complaint lacks merit and/or if it can be disposed of by mutual consent of the parties involved on a basis acceptable to the Chairperson. Such disposition shall be final, and there shall be no subsequent proceedings. If the case cannot be disposed of by mutual consent, the matter will proceed to the Academic Judicial Board.

d. All charges shall be presented to the accused student in writing via certified mail with return receipt requested; the same letter will also be sent by first class mail to the student’s current address as registered with Worcester State University. The hearing shall be scheduled not less than seven or more than fifteen calendar days after the student has been notified. All parties shall receive at least seven days advance written notice of the date, time and place of the hearing. Maximum time limits for scheduling of hearings may be extended at the discretion of the Chairperson.

e. The Chairperson will schedule an Academic Judicial Board hearing.
   i. The hearing will be conducted by the Chairperson of the Academic Judicial Board, chosen by the board members.
ii. The Academic Judicial Board is comprised of two faculty members, one administrator and two students. The faculty members are appointed by the MSCA. The administrative member is appointed by the Associate Vice President for Academic Affairs, in consultation with the Provost/Vice President for Academic Affairs. The student members are appointed by the Student Government.

iii. A quorum of three members must be present to convene a hearing.

f. Hearings shall be conducted by the Academic Judicial Board according to the following guidelines:

i. All procedural questions are subject to the final decision of the Chairperson of the Academic Judicial Board present at the hearing.

ii. Hearings shall be conducted in private.

iii. In hearings involving more than one accused student, the Chairperson of the Academic Judicial Board, at his or her discretion, may permit the hearings concerning each student to be conducted separately.

iv. The complainant and the accused each have the right to be assisted by an advisor from the Worcester State University community. Advisors may counsel their respective party during the hearings, as permitted by the Academic Judicial Board. Advisors are not permitted to participate directly in the hearing.

v. The complainant, the accused and the Academic Judicial Board shall have the privilege of presenting witnesses to any violations of academic integrity. The accused and the complainant shall have the opportunity to cross-examine witnesses presented by the other. Members of the Academic Judicial Board shall have the right to question any witnesses.

vi. All hearings are closed to friends and relatives of the accused unless they were actual witnesses to the violation of academic integrity. Witnesses are excluded from the hearing except when called to testify.

vii. Pertinent records, exhibits and written statements may be accepted for consideration by the Academic Judicial Board at the discretion of the chairperson.

viii. After the hearing, the Academic Judicial Board shall determine by majority vote whether the student has violated Worcester State University’s standards of academic honesty.

ix. The Academic Judicial Board’s determination shall be made on the basis of whether it is more likely than not that the accused student violated the rules of academic honesty in the manner charged against him or her.

g. A written record of Academic Judicial Board proceedings shall be made by the board or its secretary. This record shall be the property of Worcester State University and will be housed in the Office of Academic Affairs. The record will state the final decision of the board, a statement of the board’s findings of fact, its determination of the provision(s) of the Academic Honesty Policy, if any, that the student violated and the sanction(s), if any, imposed. The record may also include a summation of witness testimony. A copy of the final decision shall be given to the complainant and the accused.

h. Students may not be found to have violated the Academic Honesty Code solely because they fail to appear before a judicial body for a scheduled hearing. In all cases, the materials and information in support of the charges shall be presented
and considered, as the hearing will be held in the absence of the student, should he/she fail to attend.

i. In the absence of a functioning Academic Judicial Board or Academic Board of Appeals, such as during exams or during the summer and semester breaks, disciplinary hearings (under this Section 3, and the following Section 4) will be the responsibility of the Associate Vice President for Academic Affairs or his/her designee. When he/she deems it appropriate, a hearing may be postponed until the beginning of the new semester.

j. Possible sanctions that the Academic Judicial Board could impose would depend upon the severity of the offense; however, the Board could choose to uphold the original faculty decision or impose another punishment, which might include failing the course, expulsion from the major or program, or expulsion from Worcester State University.

5. Academic Judicial Board of Appeals

The purpose of the Academic Judicial Board of Appeals is to conduct procedural reviews of cases. It is not intended as an evidentiary panel. It is not the job of the Academic Judicial Board of Appeals to hear new evidence.

a. A decision reached by the Academic Judicial Board may be appealed by the accused student(s) or the complainant to the Academic Judicial Board of Appeals within five working days of the date of the decision letter. Such appeals shall be in writing and shall be delivered to the Associate Vice President for Academic Affairs or his/her designee.

b. The Academic Judicial Board of Appeals will consist of one administrator, two students and two faculty members and will be chosen in the same manner as the members of the Academic Judicial Board (see 3.e.ii. above). The administrator in this case, will be the Associate Vice President for Academic Affairs or his/her designee.

c. In cases where the student files an appeal, the complainant, and, in cases that were decided by Academic Judicial Board hearing, the Chairperson of that Board, shall be notified. In cases where the appeal is not initiated by the student, the student shall be notified.

d. An appeal is not a new hearing but is a review of the summation/record of the initial hearing and supporting documents for one or more of the following purposes:

i. to determine whether the original hearing was conducted fairly in light of the charges and evidence presented, and in conformity with prescribed procedures

ii. to determine whether the finding of responsibility or no responsibility is supported by the weight of the evidence

iii. to determine whether the sanctions imposed were inappropriate.

e. When the appellant wishes to introduce new evidence, sufficient to alter a decision, or other relevant facts not brought out in the original hearing, because the person appealing did not know such evidence and/or facts at the time of the original hearing, the Chairperson of the Academic Judicial Board of Appeal (the Associate Vice President for Academic Affairs) will decide whether to instruct the Academic Judicial Board to convene a new hearing of the case. If a case is returned to the Academic Judicial Board for consideration of new evidence, all parties shall have equal opportunities to submit new material.
f. Upon completion of the appellate hearing, the Academic Judicial Board of Appeals shall promptly notify the accused student, the complainant and the chair of the Academic Judicial Board of the outcome of the appeal. Said decision(s) shall take one of the following forms:

**Appeal Upheld**: the appellant’s request for relief has been honored. In the case of an upheld appeal, the new findings/sanctions shall be stated;

or

**Appeal Denied**: the appellant’s request for relief is denied and the finding(s) and/or sanction(s) stand.

g. In extraordinary circumstances, the Associate Vice President for Academic Affairs or his/her designee may waive the deadline for filing an appeal. The decision to waive or not to waive a deadline shall be final and shall not be subject to any appeal.

h. No disciplinary sanction shall be imposed while an appeal is pending unless the Associate Vice President for Academic Affairs determines that such action would be in the best interest of the Worcester State University community.

6. **Administrative Failing Grade**

   In cases where the sanction for academic dishonesty is determined to be a failing grade for the course, the registrar will be informed immediately. The registrar will record an administrative failure. Such a grade is not subject to withdrawal or appeal. A student who receives a failing grade for a course due to a violation of academic honesty cannot eradicate that failure through the normal grade appeal process or by withdrawing from the course.

**Matriculation**

Matriculation is a process whereby students are admitted to Worcester State University and pursue a formal course of study leading to the bachelor's degree, second major, certificate, professional certification or master's degree.
General Requirements for the Baccalaureate Degree

Candidates for a baccalaureate degree must complete 120 semester-hour credits with a 2.0 Cumulative Grade Point Average (GPA) and a minimum 2.0 GPA or higher in the departmental and ancillary courses of the major field of concentration. To receive a baccalaureate degree from Worcester State University, a student must:

- complete 30 of the last 40 credits at Worcester State University
- earn a majority of credits in the major at Worcester State University
- earn a majority of credits in the minor (if elected) at Worcester State University.

Students completing their degrees within six years must meet the degree requirements of the catalog under which they enter Worcester State University. After six years, students are subject to the degree requirements of the catalog in effect for their year of graduation.

Second Baccalaureate Degree: A student who holds a bachelor’s degree from Worcester State University or another four-year institution of higher education accredited by regional accrediting agencies may be awarded a second bachelor’s degree by completing a minimum of 30 additional semester hours of prescribed work at Worcester State University after matriculation into the second degree program. Twelve semester hours of the 30 must be in upper-level work in the student’s major, and the student must meet all requirements for that major. In addition, in order to be granted a second degree, the student must meet all current catalog requirements for a baccalaureate degree at Worcester State University, as follows:

- All courses from the former institution which the Office of Admissions deems usable towards fulfillment of the foundation, general education requirements, and the LASC requirements currently existing at Worcester State University will be transferred to the student’s second baccalaureate program.
- All courses transferred into the student’s major for the second degree are subject to the approval of the Department Chair.
- As many credits from the former institution as are deemed appropriate by the Office of Admissions will be transferred to the student’s second degree program as elective credits (up to and not to exceed 90 credits).

Post-baccalaureate students who seek a second major but do not seek a second baccalaureate degree at Worcester State University will receive a letter from the Registrar certifying completion of the second major upon completion of all prerequisites to the major and all requirements of the major. After matriculation into either post-Baccalaureate program, no additional transfer credits will be allocated as graduation credit.
An education in the liberal arts and sciences enables students to understand their world, and it equips them to analyze, appreciate, and affect that world. With these aims in mind, the faculty at Worcester State University have designed the university's Liberal Arts and Sciences Curriculum (LASC) to ensure breadth both in the range of subjects that students will encounter and in the range of approaches to that material. In addition, the Liberal Arts and Sciences Curriculum emphasizes the fundamental abilities and attitudes that make it possible to benefit fully from a liberal education. While the specialization provided by a student's major field of study is essential to a college education, the breadth and integration provided by the Liberal Arts and Sciences Curriculum supply an invaluable context for understanding the wider world.

Given the crucial importance of languages other than English in today's global society, the University strongly encourages the study of world languages, through the majors and minors, and also through combining the requirements in Global Perspectives and Thought, Language and Culture. Students may also choose to study languages through their elective courses.

The Liberal Arts and Sciences Curriculum is aimed at achieving the following student learning outcomes. Having completed courses in the Liberal Arts and Sciences Curriculum, students will:

- Demonstrate effective oral and written communication.
- Employ quantitative and qualitative reasoning.
- Apply skills in critical thinking.
- Apply skills in information literacy.
- Display an appreciation for the interrelations among global and cross-cultural communities.
- Develop a critical understanding of the U.S. experience.
- Understand the roles of science and technology in our modern world.
- Demonstrate and value personal creative expression.
- Understand how scholars in various disciplines approach problems and construct knowledge.
- Display socially responsible behavior and act as socially responsible agents in the world.
- Make connections across courses and disciplines.
- Develop as healthy individuals – physically, emotionally, socially, ethically, and intellectually.

Core Course Requirements
Core courses may not double with content area course requirements.

**Writing (up to 6 credits) [ WRI, WRII ]**

Students must complete one three-credit course devoted to addressing the rhetorical abilities necessary for effective college writing and an additional three-credit course emphasizing formal academic genres, academic research skills, and the presentation of information to academic audiences. Currently EN 101 and 102 fulfill this requirement.
Students who are exempt or waived from EN 101 will have to complete EN102. Students who are exempt or waived from both EN101 and EN102 will have fulfilled the writing requirement.

**Constitutions (3 credits) [CON]**

Students must complete one course that teaches the constitutions of the United States and the Commonwealth. Courses which meet this requirement will:

- Require students to study the Constitutions of the Commonwealth of Massachusetts and of the United States.
- Consider the historical context, addressing
  - antecedents in English law
  - idea of written fundamental law
  - context of colonial history
  - failed predecessors (the 1778 constitutions and the Articles of Confederation)
  - mechanism of drafting, ratification and amendment
  - influence of the Massachusetts Constitution on the U.S. Constitution.
- Consider political thought in contemporary society, addressing
  - how each constitution shapes modern life
  - differing interpretations, including by the courts
  - current issues related to each constitution
  - basic national, state and/or local political processes, and the rights and obligations of citizenship.

**First-Year Seminar (3 credits) [FYS]**

All first-time, first-year students will be enrolled in and must complete a first-year seminar. The first-year seminar will be a three-credit course with enrollment limited to 20 students and taught exclusively to first-year students in a seminar format. Any make-up of the First-Year Seminar requirement must be successfully completed within the first 60 credits of study. First-Year Seminars:

- Engage beginning college students and explore diverse topics that are more controversial or more narrowly focused than standard introductory courses.
- Encourage students to apply the knowledge that they acquire to address specific problems and challenges within the University, the community, and the world.
- Encourage students to be active, reflective learners.
- Include assignments or activities that orient students to and require the use of the library, educational technology, standard methods of reference and citation, that address the issues of plagiarism and academic honesty, and that require writing and at least one additional competency, (for example oral presentation or quantitative analysis).
- Encourage students to participate in student life and community activities that are part of the first-year experience.

**Capstone Experience (variable credit) [CAP]**

Capstone seminars are offered to students in their junior or senior year through their major field of study for varying credit or through a three-credit course offered within the Liberal Arts and Sciences Curriculum. Capstone seminars completed within a student's major
field of study will count toward major requirements. Enrollment in capstone seminars will be limited to 20 students.

Capstone seminars:
• provide students the opportunity to demonstrate mastery of a subject area or skill
• require synthesis and integration of prior knowledge and abilities
• are designed to facilitate the transition from WSU to the world of work, professional development and/or graduate studies
• may include research, leadership and internship opportunities, artistic projects, the production of a portfolio of student work, and/or other culminating learning experiences.

Content Area Course Requirements
Students will complete courses in eight content areas. Courses in the Liberal Arts and Sciences Curriculum will not generally serve as major courses.

Creative Arts (3 credits) [ CA ]
Students must complete one course. Courses may focus on practice (a performance or studio experience in art, music, or theater) and/or studies (a critical, theoretical, or historical examination of the arts). Courses in this area:
• Encourage recognition that artistic expression varies from one society and culture to another.
• Explore different traditions, styles and historical periods in the arts.
• Promote freedom of expression and tolerance of divergent viewpoints.
• Consider the importance of aesthetics and instill an awareness of how the arts improve the quality of life.
• Enable each student to cultivate his or her creative potential.
• Teach the terminology, techniques and skills that comprise the arts in order to provide the framework for informed creativity.

Human Behavior and Social Processes (3 credits) [ HBS ]
Students must complete one course. Courses in this area:
• Develop an understanding of how factors such as market forces, politics, demographics, physical environment, and culture affect individual behavior and thinking.
• Examine political, economic and social structures and the interplay between the individual and society.
• Explore the ways in which the individual is an agent in shaping and understanding his or her own experiences.
• Consider the ways in which individual and social roles and identities are socially constructed.
• Show how the results of social research can be used to effect social change.
• Teach the differences between and appropriate uses of qualitative and quantitative research methods.
• Investigate the ways in which scientific inquiry is value-laden.
• Help students understand the ways in which the various social sciences inform one another.
Individual and Community Well-being (3 credits) [ICW]
Students must complete one course. Courses in this area:

- Explore the growth and development of the individual and address the interconnected dimensions of well-being.
- Study and evaluate the ways that the local, state, national, or private sectors frame and implement social policies, and the consequences of these policies for well-being.
- Examine social structures and practices such as urban and rural development, planning, funding allocations, and legislative initiatives designed to secure the well-being of the community.
- Examine the short and long-term consequences of beliefs, behaviors and policies that affect the well-being of individuals and communities.
- Address the role of prevention strategies in promoting well-being.

Global Perspectives (3 credits) [GP]
Students must complete one course. Courses in this area:

- Study the culture, history, or language of a nation or geopolitical area other than the U.S.
- Consider culture, power and place in phenomena such as globalization, cultural colonialism, transnationalism, and human rights.
- Investigate issues about the environment and sustainable development in phenomena such as the use of natural resources and macroeconomic problems that affect people and ecosystems around the world.
- Study governance, peace and justice in a global context.
- Analyze the international political economy in relation to governments, enterprises, societal groups and communities from different countries.
- Consider issues such as race, class, gender, age, sexuality, language, ability, indigenous populations, transnational labor and refugee migration.

Natural Systems and Processes (minimum of 6 credits) [NSP]
Students must complete a minimum of two courses. At least one of the courses taken in this area must have a laboratory component. At least one of the courses must be a science course. These two requirements may be met by one course. Courses in this area:

- Study physical and natural systems and processes.
- Apply scientific models, theories, and technology to problems facing society.
- Have an analytical and/or quantitative component and include interpretation, communication and/or presentation of data and results.
- Compare and contrast various modes of scientific inquiry.
- Place scientific inquiry within its historical and contemporary contexts.
- Use and reflect on the scientific method of investigation.
- Address the strengths and limitations of scientific inquiry in human understanding.
- Encourage students to become scientifically literate citizens and be able to evaluate scientific information.

Quantitative Reasoning (minimum of 6 credits) [QR]
Students must complete a minimum of two courses devoted to addressing the formal and numerical reasoning skills necessary to complete college level work and to use quantitative reasoning to analyze complex problems facing the world today. All students
must pass the Math Placement Test at the stipulated level. In this category students must complete a course with the MA (mathematics) prefix within their first 60 credits of study (exceptions to this time frame may be necessary for transfer students). Courses in this area:

- Acquaint students with formal systems, procedures, and sequences of operations.
- Strengthen students' understanding of variables and functions.
- Apply mathematical techniques to the analysis and solution of real-life problems.
- Develop an understanding of and facility with statistical analysis, including an understanding of its applications and limitations. Courses meeting these criteria must emphasize why statistical inference works and not simply how to use statistical techniques.
- Strengthen understanding of the relationship between algebraic and graphical representations.
- Emphasize the importance of accuracy, including precise language and careful definitions of mathematical concepts.
- Understand both underlying principles and practical applications of one or more fields of mathematics.

Thought, Language and Culture (3 credits) [TLC]

Students must complete one course. Courses in this area:

- Explore human thought, history, culture, art, literature, and language (including world languages).
- Present the subject in the context of competing theoretical frameworks, for example, about race, gender, historiography, textual analysis, or cultural interpretation.
- Synthesize approaches from different disciplines.
- Explore problems of ethics, politics, aesthetics, epistemology, and metaphysics.
- Use original works as the primary object of study.
- Require discursive written work, including standard references and citations, for evaluation or extensive written work in a second language.

The United States and Its Role in the World (3 credits) [USW]

Students must complete one course. Courses in this area:

- Study cultures, histories, and social practices in the U.S., including consideration of the ways that differences in power affect different racial, ethnic, gender, and cultural groups as evidenced by readings, texts, testimony, and narratives.
- Address issues of economic and political power that shape the U.S. and the world.
- Trace the roots and development of U.S. political and economic institutions at home and around the globe.
- Focus on particular aspects of U.S. culture and how understanding them helps to illuminate the larger context of U.S. society and its role in its world.

Across the Curriculum Course Requirements

Across the Curriculum courses may be met with Content Area courses, courses in the major and general elective courses. This requirement need not add additional credits to the students’ curriculum requirements. First-year seminars may be approved for QRAC and DAC. Capstone seminars may be approved for DAC, WAC, and/or QRAC.
Writing Across the Curriculum (3 credits) [ WAC ]
Students must complete one Writing Across the Curriculum course after completing the writing requirement (currently EN 101 and 102). Students may complete the WAC requirement in a language other than English. Placement at the 300-level in a language other than English will satisfy the prerequisite for WAC courses in that language. Courses in this area:

- Require a variety of formal and informal writing assignments. Formal writing assignments may include traditional essays and research papers, case studies, process analyses, and reports on research findings. Informal writing assignments may include journals, lab notebooks, reading responses, and in-class essay examinations.
- Offer students instruction in the conventions of writing for a particular discipline.
- Assign writing of different lengths and different formats, for a minimum total of approximately 2500 words (or ten pages) during the course of the semester.
- Provide opportunities for revision.
- Incorporate clear explanations of assignments and various approaches to instruction such as workshops, individual conferences with the instructor, and/or assignment criteria handouts.
- Offer different types of feedback, such as traditional grading and evaluation, peer review groups, self-assessment, and writing center sessions.

Diversity across the Curriculum (3 credits) [ DAC ]
Students must complete one Diversity Across the Curriculum course. Courses in this area address issues of social and cultural diversity in the United States and/or in the world. These may include differences in race, religion, ethnicity, language, national origin, gender identity, sexual orientation, regional background, abilities, and/or age. Courses in this area:

- Study historical experiences, cultural patterns, and social advantages and disadvantages of different groups within the society.
- Explore social problems such as racism, prejudice, discrimination, and exploitation as both mainstream and non-mainstream groups experience them.
- Examine the diversity within each group's experience and how such experiences are dynamic and continuously changing.
- Help students develop a sound knowledge of the methods of thinking about issues of diversity, particularly the ability to distinguish facts from interpretations and opinions.
- Include materials written by as well as about persons from diverse groups.
- Develop an appreciation/respect for members of diverse groups.
- Demonstrate how to communicate culture-specific and/or culture-general ways with diverse groups in various contexts.

Quantitative Reasoning Across the Curriculum (3 credits) [ QRAC ]
Students must complete one Quantitative Reasoning Across the Curriculum course. All students must pass the Math Placement Test at the stipulated level prior to enrolling in a QRAC course. Courses in this area will:

- Apply quantitative reasoning both to frame and solve problems encountered across areas of study.
- Demonstrate how quantitative literacy is embedded in everyday experiences.
- Evaluate a given problem, situation, or experiment, ask suitable questions, and draw various conclusions and interpretations through the application of quantitative reasoning.
Laptop and Technology Requirement

Entering full- and part-time first-year and transfer students are required to own a laptop computer when they arrive on campus.

First-Year Experience Requirement

First-Year Seminar Requirement

Students who enter Worcester State University as first-time first-year students must enroll in a first-year seminar—a course outside the student's major, which focuses on a special topic or problem, and which is designated by FS and followed by the department and course number designations. Students may choose from a variety of first-year seminars that are offered each year. First-year seminars differ from other courses in that they have a limited enrollment, are designed for first-year students, and emphasize the academic tools necessary to ensure a successful Worcester State University experience.

Electives

Having met the general education requirements and those of the major (and minor, where applicable), a student may elect other courses without restriction to complete the 120 semester hours of credit necessary for graduation. Since the purpose of elective courses is to encourage exploration in diverse fields of knowledge, students are urged to take advantage of the opportunity to broaden and deepen their intellectual development.

Intent to Graduate

The degree and diploma will be granted within 60 days of the final day of examinations for the semester in which degree requirements have been met providing that students have adhered to the following deadlines for filing an Intent to Graduate form:

- December completion: Last Friday of October
- May completion: Last Friday of December
- August completion: Last Friday of May

Program

A program is an approved academic course of study whether it be a major, minor or concentration.

Major/Minor

**Major:** Upon or after admission to Worcester State University, and in any case prior to the beginning of the junior year, degree seeking students declare an intent to major in a specific discipline or an approved interdisciplinary area. In general, a major is completed by earning between 30 and 48 credits with a minimum GPA of 2.0. Students may take additional electives in their major if desired. Courses are selected under the direction, and with the approval of the student's faculty advisor in the major.

**Declaration:** A department and/or an appropriate interdisciplinary committee administering an interdisciplinary major may establish standards for admission of enrolled students into their major and minor programs. The standards are not based solely on any GPA. They may
be based on grades earned in prerequisite courses, demonstration of special knowledge and skills through test, portfolios, interviews, and other relevant criteria. Departments and interdisciplinary major administering committees must have standards approved by the All University Committee. A minimum GPA at variance with Worcester State University's policy may not be used as a standard for retention as a major or minor student within a department and an interdisciplinary program. Transfer credits must be approved by the major department or the corresponding program administering committee.

**Minor:** Although not required for graduation, a minor may be completed by earning between 18 and 24 credits in a discipline other than the student’s major discipline and/or in an interdisciplinary program.

**Changing Major or Minor:** A student wishing to change a major or minor field of study completes the Declaration/Change of Major/Minor Form at the Office of the Registrar. A request for a change in major or minor must be made in the Fall by mid-October and in the Spring by mid-March. Forms for the declaration or change of a major/minor are available at the Office of the Registrar.

**Note:** A student wishing to declare/change into Criminal Justice, Education, Nursing, or OT must obtain approval from the Chair of the department.

### Concentration

A concentration is a specialized track within a major or an approved interdisciplinary track study. The number of credits and courses of study required to earn a concentration within a major is determined by the major department or the program administering committee.

An interdisciplinary concentration may be completed by earning between 12 and 17 credits in a specified course of study as determined by the program administering committee.

### Certificate

A certificate is a course of study leading to a professional credential or certification. The number of credits or courses required is determined by the program offering the certificate.

### Academic Advising

A student is assigned a faculty member from his or her major department to serve as advisor in the selection of courses, changes in schedule, and all other academic matters. Undeclared students have faculty/academic advisors assigned as well. The student meets with the academic advisor during the regularly scheduled advising period each semester to review academic progress and select courses for the coming semester. During the registration period the advisor signs the registration form which the student presents in order to enroll in courses. All advisors have office hours so the student should contact the advisor whenever information or an opinion on an academic matter is needed. Refer to the Academic Advising Handbook online (www.worcester.edu/handbook) or the Academic Success Center for further information.

**Faculty advisors must approve all courses taken off-campus using appropriate forms available in the Office of the Registrar.**
Academic Support Services

Academic Success Center

The Academic Success Center is located in the Administration Building, Room 130. It focuses on:

- advising (for new first-year students, transfer students and undeclared students)
- walk-in advising for all students
- placement testing
- special first-year initiatives such as the First-Year Programs
- organization of student workshops that deal with academic issues
- tutoring for all academic subjects.

Peer Advisors: The Academic Success Center sponsors a team of Peer Advisors who can provide academic information about programs, policies, and procedures. New students and those unsure of their choice of major are encouraged to drop-in and speak with these students who are resources for support and referral.

Tutoring Services

The aim of Tutoring Services is to increase student academic effectiveness. After a preliminary assessment, assistance is provided on a one-to-one or small group basis. The primary thrust of the service is directed toward 100- and 200-level courses, as this is the time when students are learning how to adjust to college-level study. The focus, therefore, is on learning how to learn rather than on content area tutoring. Accordingly, tutors assist students in improving their study skills, test-taking skills, and time management skills.

Students who think they may need academic assistance in order to achieve their educational objectives should visit the Academic Success Center as soon as possible to maximize the benefit of the service.

Math Lab Services

The Worcester State University Math Lab, housed next to the Math Department (S143), is staffed with a supervisor and peer tutors with day and evening hours (Monday through Friday). Its main function is to offer students, who have not received a passing score on the Accuplacer Arithmetic and/or Elementary Algebra test, resources for skill development.

This lab offers developmental tutoring on a walk-in basis and houses the mathematics library as well as tutorial software. Any student in need of refreshing their mathematics skills, or tutoring for MA 098 and MA 099, may use this lab which has both a wireless network connection for lap-top users and several desktop computer stations.

The Writing Center

Located in Sullivan 306, the Writing Center is a resource available free of charge to all members of the Worcester State University community. The Writing Center is staffed by graduate assistants and peer tutors who represent a variety of majors and interests. Sessions can be arranged on an appointment or drop-in basis, and the staff of the Writing Center can address basic and advanced writing needs. The Writing Center also hosts Writenet (www.worcester.edu/owl), an online writing center that offers instruction and support over the World Wide Web.
Worcester State University Honors Program

Worcester State University offers selected students the option of partially fulfilling their distribution requirements through participation in the college-wide Honors Program. The purpose of the Honors Program is to present students with a diverse, innovative, and stimulating learning environment that is composed of interdisciplinary and multicultural courses taught, whenever possible, in small sections. Students are encouraged to contact the Honors Program Director for information regarding admission into the program.

To continue in the Honors Program, the student must complete a total of twenty-one credits in honors courses (six 3-credit courses and a 3-credit capstone experience during their first year, sophomore year, junior and/or senior years).

Commonwealth Honors Scholars: Successful completion of the honors courses and a senior thesis will qualify the student to become a Commonwealth Honors Scholar. The Commonwealth Honors Program is a collaboration of select Massachusetts institutions of higher education that provides the student with unique educational opportunities through state-wide conferences, shared cultural activities, and cooperative academic and research support. A student need not be a Commonwealth Honors Scholar to complete the President’s Scholars Honors Program in good standing.

Dean’s List (posted for matriculated undergraduate students only)

Full-time Students: Following the completion of each semester, the names of all students enrolled for a minimum of 12 graded credits excluding courses taken on a pass/fail basis and whose GPA for that semester is 3.5 or better will appear on the Dean’s List. The distinction will be noted on the student’s transcript.

Part-time Students: Following the completion of each semester, the same criteria for honors for full-time students will be applied to part-time day and evening students. Students must have an academic load of a minimum of six credit hours excluding courses taken on a pass/fail basis. The names of students whose GPA for that semester is 3.5 or better will appear on the Dean’s List. The distinction will be noted on the student’s transcript.

Any student receiving an incomplete grade in a semester is ineligible for academic honors in that semester.

Graduation Honors

According to the degree of academic excellence, graduates may be awarded the distinctions of cum laude, magna cum laude, or summa cum laude. Students graduating with honors must attain the following cumulative GPA based on all credits earned at Worcester State University (minimum 60 credit hours for transfer and second degree students).

<table>
<thead>
<tr>
<th>Degree of Honors</th>
<th>GPA Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cum Laude</td>
<td>3.5–3.69</td>
</tr>
<tr>
<td>Magna Cum Laude</td>
<td>3.7–3.89</td>
</tr>
<tr>
<td>Summa Cum Laude</td>
<td>3.9–4.00</td>
</tr>
</tbody>
</table>

Academic Achievement Awards Ceremony

Conducted annually, the Academic Achievement Awards Ceremony gives special recognition to Worcester State University students who excel academically. Students so honored include those achieving the highest grade point average in individual disciplines, scholarship recipients, special academic award recipients, Dean’s List and honor society inductees.
Registration and Course Information

Pre-registration for returning students is scheduled in the fall and spring of each academic year for advance course selection. The order of registration proceeds from seniors to first-year students. Class determination is made at the completion of the Fall semester and at the end of summer sessions. A student’s registration is not considered official until all financial obligations are met.

Course Numbering: The 100-level offerings are introductory or survey courses that generally do not require prerequisites. The 200-level courses are intermediate and may require prerequisite courses. The 300-level courses are advanced and require prerequisite courses. The 400-level courses are generally for seniors and include seminars, independent study, and internships. Courses at the 900 level are open only to post-baccalaureate students.

Prerequisites represent an essential body of knowledge and skills necessary for students to succeed at an acceptable level in a course and/or are required to satisfy licensing and certification standards. Specific prerequisites are required for many courses and in certain professional studies leading to licensing and certification. Prerequisites may be waived by the instructor or department chair of the department offering the course.

Corequisites are courses which support the successful completion of certain other courses when taken concurrently. When a corequisite is listed for a course, the students are advised to register for both at the same time. In some cases, prerequisite/corequisite courses may fulfill distribution requirements.

Course Credit is counted in units called semester hours. The number of semester hours carried by a particular course is indicated in the course description. Twelve to 19 semester hours of credit per semester are considered a full-time schedule of study.

Course Overload: Special permission is required for students to register for more than 19 semester hours of credit. Forms are available at the Office of the Registrar and advisor/department and Dean's approval are required.

Course Repeat: Students in academic difficulty who wish to repeat a course must file a course repeat form with the Registrar. Only the higher of the two grades is computed in the cumulative GPA. Students will not receive credit for a course more than one time except for PE100 and MU102, 220, 225 and TH321 and may include departmental special topics courses. Both the old and new grade appear on the transcript. Course repeats must be taken at Worcester State University.

Adding or Dropping a Course: Students may add/drop courses in accordance with the deadline published in the academic calendar. It is the student’s responsibility to return the completed form(s) to the Registrar’s Office. After the deadline, students wishing to drop a course must follow the procedure for withdrawal.

Withdrawal From Courses: A student may withdraw from a course at any point up to one week after failure warnings have been issued. Choosing to withdraw is a serious matter which may affect a student’s class standing, full-time status, financial aid, etc. A student considering such a step should seek advice from the instructor or the faculty advisor. To withdraw from a course, a student must obtain a Course Withdrawal Form from the Registrar’s Office and follow the prescribed steps. Mere non-attendance at class does not constitute official withdrawal and may result in a failing grade.
In cases of academic dishonesty, the W grade may be reversed.

All “W” grades are permanently recorded on the student’s transcript. A student who withdraws from all courses will be considered withdrawn from Worcester State University, and must file a formal intent to withdraw with the Academic Success Center.

Students who receive any form of financial aid or veterans educational benefits should consult with the respective office PRIOR to dropping or withdrawing from a course. Reducing hour credit load may adversely affect eligibility to receive financial aid or veterans educational benefits. In addition, most private insurance companies require that students be full-time (12 credits or more) to be eligible for coverage.

Quality of achievement is represented by the following letter grades with associated points per semester hour of credit.

- **A** 4.0 - points per semester hour credit
- **A-** 3.7
- **B+** 3.3
- **B** 3.0
- **B-** 2.7
- **C+** 2.3
- **C** 2.0
- **C-** 1.7
- **D+** 1.3
- **D** 1.0
- **D-** 0.7
- **E** 0.0 - no credit, included in calculation of GPA
- **I** a temporary grade, not computed in the GPA
- **P** pass/fail option; credit, not computed in the GPA
- **F** pass/fail option; no credit, not computed in the GPA
- **W** withdrawn; no credit, not computed in the GPA
- **AU** Audit

**Grade Point Average (GPA):** At the end of each semester (and/or summer session), a semester GPA is calculated by dividing the total number of credits attempted (excluding grades of I, P, F, W) into the sum of the products of points and credits for all courses taken.

**A Cumulative Grade Point Average** reflecting the entire history of a student’s achievement at Worcester State University is also computed. The Cumulative GPA is a major factor in determining class membership, academic standing, and eligibility for academic honors. Only grades earned at Worcester State University or through the Consortium Program are computed in the cumulative GPA.

**Audit Procedure Policy:** Students electing to audit may attend classes but will not earn grades or be permitted to submit assignments or take examinations. No academic credit is awarded, but the student receives the benefits of course lectures and discussions. Consent of the instructor is required to enroll in a class as an auditor.

Only students who are not matriculated undergraduates at Worcester State University are eligible to audit undergraduate courses. Also ineligible to audit courses are Consortium, CAPS, dual enrollment, and foreign exchange students.
The audit option must be declared at the time of pre-registration or registration. Students cannot switch to credit-bearing status or from credit-bearing to audit status after registration. Audited courses do not count toward load for any purposes (e.g., financial aid, veterans benefits, etc.) The audit will be permanently recorded on the student’s transcript.

**Pass/Fail:** Students may elect up to two courses per semester on a pass/fail basis. Foundation courses and courses within major(s) and minor(s) disciplines may not be taken pass/fail, even when not applied to specific degree requirements. Students must notify the Registrar’s Office at least four weeks prior to the last scheduled day of classes if they intend to take a course on a pass/fail basis. Similarly, students deciding to change from pass/fail status to standard grading must notify the Registrar’s Office by the same deadline, four weeks before the final day of classes. Once a student decides to change from pass/fail status to standard grading, it is not reversible; the letter grade stands. No more than fifteen (15) hours may be taken on a pass/fail basis. No more than two courses in any given semester may be taken pass/fail.

**Independent Study:** A matriculated student desiring to conduct an independent study must select an instructor and prepare a written contract containing the content and credit hours of the study. The approved contract should be submitted to the discipline during the pre-registration advising period but no later than the first week of the add-drop period. One to six hours of credit may be granted for one semester of independent study. No more than 12 credits in independent study may be granted toward the baccalaureate degree. In no event may the total number of credit hours earned in independent study at Worcester State University exceed 10% of the credit hours counted toward a Worcester State University degree. The student must provide a copy of the approved contract to the department chair, major advisor, the instructor and the Registrar’s Office no later than the last day of the add-drop period.

**Incomplete Grades:** When circumstances (e.g.: illness) prevent a student from completing a course on time the student is responsible for requesting an incomplete. The professor may grant an incomplete provided the student had completed a substantial portion of the course requirements. The student must make arrangements with the professor to complete the course within six weeks of the beginning of the next semester. The academic calendar indicates the deadline for resolving incompletes from the previous term. If the requirements are not met within the appropriate period, the incomplete will automatically become an “E,” and so recorded on the student’s permanent record.

An extension of an incomplete for one semester may be granted if circumstances still prevent the student from completing the course. In such cases, the student is responsible for obtaining the approval of the professor who must notify the Registrar in writing of his/her approval prior to the end of the initial six (6) week period. With regard to the extension of an incomplete grade, the required course work must be completed by the student prior to the beginning of the final examination period of the semester immediately following the one in which the incomplete was originally issued. The instructor will then have five working days within which to submit a final grade to the Registrar.

**Change of Grade:** Once a grade has been posted to a student’s transcript that grade may be changed if, and only if, an error has been made in the calculation or transcription of the original grade. Under no circumstances will a change in grade for a student be allowed because of the submission of additional work after the course has ended. No grade change may be made after the conclusion of the semester following the semester in which the grade was originally submitted.
Transcripts

Official transcripts of coursework taken at Worcester State University may be obtained by eligible students from the Office of the Registrar with the completion of a form available for that purpose, or by writing the request. Students may also download the transcript request form from our Web site (www.worcester.edu/transcriptrequest), and forward the completed copy to the Registrar's Office. Requests must include name while attending, current name if different, Social Security number and/or student ID number, last date of attendance and whether or not the student was officially accepted into a program. Transcripts are $5 per copy. Payment must accompany the request in the form of a check made payable to Worcester State University. Transcripts cannot be ordered by telephone or fax.

International Programs

International Students

Worcester State University is authorized to host both F-1 and J-1 international students, scholars and professors. The Office serves the Worcester State University international community in a variety of ways from pre-attendance advising on visa issues, to on-campus orientation and comprehensive support services throughout the duration of students’ academic programs at Worcester State University.

All international students must have a valid student visa to travel to the U.S. and are required to pursue a full course of study at all times. Under the policy of the US Department of Homeland Security, all international students must report to the Office of International Programs after their initial entry into the U.S. Additional information on international applicants can be found on the Admissions page.

Education Abroad

Worcester State University strongly encourages students to participate in some form of study abroad experience during their time as an undergraduate. To facilitate such opportunities, Worcester State University offers an array of domestic and international exchange opportunities. Worcester State University students can earn academic credit on both short and long-term programs throughout the year. All courses must be approved with the assistance of academic departments in advance in order for credits to transfer back to Worcester State University. Interested students are strongly advised to communicate their intention to study abroad early in their academic career.

International Exchange Opportunities

Worcester State University has entered into multiple exchange agreements with institutions in a variety of locales including England, China, Thailand, South Korea and Portugal. Courses are offered in English and students have the opportunity to learn the native language as well. Per the conditions of the exchange agreements, Worcester State University students pay Worcester State University tuition and fees to Worcester State University, and accommodation fees to the host institution.

The National Student Exchange

The National Student Exchange (NSE) offers students the opportunity to participate in exchange opportunities with nearly 200 institutions in the U.S., Canada, and the U.S. territories enabling participating students to attend another NSE school at either the home or host school in-state tuition rate. Reciprocal tuition exchanges are available in 48 states including Alaska and Hawaii and in the three U.S. territories of Guam, Puerto Rico and the U.S. Virgin Islands. NSE offers students the opportunity to live and learn in a different academic and geographical setting for up to one academic year.
Study Abroad

Worcester State University is affiliated with a number of organizations which provide summer, semester and academic year program options for students throughout the world. These programs are committed to developing international dimensions as an integral part of the academic curriculum and they strive for a high level of academic excellence. To qualify for participation, students must have a minimum class standing of a Sophomore. All courses must be approved by the appropriate academic departments prior to participation in the program in order for credits to transfer back to Worcester State University.

Short-Term Programs

Worcester State University offers a variety of short-term, one to four weeks, programs each academic year. Popular destination include: Costa Rica, Nicaragua, the U.K., Spain, Ecuador and Belize. These programs are offered over January Break, Spring Break, and during the summer semesters. These faculty-led credit-bearing overseas learning experiences are focused and affordable and are designed to provide greater accessibility to students and to cover a breadth of academic interests and geographical destinations. All students are eligible for participation at the discretion of the faculty leader provided they have a minimum of a 2.5 GPA.

Intensive English Language Institute (IELI)

The Intensive English Language Institute offers students the opportunity to attain English language fluency and U.S. cultural competencies to succeed in college or university studies. IELI offers both full-time and part-time programs providing top quality English as a Second Language (ESL) instruction to international students and working professionals. Courses are not for credit.

In the Intensive ESL Program students study academic English up to 20 hours per week to rapidly improve their fluency and competency. Classes meet in the fall and spring for 14 weeks and in the summer for 5 or 10 week sessions. Core courses focus on reading, writing, listening, speaking, pronunciation, grammar and preparation for the iBT TOEFL examination. The full-time program meets requirements for an F-1 student visa.

ESL classes in the Community Program meet 4-5 hours per week. Students improve their English for work, further education, or general fluency.

Placement tests are required for all students to determine the best level.

Standards of Progress

Matriculated students (students admitted to Worcester State University and pursuing a formal course of study leading to the bachelor’s degree, second major, certificate or professional certification) are expected to make satisfactory and steady progress toward completion of their programs.

Opportunities are available for student advisement, both within the departments and from the Academic Success Center. However, each student is solely responsible for selecting courses, which satisfy departmental requirements for a major, as well as the general requirements for graduation as described in this catalog. Students are responsible for familiarizing themselves with this information. Exemption from, or exception to, any published requirement is valid only when approved in writing by the Provost/Vice President for Academic Affairs or Associate Vice President for Academic Affairs and confirmed by the Registrar.

Attendance

All students are expected to attend and participate in all class meetings and laboratory sessions. In the event that illness or some other emergency prevents a student from
attending class, the student should contact the instructor directly. Since attendance requirements differ according to the specific academic goals of each course, students should carefully check the attendance policy on the course syllabus. If there is anticipated prolonged absence, the Associate Vice President for Academic Affairs (Administration Building, Room 361) should be contacted.

Worcester State University abides by Chapter 375 of the Commonwealth of Massachusetts, An Act Excusing the Absence of Students for Their Religious Beliefs. Section 2B of this law states: “Any student in an educational or vocational training institution other than a religious or denominational educational or vocational training institution, who is unable, because of his religious beliefs, to attend classes or to participate in any examination, study, or work requirement on a particular day shall be excused from any such examination, study or work requirement, and shall be provided with an opportunity to make up such examination, study, or work requirement which he may have missed because of such absence on any particular day; provided, however, that such makeup examination or work shall not create an unreasonable burden upon such school. No fees of any kind shall be charged by the institution for making available to the said student such opportunity. No adverse or prejudicial effects shall result to any student because of his availing himself of the provisions of this section.”

**Academic Standing:** For degree-seeking students, class membership is based upon the number of credit hours completed. Class membership determines priority for registration and participation in class events.

<table>
<thead>
<tr>
<th>Class</th>
<th>Credit Hours Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Year</td>
<td>0-29</td>
</tr>
<tr>
<td>Sophomore</td>
<td>30-59</td>
</tr>
<tr>
<td>Junior</td>
<td>60-89</td>
</tr>
<tr>
<td>Senior</td>
<td>90-120</td>
</tr>
</tbody>
</table>

**Good Standing:** To maintain good standing at Worcester State University, matriculated students must meet the minimum standards specified below.

<table>
<thead>
<tr>
<th>College Credits*</th>
<th>Cumulative GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-29</td>
<td>1.50</td>
</tr>
<tr>
<td>30-59</td>
<td>1.75</td>
</tr>
<tr>
<td>60 and over</td>
<td>2.00</td>
</tr>
</tbody>
</table>

*College credits include all credits **attempted** at Worcester State University plus all credits **accepted in transfer**. Students are reminded that only grades earned at Worcester State University or through the Consortium Program are used in determining their GPA.

**Warning Status:** Students will not be placed on probation status until they have attempted 24 semester hours; however, students may be placed on a warning status if they fail to maintain the minimum standard after attempting 12 semester hours. Students on warning status may enroll in no more than 16 semester hours. In consultation with an academic advisor, each such student will develop an academic plan/registration contract that will include such conditions as repeating failed courses, regularly scheduled advising appointments, attending workshops offered through the Academic Success Center, and recommended use of the writing center, math lab, and tutoring services.

**Probation and Dismissal:** Students who fail to meet and/or maintain the minimum cumulative GPA required for good standing are placed on academic probation and are subject to the following restrictions: 1) they may not participate in intercollegiate athletics; and 2) they may not register for more than 12 semester hours of credit per semester; and 3) they may not serve on any standing and ad hoc governance committees of Worcester State University.
Failure to improve the GPA and regain good standing after two regular academic semesters (Fall and Spring) will result in academic dismissal and separation from Worcester State University. Students dismissed from Worcester State University for academic deficiency may not register for or attend classes at Worcester State University until 12 months have elapsed. Readmitted students must attain a minimum GPA of 2.0 for each semester following their return. Failure to maintain a 2.0 semester GPA will result in a second separation from Worcester State University not subject to appeal. See next section regarding withdrawal/leave of absence.

Appeal of Dismissal: Students may appeal for reinstatement to continue for a third semester on probation. Appeals must be made in writing to the Chair of the Academic Progress Review Board and submitted to the Registrar within five (5) days of notification. The Academic Progress Review Board will review the written appeals. The decision of the Review Board is final.

Withdrawal from Worcester State University/Leave of Absence

Matriculated students who fail to take a course during a calendar year will be administratively withdrawn from Worcester State University. Students who wish to permanently withdraw from Worcester State University or take a temporary leave of absence must complete appropriate forms in the Academic Success Center. If the withdrawal or leave of absence is filed prior to the last day to withdraw from courses for the term, “W” will be recorded on the student’s record. Students who file for leave of absence or withdrawal after the last day to withdraw from courses for the term may petition if they feel circumstances warrant the recording of “W” for all courses enrolled for that term. Normally, a leave of absence is for one semester; however, a student may have up to one year to return to Worcester State University. Failure to return at the specified time will result in an administrative withdrawal from Worcester State University.

Students who receive any form of financial aid or veterans educational benefits should consult with the respective office PRIOR to dropping or withdrawing from a course. Reducing hour credit load may adversely affect eligibility to receive financial aid, veterans educational benefits. In addition, most private insurance companies require that students be full-time (12 credits or more) to be eligible for coverage.

Reinstatement after Withdrawal/Non-continuous Attendance/Dismissal

Students reactivate their undergraduate, matriculation status through the Registrar’s Office. It is the student's responsibility to supply and update the following documents if they are not on file:

- final high school transcript
- completed and notarized proof of residency form
- official transcript of all courses completed at each post-secondary institution attended (excluding Worcester State University).

When the file is complete, the student will meet with an advisor and develop a plan for academic persistence and success. If applicable, an updated evaluation of transfer credits will be done at this time. In the case of Nursing, Occupational Therapy, and Education majors, an interview with the academic department will be necessary to determine reinstatement possibility in these majors.

Students readmitted after dismissal must attain a minimum GPA of 2.0 for each semester following their return. Failure to maintain a 2.0 semester GPA will result in a second separation from Worcester State University not subject to appeal.
All reinstated students follow the degree, program, and graduation requirements from the catalog in effect at the time of their reactivation. Through appropriate advising, a plan for success outlining the maximum credits applicable will be developed prior to the semester of re-matriculation.

**Academic Reprieve Policy**

The Academic Reprieve Policy applies to former Worcester State University students returning to complete baccalaureate degree programs a minimum of three academic years after their last completed semester at Worcester State University. This policy is designed to facilitate program completion for students whose previous academic records were so poor as to put them in jeopardy of academic probation or dismissal immediately upon readmission. A student may exercise this academic reprieve option only once.

A student meeting criteria for eligibility must file a petition form, available in the Office of the Registrar, requesting reprieve of eligible course work at Worcester State University, either at the time of readmission or before the close of the first semester of re-enrollment. A maximum of 60 credits may be applied toward graduation from the student’s previous enrollment at Worcester State University. In order to be applied, those courses must have received a passing grade. Credit for courses in the student’s major is contingent upon approval by the Department Chair. None of the grades associated with courses given credit under the academic reprieve policy will be calculated in the student’s GPA; however, all course work will be recorded on the transcript. A student selecting the reprieve option will be required to meet degree requirements of the catalog in effect on the date of the student’s application for readmission. Those electing the reprieve option may qualify for honors at graduation upon the completion of a minimum of 60 graded credits. All approved academic reprieve students should check with the Financial Aid Office to see whether their reprieve will be recognized for financial aid purposes.
Undergraduate Appeal Procedure

Prior to invoking the use of the undergraduate appeal procedure, individuals should exhaust all informal means available to resolve questions concerning specific issues related to their courses.

The appeal procedure may not be used to challenge a grade which results from a faculty member exercising usual and customary professional judgment in the evaluation of student work.

Step 1

When an issue arises in which the student believes he/she has been treated unfairly, the student shall request in writing a meeting with the instructor. In the case of an end-of-semester grade, the student shall request such a meeting no later than ten working days after the beginning of the next semester. The instructor shall arrange to meet with the student within ten working days of the receipt of the request.

Step 2

If the matter is not resolved to the satisfaction of the student at Step 1, then, within ten working days of the meeting in Step 1, the student shall file a written request to review the matter with the appropriate Department Chair.

Step 3

If, within ten working days of the receipt of the request in Step 2, the Department Chair is unable to resolve the matter to the satisfaction of all parties, then either party may, within ten working days, file a written request to review the matter with the Dean of the respective School. In the case of continuing education courses or graduate courses, the appeal at Step 3 goes to the Dean of Graduate and Continuing Education.

Step 4

If, within ten working days of the receipt of the request in Step 3, the Dean is unable to resolve the matter to the satisfaction of all parties, then either party may, within ten working days, file a written request to review the matter with the Associate Vice President for Academic Affairs.

Step 5

If, within ten working days of the receipt of the request in Step 4, the Associate Vice President for Academic Affairs is unable to resolve the matter to the satisfaction of all parties, then either party may, within ten working days, file a written request to review the matter with the Provost/Vice President for Academic Affairs.

Step 6

Within ten working days of the receipt of the request in Step 5, the Provost/Vice President for Academic Affairs shall inform the student, faculty member, Department Chair, Dean, and Associate Vice President for Academic Affairs of the results of his/her review.

The appeal process ends at this point.
Enhanced Learning Opportunities

Accelerated Pharmacy Program with Massachusetts College of Pharmacy and Health Science:

Worcester State and Massachusetts College of Pharmacy and Health Science (MCPHS) have a formal affiliation agreement that admits students into an articulated program that begins with three years at Worcester State in one of four science tracks: Biology, Biotechnology, Chemistry or Natural Science, and concludes with the three-year accelerated Doctor of Pharmacy program on the College’s Worcester or Manchester (NH) campus. After successfully completing the first year of required coursework in the PharmD program at MCPHS, students will earn a Bachelor of Science degree from Worcester State. The first three years at Worcester State offer a blend of liberal arts and sciences that meet both the MCPHS general education curriculum requirements and the specific science track requirements at Worcester State. Massachusetts College of Pharmacy and Health Science provides the coursework needed for the student to earn the Bachelor of Science degree from Worcester State at the end of the first year of professional study, as well as the professional education required to earn the Doctor of Pharmacy degree at the end of three years at MCPHS.

MCPHS shall accept up to ten (10) qualified WORCESTER STATE students each year into the first year of the Pharmacy Program. If more than 10 students meet the established requirements and wish to transfer under the terms of this Agreement, the 10 students determined by the MCPHS Worcester/Manchester Pharmacy Admissions Committees to be the best qualified will be assured transfer admission, with the remaining students accepted on a space available basis.

Students who qualify (at the end of three years at Worcester State) for the Accelerated Pharmacy Program with MCPHS must:

- have at least a 3.5 cumulative grade point average (on a scale of 4.0) if they entered Worcester State after fall 2008
- have at least a 3.2 cumulative grade point average (on a scale of 4.0) if they entered Worcester State in fall 2008
- be full-time students at Worcester State for the three pre-pharmacy years and follow one of the approved curricula
- no grades below C (not C-)
- no course repeats
- all courses completed at Worcester State
- TOEFL score of at least 213 if English is a second language.

****Students taking a reduced load for two or more semesters will be in violation of the terms of the Agreement and may lose their right to enroll in the PharmD program.
Enhanced Learning Opportunities

Students who transfer into Worcester State from another college are not eligible for this program but can apply to MCPHS via the traditional application process.

Students applying to the MCPHS Accelerated Pharmacy Program must:

- Declare by November 1 of their third year at Worcester State their intent to transfer to MCPHS as a first-year Pharmacy Program student the subsequent Fall term.
- Complete an application to MCPHS via the Pharm CAS System by November 1.
- Notify both the Worcester State pre-pharmacy advisor and the MCPHS Office of Admission on the Worcester campus by November 1 of their third year at Worcester State. Students must indicate their first and second choice of campus (Worcester or Manchester).
- Send the completed application to the MCPHS Office of Admission on the Worcester campus by February 1 of their third year at Worcester State.
- Complete a successful pre-admission interview, conducted by MCPHS at the campus to which the student intends to transfer.

American Antiquarian Society Seminar: Each year the American Antiquarian Society and five Worcester Colleges—Assumption College, Clark University, College of the Holy Cross, Worcester Polytechnic Institute and Worcester State—sponsor a research seminar at the Society library. The seminar is conducted by a scholar familiar with the Society’s extensive early American History collection, and the seminar topic is related to his or her field of research. Normally two students are chosen from each of the five colleges to participate. The seminar topic and research methods combine several disciplines, and students from a wide variety of majors have participated in this unusual undergraduate opportunity. Further information is available from the Department of History and Political Science.

American Chemical Society: Students may challenge Chemistry for the Allied Health Professions by contacting the Chemistry Department, New York Board of Regents. In some cases, credit can be awarded for these examinations.

Colleges of Worcester Consortium, Inc.: Thirteen Central Massachusetts colleges, along with a number of Worcester area organizations, comprise the Worcester Consortium for Higher Education. In addition to cultural activities, interdisciplinary programs, and other opportunities, the Consortium provides a cross-registration service whereby full-time day students of member colleges may register at no additional cost for one course per semester at another campus. A Consortium shuttle bus provides transportation among campuses throughout the day.

Members of the Consortium, in addition to Worcester State, are Anna Maria College, Assumption College, Atlantic Union College, Becker College, Clark University, College of the Holy Cross, Mass College of Pharmacy and Health Science, Nichols College, Quinsigamond Community College, Tufts University, University of Massachusetts Medical School, and Worcester Polytechnic Institute. Among other organizations participating with the Consortium to enrich local college curricula are the American Antiquarian Society, Worcester Craft Center, The International Center, Old Sturbridge Village, radio station WICN, Worcester Art Museum, Worcester Foundation for Experimental Biology, Worcester Historical Society, Worcester Horticultural Society, and New England Science Center.

Cross registration opportunities (at no additional cost) exist only for our matriculated undergraduate students taking day courses at one for the member Colleges during the Fall and Spring semesters. Students must be in good academic standing to take advantage of the one course per semester cross-registration option. Student eligibility and course applicability is determined by the Registrar's Office. Further information is posted on the Consortium website — www.cowc.org.
**College Academic Program Sharing (CAPS):** A student enrolled at any of the nine Massachusetts State Colleges may enroll for up to 30 credits at any other state college without going through formal registration procedures. Credits are automatically transferred to the student’s home institution, and the student pays no additional tuition or fees. To take part in the program, degree-seeking students must have attained sophomore status and be in good academic standing at Worcester State. For further information consult the Registrar.

**College Level Examination Program (CLEP):** These standardized examinations offered on campus through the Educational Testing Service confer college credit in two categories—general examinations, which include English, humanities, mathematics, social sciences, and natural sciences; and examinations in specific subjects. CLEP examinations allow students to earn college credit by demonstrating their mastery of college-level material in introductory subjects. A maximum of 60 credits earned through the CLEP process will be accepted towards a degree at Worcester State. Additional information and applications are available through the Counseling and Career Services Center.

**Credit by Examination:** Worcester State University has established equivalencies for Advanced Placement and High-Level International Baccalaureate examinations. For more information visit the Registrar’s website at [www.worcester.edu/Registrar](http://www.worcester.edu/Registrar). Other opportunities to challenge subject areas for credit are available.

**Department Challenge:** When appropriate and with the sanction of the faculty advisor, students may request and complete a department-developed examination to translate competencies into credit. A limited number of departments offer this as an option, so consult the appropriate department chair. However, in most cases it is recommended that students explore the CLEP option.

**Internships and Professional Experiences:** Matriculated students in good academic standing are eligible for internship placement if they meet departmental requirements for such placement. No more than 12 academic credits may be applied toward graduation. An internship is a form of experiential learning that permits a Worcester State matriculated student to convert theory into action. An internship may be undertaken with or without the expectation of academic credit. If credit is to be granted, however, the internship must be monitored and evaluated by the appropriate Worcester State department and a grade awarded at its completion. The internship can be constructed according to any of a number of models including professional apprenticeships, work experience, field research, career exploration, socio-political action and service learning. Because students must be actively involved in the development of an internship placement—by developing a resume, preparing necessary correspondence, or being interviewed—they should contact the faculty sponsor in the semester prior to the proposed internship. The internship contract sets forth the responsibilities of each party so that each understands his or her specific role in the educational field experience. Each program is designed to accommodate and articulate the personal goals of the student, the academic goals of the department, and the needs of the participating off-campus organization. Information about available internships is regularly relayed to, and publicized in, appropriate academic departments. The following conditions apply to all internships:

- No more than 12 units of internship credit may count toward a degree.
- Students undertaking internships must be in good academic standing.
- Only juniors and seniors may undertake internships.
- A copy of the student’s internship contract with the sponsoring department must be filed with the Registrar’s Office.
- Students are responsible for providing their own transportation for off-campus learning experiences.
Enhanced Learning Opportunities

National League for Nursing (NLN) Examinations: For RNs who graduated from a diploma program, up to 21 credits may be transferred after taking and passing the NLN Profile II Mobility Exams.

New England Regional Student Program: Worcester State participates in a regional cooperative program administered by the New England Department of Higher Education. The New England Regional Student Program offers qualified residents the benefits of in-state tuition plus 50% in certain programs at any New England state university, college, two-year college, or technical institute. The purpose of the program is to expand higher educational opportunities for New England residents by making available, on an equal basis, those programs not commonly offered at every institution. Information about the program can be obtained from the Admissions Office, from any guidance counselor, or from the New England Department of Higher Education, 45 Temple Place, Boston, MA 02111.

Off-Campus Courses: Matriculated students may enroll in off-campus courses at regionally accredited institutions in academic disciplines that are compatible with the Worcester State curriculum. To assure applicability and transferability, matriculated students must have approval in writing from their faculty advisor and the Registrar before enrolling in courses at other accredited institutions. Copies of course descriptions from college catalogs or other publications for each course must be attached. Forms are available at the Registrar's Office (Administration Building, Room 107).

Pre-Law Program: A program of preparation for law school is available through the Department of History and Political Science.

Pre-Medical, Pre-Dental, Pre-Veterinary and Pre-Pharmacy Advisory Program: Worcester State offers an advisory program for students interested in preparing for medical, dental, veterinary or pharmacy studies. Students interested in medicine or dentistry may pursue study in any of the academic majors of Worcester State. It is the obligation of the students to check with the professional school(s) to which they intend to apply for exact requirements. Nearly all medical and dental schools require one year each of the following laboratory courses: General Chemistry, Organic Chemistry, Biology and Physics. In addition, many schools require two years of a modern foreign language, one year of English (including composition), and Mathematics through Calculus. Regardless of major, students are advised to select CH 120 and CH 121, General Chemistry I and II, and either BI 140 and BI 141, or PY 221 and PY 222, or PY 241 and PY 242 in their first year.

Students interested in medicine, dentistry, veterinary medicine, optometry, podiatry or osteopathy should consult both the major advisor and the Chair of the Pre-Medical and Pre-Dental Advisory Committee as soon as possible following matriculation. Students are advised to complete their science requirements before the end of their junior year and to take the national pre-professional exam (e.g., MCAT, DAT) during the Spring semester of their junior year. During the junior year, students must arrange an interview with the Pre-Medical and Pre-Dental Advisory Committee. The current chair of the Pre-Medical and Pre-Dental Advisory Committee is: Dr. Margaret Kerr, Chemistry. Additional information is available at www.worcester.edu/PreMed.

Summer Programs: Worcester State offers a variety of undergraduate and graduate courses during the summer months. Two six-week sessions, the first beginning in early June and the second beginning in early July, provide intensive enrichment opportunities for students working toward completion of degree requirements or upgrading and enhancing professional skills. The summer schedule is usually available in April. Course listing is on website (www.worcester.edu/summer).
The Washington Center for Internship and Academic Seminars

Worcester State participates in this internship program that combines experience in public, private, or non-profit sectors in Washington, D.C. with academic learning. The internship provides a unique opportunity to explore career paths while sampling the intellectual and cultural diversity of our nation's capital. This internship must be taken for credit so it is imperative that a student meets with the faculty sponsor within his/her academic major early in the semester prior to the proposed participation.

A student's financial aid may be applied toward program costs. In addition, significant scholarship monies are possible through The Washington Center and the Massachusetts Department of Higher Education for students with a minimum GPA of 3.0 and who are residents of Massachusetts. Tuition and fees are also waived for the semester for students who meet both the residency and GPA criteria. It should be noted that scholarship/financial aid monies are awarded based on the most recent policies put forth by OSFA and the Massachusetts Department of Higher Education and are subject to change.

Each semester The Washington Center Regional Recruiter visits the campus to speak with students about the internship program. These visits are coordinated through Career Services. Interested students should contact the Career Services Office, located in the Student Center, third floor.

Workplace ESL (English as a Second Language)

For a company or organization to function well, its employees must be able to communicate effectively. At Worcester State, our Workplace ESL Programs can be tailored to the needs of your organization. Most employees are eager and pleased to be able to increase their English language skills and thus become more valuable in the workplace. Our Workplace ESL Programs emphasize the basic skills of listening, speaking, reading and writing, with specialization in vocabulary and American expressions (slang and idioms) used everyday. There is often a special need for employees to learn vocabulary used in your workplace, and we work with management to identify and offer that specific terminology. Education in English as a Second Language gives employees a sense of empowerment and a sense that they belong to their new culture. This includes a sense of belonging to the culture of their workplace. These employees often become more aware of the entire corporate atmosphere, and identify more strongly with their workplace, getting more involved and more comfortable being part of a team, giving suggestions and being concerned with safety issues. We also offer a program for managers to learn conversational Spanish that will help them to communicate more effectively with new employees. For more details, contact the Center for Business and Industry 508-929-8126.

Reserve Officer Training Corps (ROTC)

Air Force

Worcester State students have the opportunity to participate in Air Force ROTC through the AFROTC Detachment at Worcester Polytechnic Institute. The Air Force ROTC program is voluntary and open to all students who seek the challenge of being an officer in the United States Air Force upon graduation from college.

The Air Force ROTC academic program includes a one-hour, non-credit course both semesters of the first year; a one-hour, one credit course both semesters of the sophomore year; and three-hour, three credit courses each semester of the junior and senior years. The courses cover Air Force organization and history the first year and sophomore year, and management, leadership, American defense policy, regional studies, and military law during the junior and senior years. Additionally, AFROTC cadets participate in a one and one-half hour military training period each week.
All AFROTC cadets also attend Air Force ROTC field training during the summer between their sophomore and junior years. Cadets are paid while at field training and will receive travel pay to and from the Air Force base hosting field training. Students participating in the first two years of AFROTC will attend a four-week field training session, while students entering AFROTC during their sophomore year will attend a six week training program.

By participating in AFROTC students can compete for scholarships ranging from two years to three years in duration. These scholarships cover tuition, most fees, and textbooks. A monthly tax-free subsistence allowance of $100 is paid to all scholarship students, and to all non-scholarship cadets in the last two years of the Air Force ROTC program.

To participate in Air Force ROTC students must be United States citizens (or naturalized by the end of their sophomore year), of good moral character, and in sound physical condition. Students interested in Air Force ROTC should write to the Professor of Aerospace Studies, AFROTC Detachment 340, Worcester Polytechnic Institute, 100 Institute Road, Worcester, MA 01609-2280, or call 508-831-5747 for further details and the latest information on scholarship opportunities.

Army

The Army Reserve Officers’ Training Corps (ROTC), is offered by Worcester Polytechnic Institute and is available to all Worcester State students. American citizens who are physically qualified and who satisfactorily complete the entire four-year program will be commissioned in the United States Army. Graduates serve as second lieutenants in the Active Army or the reserve components. Delayed entry on active service for the purpose of graduate school is available. Military science is designed to complement other instruction offered by Worcester State. Emphasis throughout is on the development of individual leadership abilities and preparation of the student for future important leadership roles in the Army. There are two variations of ROTC available to the student who desires to participate: a four-year program, in which students participate in required military science courses and activities for four academic years. Attendance at a six-week advanced training camp is required between the third and fourth year.

The two-year ROTC program is intended for students in their second year of college who want to enroll in ROTC in their junior year. It begins with a six-week basic summer training camp, with pay, between the sophomore and junior years. Upon successful completion of basic camp, the student participates in the third year of ROTC and attends the advanced camp during the next summer. As an alternative, an enlisted member of the Army National Guard or Army Reserve who has completed basic training can qualify for the two-year ROTC Simultaneous Membership Program (SMP).

All students enrolled in the last two years of the program receive a tax-free cash stipend of $100 each month in school. Two- and three-year Army ROTC scholarships are available for students who wish to apply. The scholarship is based on the achievements of the applicants, not the financial status of their families. The ROTC scholarship covers tuition and most required fees, paid directly to the college. It also pays directly to the student $450 per year for books and a $100 monthly cash stipend, each month in school. Both are tax free. Members of Army Reserve and National Guard may participate in the ROTC/SMP as college juniors, receiving a reserve officer commission upon successful completion of the military science requirements. SMP cadets remain members of their unit and earn E-5 drill pay in addition to the tax-free stipend of $100 per month through ROTC. Additionally, Massachusetts National Guard ROTC/SMP members receive free tuition at state schools.

Students interested in Army ROTC should contact the Professor of Military Science, Military Science Department, Worcester Polytechnic Institute, 100 Institute Road, Worcester, MA 01609, or call 508-831-5268. Offices are located in Room 28A, Harrington Auditorium.
Navy

Programs leading to a commission as an officer in the United States Navy or Marine Corps are available to all qualified Worcester State male and female students through cross-enrollment in the Naval Reserve Officers Training Corps Unit at the College of the Holy Cross. Students can participate as Scholarship or College Program (non-scholarship) students in either a four-year or two-year Naval ROTC program. The basic qualifications for enrollment in the NROTC Program are United States citizenship, good moral character, and sound physical condition.

High school students, in the Fall of their senior year, can apply through the national competition for three- and four-year Naval ROTC Scholarships. If selected, they receive full tuition, payment of most fees, and a $150 per month tax-free stipend. Along with their college degree requirements, Naval ROTC students are required to complete one Naval Science course each semester and also participate in one two-hour weekly unit drill period. Additionally, scholarship NROTC students participate in summer training cruises after their first year, sophomore year, and junior year. The summer cruises are four to six weeks in length, with pay and allowances, and afford an opportunity for practical experience and travel. Upon successful completion of the NROTC program, graduates are commissioned ensigns in the Navy or second lieutenants in the Marine Corps and are required to serve at least four years on active duty.

First-year and sophomore students can apply for the two-year Naval ROTC Scholarship Program during their first two years in college. If selected, they receive full tuition, payment of most fees, and a $150 per month tax-free stipend. They attend a six-week indoctrination course during the summer preceding their junior year at the Naval Science Institute at Newport, Rhode Island. Along with their remaining college degree requirements, they are required to complete one Naval Science course each semester and also participate in one two-hour weekly unit drill period during their junior and senior years. They are required to serve at least four years on active duty after commissioning.

Students can also participate as College Program (non-scholarship) students in either the four-year or two-year Naval ROTC Program. Students apply directly to the Professor of Naval Science at the College of the Holy Cross for enrollment. The program provides military uniforms and during the junior and senior years a subsistence allowance of $150 per month. College Program students are required to complete one Naval Science course each semester and also participate in one two-hour weekly unit drill period. They also participate in one summer training cruise preceding their senior year. Once enrolled in the NROTC Program, College Program students are eligible to apply for scholarships based on their academic record and performance in the Naval ROTC Unit. Scholarships of one, two, and three years are available.

Upon successful completion of the program, College Program students are commissioned in the Naval or Marine Corps Reserve and are required to serve at least three years on active duty after commissioning. For additional information about the Naval ROTC Program, contact the Professor of Naval Science, Naval ROTC Unit, College of the Holy Cross, Worcester, MA 01610-2389; 508-793-2434.
Services for Students

Student Services is a collaboration of varied offices designed to enhance each student's experience at Worcester State University. We offer career counseling, provide assistance for students with physical and/or learning disabilities, and present programs for students who may need additional academic preparation for college success.

Athletics and Recreation

The Athletics and Wellness office is an integral part of Worcester State University’s efforts to provide a high-quality, affordable education and supportive environment that promotes the total development of our students. The staff provides students with the opportunities to grow and learn through intercollegiate varsity athletics, intramurals, and wellness programs. Participation in these activities fosters physical, mental, leadership and life skills development, while enhancing self-discipline and sportsmanship qualities.

In all of its programs, the Athletic and Wellness office is cognizant of its responsibilities as an educational support component at Worcester State University.

As a Division III member of the National Collegiate Athletic Association (NCAA), the Massachusetts State College Athletic Conference (MASCAC), the Eastern College Athletic Conference (ECAC), and the New England Football Conference (NEFC), Worcester State University offers baseball, basketball, cheerleading, cross-country, field hockey, football, golf, ice hockey, soccer, softball, tennis, track and field, volleyball and women's lacrosse.

For those students interested in competing on a less formal level, Worcester offers an intramural sports program. The program includes touch football, coed football, basketball, tennis, street hockey, softball, soccer, volleyball, and golf. Any student who wishes to participate in intramural sports, regardless of ability or past experience is urged to do so. For the recreational athlete, Worcester State University also offers a fitness center. Students may also find part-time employment through the intramural director as supervisors and officials.

Bookstore

All required course materials for classes are available at the Worcester State University Bookstore located in the Student Center. This full-service bookstore offers new and used textbooks, as well as textbook rental. To make the book selection process for classes easier, please bring your class schedule. The Bookstore also stocks school supplies, specialty books and a wide variety of gifts and clothing imprinted with the Worcester State University logo.

Used Textbooks

We stock many used copies of textbooks, but the supply is limited and they sell quickly. Shop early for the best selection of used books.
Rent-A-Text
Students will have the option to use Rent-A-Text through the University bookstore saving on average half the price of a new book. You’ll need to complete the short rental agreement online or at the register in the store. You must be 18 years of age and provide a valid ID and a credit card as collateral. With Rent-A-Text, students can highlight and write in the book. Normal wear and tear is anticipated. You can pick up rental textbooks in store or order online and have them shipped to your home.

Textbook Rental Return Policy
Any student who uses the University Bookstore Book Rental Program must abide by the contact he/she signs with the bookstore. All rented textbooks are due back by the rental due date. Students who fail to return books or pay the balance due will have their accounts turned over to a collection agency. In addition, the student will not be eligible to participate in the Textbook Rental Program until he/she settles his/her debt.

Online Purchasing
Textbooks and many general merchandise items are available on the bookstore website at www.WSU.bkstr.com. Students can purchase or rent textbooks by clicking on the textbook tab, picking the proper term and selecting the course and section numbers. Online orders can be picked up at the bookstore or they can be shipped to your home.

Return Policy
Textbooks are returnable for one week after the first day of the semester, with receipt, provided they are unmarked and are in the purchased condition with all materials intact. General merchandise is returnable at any time with receipt.

Ways to Pay
The bookstore accepts cash, personal checks, MasterCard, Visa, American Express, and Discover, as well as the One Card. The bookstore also has gift cards available for sale both in store and online.

Book Buy Back
The bookstore will purchase books back at any time, no matter where they were originally purchased, provided there is national demand for the book, as determined by the bookstore’s buying guide. The bookstore purchases books back for resale from Worcester State University students at half the new purchase price provided there is a current order and need for the book in the upcoming semester. The best time for students to sell books back is during finals when they are finished with them and the bookstore has the most-up-to-date information on the needs of the upcoming semester.

See bookstore website for hours.
Bookstore Online: www.WSU.bkstr.com

Campus Ministry
Campus Ministry at Worcester State University seeks to enable students, faculty and staff to grow spiritually in their faith journey as they work and study in the Worcester State University setting. Through interfaith programs, suppers, counseling and fellowship opportunities, the Campus Ministry seeks to bring a religious dimension into the everyday life and conversation of the Worcester State University community. The Campus Ministry House is located near Dowden Hall and is staffed by Catholic and Protestant chaplains and available clergy from various religious traditions.
Services for Students

Career Services

Career Services provides students with the opportunity to obtain information regarding career fields and occupations, finding out about internship opportunities, conducting self-assessment, linking career planning to academic planning, and making a successful transition from college to career or to further schooling. We have a wide variety of services and resources available. Please visit our website at www.worcester.edu/careerservices, or visit our office on the third floor of the Student Center. Appointments with a Career Counselor are available year round to currently matriculated students. Please call us at 508-929-8072 to make an appointment or if you have any questions. We look forward to serving you.

Counseling Services

The Counseling Center assists students in coping with personal issues that interfere with their academic and personal development and sense of well-being. Individual counseling is available to those who are seeking assistance. Group counseling may also be available on an as-needed basis. Specialized counseling is available for individuals who have experienced sexual trauma at any point in their life. The staff of the Counseling Center is also able to assist students with academic concerns.

The Counseling Center provides services to undergraduate and matriculated students and is located on the third floor of the Student Center. To make a counseling appointment, please call 508-929-8072.

Disability Services

Worcester State University and the Disability Services Office (DSO) are committed to providing services that will enable students who qualify under Section 504 of the Rehabilitation Act and the Americans with Disabilities Act as Amended (ADAAA) to participate fully in the activities of Worcester State University. The DSO is the primary support system on campus for students living with disabilities. Services have been established to ensure that facilities, activities, and programs at Worcester State University are accessible to all students.

Current and comprehensive documentation is required from all students who request services, and it must demonstrate that the student’s disability substantially limits one or more major life activities. For specific documentation criteria, please visit the DSO website at www.worcester.edu/dso. Accommodations and services are individually determined based on the functional limitation(s) that are identified by the diagnostic evaluation and during the intake interview.

An intake appointment is necessary to officially register with the DSO to review documentation and subsequently receive reasonable accommodations. Once registered with the DSO, it is the responsibility of the student to request accommodations on a semester-to-semester basis. A learning specialist, who provides time management, organizational, self-advocacy and academic strategies, is available to students registered with the DSO.

Please contact us for more information. The DSO is located on the first floor of the Administration Building, Room 131. Telephone: 508-929-8733, fax: 508-929-8214, email: dso@worcester.edu, or web: www.worcester.edu/dso.
Health Services

The Health Services Office is located in the Modular building Room 117. During the academic year a full-time nurse practitioner, two part-time practitioners, and a part-time physician staff the office. Office hours are Monday, 8 a.m. to 8 p.m.; Tuesday, Wednesday and Friday 8 a.m. to 4 p.m.; and Thursday, 8 a.m. to 7 p.m. During the summer months when the Health Services Office is closed, emergencies are referred to Worcester State University Police.

Services include acute and routine medical care, health screenings, and specialty referral. Treatment is completely confidential. Students’ health history forms remain on file in this office, and health insurance brochures are available.

Health Forms and Immunization

Each full-time undergraduate and graduate student, and all full and part-time students in health science programs involving patient contact (Nursing, Occupational Therapy, and Communication Sciences and Disorders) must present evidence of immunization in order to register for courses. Massachusetts law specifies the following immunizations: 1) two doses of measles, mumps and rubella vaccine given at least one month apart beginning at or after 12 months of age; 2) one dose of tetanus/diphtheria/pertussis (Tdap) is required, if it has been 5 years or more since the last dose of tetanus/diphtheria (Td); 3) three doses of Hepatitis B vaccine; 4) All newly enrolled full-time resident students must be immunized with the Meningococcal vaccine within the last 5 years or the student/parent/legal guardian may sign the Meningococcal Information and Waiver Form developed by the Massachusetts Department of Public Health; and 5) a history of varicella (chicken Pox) disease verified by a health care provider, or two doses of Varicella vaccine given at least 1 month apart beginning at or after 12 months of age. All international students must have proof of a negative Mantoux test performed in the USA. In the case of positive test results, evidence of a negative chest x-ray is required. Mantoux testing (PPD) is also available at Student Health Services for a minimal fee. A copy of an immunization record from a school in the Commonwealth indicating receipt of the required immunizations may be presented; or in the case of measles, mumps, rubella, Hepatitis B, or varicella, laboratory evidence of immunity. The law provides for medical and/or religious exemptions. Provision is also made to allow students to register on condition that the required immunizations are obtained within thirty days of registration.

Students must submit the Worcester State University Report of Medical History form, completed by a physician, in order to register for courses. All resident students must have a complete Worcester State University Health Form in order to move into the residence halls.

Health Insurance

The Commonwealth of Massachusetts requires that students must be covered by health insurance under their own policy or purchase the Worcester State University health insurance plan. Health insurance is required for undergraduate students if they register for nine (9) or more semester hours of credit. Coverage for graduate students is required if they register for seven (7) or more semester hours of credit.

At the time of fall and spring registration, all students will be enrolled in and charged for the Worcester State University Student Health Insurance Program. Students who do not wish to participate in Worcester State University’s plan must return the completed waiver request form that is enclosed with their bill. They may also waive the insurance online at www.universityhealthplans.com. Both the completed waiver form and proof of insurance coverage should be returned with payment of their bill to the Bursar’s Office. Students who enroll only in summer session courses are not required to participate.
Services for Students

Lancer Dining Services

Worcester State University Dining Services is managed by Chartwells, a Division of Compass Group North America. Chartwells is proud to present to you the “Profiles in Good Taste” at Worcester State University. It’s an unforgettable dining experience; passion and practicality; ingenuity and sensibility. Great food and exciting environments combined with our pride of service transform the ordinary into the unexpected.

Locations and Hours of Operation

There are five dining locations on campus The Lancer’s Loft Café, The Food Court, LRC Starbucks Café, Outtakes C-Store and Java Junction. To find out about hours of operations, menus, prices, specials and upcoming events go to www.dineoncampus.com/wsu.

Meal Plans

Chartwells offers a wide variety of meal plans to both resident students and commuters. Resident students can choose from 19 meals, 14 meals, 10 meals, 7 meals and a 65 block plan for students with 90 credits or more. We also have a commuter dining dollar plan for all first-year students, sophomore, junior and first-time transfer commuter students. All meal plans only last a semester. To find out more information about meal plans and see which plan is right for you please visit www.dineoncampus.com/wsu.

Multicultural Affairs

Alternatives for Individual Development (A.I.D.)

The Alternatives for Individual Development Program (A.I.D.) is an alternative admissions program at Worcester State University which provides educational assistance to students.

The primary focus is the first year, however, the program requires a minimum participation of two academic semesters, designed by the program staff and based on individual assessment. Other services will be provided to students throughout their undergraduate experience, including academic assistance, individualized or group tutoring, assistance with financial problems and cultural enrichment.

The program actively recruits students who show motivation and desire to succeed in higher education. Included in this category are ALANA, low-income and first-generation students.

In order to be eligible, students must be incoming first-year students, meet minimal admissions requirements, be a Massachusetts resident and a U.S. citizen and/or permanent legal resident.

When completing your Worcester State University application, answer “yes” to “I wish to be considered for admission to the Alternatives for Individual Development Program.” Letters of recommendation from guidance counselors and high school teachers are needed to complete the application file. In some cases an interview may be required.

Upward Bound

The Upward Bound Program at Worcester State University is designed to encourage eligible high school students to persist in school through graduation and to seek a post-secondary education.

The Program actively recruits students who show motivation and desire to succeed and who are college bound. Included in these categories are: first-generation, ALANA and low-income students.
Services for Students

Services include: college visits, workshops and seminars in college admissions and financial aid assistance, career counseling, individualized or group tutoring and cultural enrichment activities.

The Program has two main components—the Saturday component and the summer residential academy.

Residence Life and Housing Services

Mission

Residence Life and Housing is committed to providing inclusive living and learning experiences that enhance our residents engagement in their own development and academic success.

Students may choose to live in one of three residential facilities on campus:

Chandler Village accommodates 420 students. It is a unique living area with 63 apartments in 26 interconnected townhouses. The different apartments accommodate three to eleven people in single and double occupancy bedrooms. Each unit features newly furnished bedrooms, common living and kitchen areas. Chandler Village has undergone a renovation that includes sprinkler systems for all units. There are several units accessible to persons with disabilities.

Dowden Hall, accommodating 406 students, is a traditional residence hall overlooking the lower campus. It includes single, double and triple rooms with study and recreational lounges on each floor. Dowden Hall has undergone a renovation that includes a sprinkler system for the entire building, a fitness center in the basement, and a convenience store on the first floor. Dowden Hall is accessible to persons with disabilities.

Wasylean Hall is an apartment-style building that accommodates 348 students. The apartments are designed to house four and six people. Each unit contains a common living and kitchen area. There are multiple study and recreational lounges throughout the building. Wasylean Hall is also accessible to persons with disabilities. There is a sandwich shop, open to the campus community on the first floor. Also, there is the central mailroom for all resident students. Wasylean Hall is home to the Office of Residence Life and Housing and Worcester State University Police.

Residence Life and Housing offers several special housing opportunities: First year students who are majoring in Nursing, Occupational Therapy, and Communication Sciences and Disorders have the opportunity to all live together on the same floor in Dowden Hall. First year Honors students also have the opportunity to live together. WSU also offers a program named CLEWS (Community & Leadership Experience at Worcester State) that offers students the opportunity to live together take classes together and participate in activities that focus on community service and leadership.

See pages 73-75, Room and Board, for additional information.
Student Activities and Organizations

A variety of cultural, social and service activities complement classroom instruction at Worcester State University including films, lectures, novelty acts, comedy, and live musical performances. Students are encouraged to participate in one or more of the student organizations: the Student Events Committee, WSUR radio, Dance Company, The Student Voice Newspaper, Worcester State Pride Alliance, Student Government Association, Third World Alliance, Campus Ambassadors, the Dance Team, the Surreal Club, the Commuter Advisory Board, Lancervision TV, the Equestrian Team, special interest groups, and honor societies, more than 25 in all.

There is an active Student Government Association with a President, Student Trustee, and a Student Senate comprised of elected representatives from each class. Annual campus events include Welcome Week, Family/Homecoming Weekend, Senior Capping, Winter Week, Commuter Appreciation Week, and Spring Week.

Veterans Service

Worcester State University proudly welcomes our student veterans. You have provided a very noble and crucial service for all of us, and for that, we thank you. We are committed to helping you meet your educational needs by providing you with information, services, and support.

Certifying Official for Veterans Benefits

Your dedicated contact at WSU is: Cherie Milosh, Certifying Official
Cherie can be reached at: cmilosh@worcester.edu
Registrar’s Office, Administration Building, Room 107
508-929-8773

Cherie can assist with all aspects of Chapter 33, the Post-9/11 Bill, and the Montgomery GI bill.

The Registrar’s Office can also provide general information of interest to veterans and dependents of veterans enrolled at WSU. Spouses and dependents of 100 percent disabled or deceased veterans wishing to inquire about possible veterans’ benefits should contact the Registrar’s Office.

Director of Veterans Services

Your dedicated contact for Services at WSU is: Alan Jackson
Alan can be reached at: ajackson@worcester.edu
Admissions Office
Administration Building, Room 248
508-929-8884

Once a Veteran has been accepted to WSU, certified their benefits, the Office of Veterans Services will assist you in your transition to the academic environment. Services to assist you through on-campus and off-campus resources are available and coordinated through this office. Our aim is to insure that our Veterans are successful in completing the requirements as degree seeking students.
Worcester State University Police Department

The Worcester State University Police Department's main priority is to provide the safest and most secure environment possible for the students, faculty, staff and visitors that comprise the institution's community. We believe that safety is everyone's responsibility and encourage our students, faculty and staff to engage in community policing and to report any suspicious activity to Worcester State University Police. Policing is provided 24 hours a day throughout the calendar year by a full-time staff of sixteen sworn officers and three residence hall security officers. Worcester State University Police officers enforce the rules and regulations of Worcester State University in conjunction with applicable state and federal laws. The department also provides crime prevention programs and seminars scheduled at intervals throughout the year as well as ad hoc programs when requested by any constituent of the Worcester State University community. The Worcester State University Police and Parking Clerk's offices are located on the first floor of Wasylean Hall. The University Police may be reached by visiting www.worcester.edu/police or by calling 508-929-8911.

The Center for Service-Learning and Civic Engagement

The Center for Service-Learning and Civic Engagement was established in the spring of 2006 by a group of distinguished faculty at Worcester State University. Today, Dr. Mark Wagner is the director of the Center.

The mission of the Center is to challenge students and faculty to investigate social problems by examining their root causes in the classroom while simultaneously addressing them in the community. To accomplish this successfully, we encourage students and faculty to work collaboratively with community partners to design effective research and service projects.

Many faculty members and departments within WSU develop projects that involve faculty, staff, and students in reciprocal partnerships with public, private and non-profit organizations in communities to address critical social issues and align curriculum, scholarship, research and creative activity with the public good. Our hope is that higher education institutions engender students’ civic learning through participation in civic engagement, academic coursework, extracurricular activities and off-campus programming. The ultimate goal of civic learning and civic engagement is to prepare individuals for effective democratic participation, which in turn promotes growth of healthy communities, global economic vitality, social and political well being and democratic human interactions.
## Discipline Information

**University Switchboard:** 508-929-8000  
**Web Site:** [www.worcester.edu](http://www.worcester.edu)

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Location</th>
<th>Sponsoring Department</th>
<th>Phone</th>
<th>Fax</th>
<th>Departmental Website</th>
</tr>
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<tbody>
<tr>
<td>Art</td>
<td>Learning Resource Center (L132B)</td>
<td>Visual Performing Arts</td>
<td>508-929-8145</td>
<td>508-929-8166</td>
<td><a href="http://www.worcester.edu/art">www.worcester.edu/art</a></td>
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<tr>
<td>Biology</td>
<td>Science &amp; Tech Bldg (ST310)</td>
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<td>508-929-8569</td>
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<td>Biotechnology</td>
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<td>508-929-8569</td>
<td>508-929-8148</td>
<td><a href="http://www.worcester.edu/biotech">www.worcester.edu/biotech</a></td>
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<td>Business Adm.</td>
<td>Sullivan Academic Center (S203)</td>
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<td>508-929-8091</td>
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<td>Chemistry</td>
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<td>Communication</td>
<td>Learning Resource Center (L332B)</td>
<td>Communication</td>
<td>508-929-8829</td>
<td>508-929-8170</td>
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<tr>
<td>Computer Science</td>
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<tr>
<td>Criminal Justice</td>
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<td>Criminal Justice</td>
<td>508-929-8000</td>
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<td><a href="http://www.worcester.edu/cj">www.worcester.edu/cj</a></td>
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<tr>
<td>Economics</td>
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<td>Education</td>
<td>Sullivan Academic Center (S226)</td>
<td>Education</td>
<td>508-929-8671</td>
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<td>English</td>
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<td>508-929-8154</td>
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<td>French</td>
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<tr>
<td>Geography</td>
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<td>Physical &amp; Earth Sciences</td>
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<td>Health</td>
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<td>Health Science</td>
<td>508-929-8832</td>
<td>508-929-8176</td>
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<td>History</td>
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<td>508-929-8162</td>
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<td>Math</td>
<td>Sullivan Academic Center (S145) 508-929-8912</td>
<td>508-929-8197</td>
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<td>Music</td>
<td>Learning Resource Center (L132B)</td>
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<td>Natural Science</td>
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<td><a href="http://www.worcester.edu/natsci">www.worcester.edu/natsci</a></td>
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<td>508-929-8129</td>
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<td>Occ. Therapy</td>
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<td>508-929-8624</td>
<td>508-929-8178</td>
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<td>508-929-8159</td>
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<td>Sociology</td>
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<td>508-929-8408</td>
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<td><a href="http://www.worcester.edu/spanish">www.worcester.edu/spanish</a></td>
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<td>Theatre</td>
<td>Learning Resource Center (L132B) Visual Performing Arts</td>
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<td>Urban Studies</td>
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Financial Information

The schedule of fees, tuition, methods of payment and refund policies are those in effect at the time of publication. They are subject to change without notice.

Tuition and Fees

Tuition and fee schedules are presented separately for undergraduate day programs, and evening undergraduate, graduate and summer programs. Certain students may be eligible for tuition waivers. Information about eligibility requirements can be found in the section on financial aid.

Undergraduate State-supported Programs

In addition to the non-refundable application fee of $40 for Commonwealth residents, $40 for nonresidents, students must upon acceptance pay a $75 non-refundable tuition deposit that will be credited towards tuition upon matriculation and an orientation fee for $75. Students are billed for all semester charges following completion of registration.

Reinstatement Policy

Payment in full is required by the due date specified on the student bill. Students whose accounts are not paid in full will be subject to cancellation of class enrollment. Reinstatement of course after the add/drop deadline requires the following procedure:

Within 2 weeks of cancellation:
1. Full payment including $75 reinstatement fee paid in Bursar's Office by certified check, money order, or credit card (MasterCard, Visa, Discover, American Express) to receive reinstatement form.
2. Reinstatement form needs to be signed by professors of cancelled courses thereby approving continued attendance in course.
3. Completed form returned to Bursar's Office by student within stated deadline.

Reinstatements requested between the stated deadline and the Academic Withdrawal Date each semester will need approval of the office of Academic Affairs along with the above requirements.

Reinstatements requested after the Academic Withdrawal Date will not be approved.

Payment may be made by check, money order, or credit card (MasterCard, Visa, Discover, American Express). If payment is made by check, the cancelled check will serve as the student’s receipt. If a student remits payment with a check that is returned because of
insufficient funds, he or she must make any future payments to Worcester State in the form of a certified check, bank check, or money order. **A returned check fee of $25 will be imposed for each instance of a personal check in payment of any Worcester State charge that is returned not honored.** Students will incur all costs of collection if Worcester State must place their accounts with a collection agency and with the Commonwealth of Massachusetts for intercept of other State payments (tax refunds, etc.).

**Monthly payment plans** through external agencies are available for families who wish to avoid a large outlay of cash at the beginning of each semester. For further information, contact the Bursar’s Office.

Tuition and fees are subject to change by vote of the Legislature, Department of Higher Education, or Board of Trustees.

**Tuition Surcharge**

Students enrolled in credits that result in course registration in excess of 118% of academic degree program requirements will be assessed a tuition surcharge. These students are required to pay a surcharge of $235 per credit hour in excess of the 118% limit. Transfer and continuing education credits are not included in total credit hour when determining who will be assessed the surcharge.

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**Worcester State University**

**Affordability/Accessibility Disclosure Statement**

**2013 – 2014**

**Annual Department of Higher Education**

**Affordability/Accessibility Disclosure Statement**

One of the benefits of being part of public higher education in Massachusetts is the substantial subsidy students receive to enroll in Worcester State. The annual cost information below is provided about the “average” student as a way of showing the amount of this subsidy.

- **Full Operating Cost (per full-time student)** $16,424
- Less: **State Operating Subsidy** (5,641)
- **Tuition and Mandatory Fees** (based on 30 credit hours) 10,783
- Add: **Average Residence Hall Fees** 10,925
- **Cost of Attendance Estimate** 21,708

**Annual Aid Available to Students**

- Less: **Average Annual Student Financial Aid** $ (9,193)
- **Net Direct Price to Student** 12,515
# Tuition and Fees – Fall 2013/2014

## State Supported Courses

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<tr>
<th>Cost for Full-Time In-State Student</th>
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<th>Per Semester</th>
<th>Per Cr. Hour</th>
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<td>$8,630.00</td>
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### Tuition:
- **MA Resident**: $970.00, $485.00, $40.42
- **Non-Resident**: $7,050.00, $3,525.00, $293.75
- **N.E. Regional**: $1,455.00, $727.50, $60.63

### Fees:
- **General Fee**: $7,034.00, $3,517.00, $293.08
- **Student Activity Fee**: $72.00, $36.00, $3.00
- **Student Health Services Fee**: $110.00, $55.00, $4.58
- **Capital Improvement Fee**: $444.00, $222.00, $16.50
- **Total Fees**: $7,660.00, $3,830.00, $317.16

### Residence Halls:
- **Chandler Village I**: $7,210.00, $3,605.00
- **Chandler Village II**: $7,210.00, $3,605.00
- **Dowden Hall**: $6,920.00, $3,460.00
- **Single (Additional charge)**: $400.00, $200.00
- **Wasylen Hall–single**: $7,980.00, $3,990.00
- **Wasylen Hall–double**: $7,580.00, $3,790.00
- **Residence Activity Fee**: $50.00, $25.00
- **Tech Access Fee**: $270.00, $135.00
- **Resident Parking Fee–garage**: $175.00, $87.00
- **Board**: $3,320.00, $1,660.00
- **Damage Deposit (1st Semester)**: $100.00

### Other:
- **Health Insurance**: $1,498.00, na
- **Orientation Fee (New Students)**: $75.00, na
- **Commuter Meal Plan**: $200.00, $100.00
- **Pamling & Pedestrian Access fee–commuters**: $72.00, $36.00

## Non-State Supported Courses

### Tuition:
- **Undergraduate**: $130.00
- **Graduate**: $150.00

### Fees:
- **Administrative Fee**
  - Undergraduate: $95.00
  - Graduate: $95.00
- **Capital Improvement Fee**: $18.50
- **Parking & Pedestrian Access Fee**: $3.00

### Other:
- **Student Teaching**: $75.00 per course
- **Lab Instruction**: $60.00 per course
- **Art Model Fee**: $25.00 per course
- **Applied Music Fee**: $260.00 per course
- **Application Fee**: $40.00 per item
- **Transcript Fee**: $5.00 per item
- **Field Work Supervision**: $15.00
- **Internship**: $15.00

*Undergraduate Day division courses are offered M-F, 8am - 4pm
** Undergraduate courses in the Division of Continuing Education are offered at 4pm M - F, Sat/Sun and on-line
Room and Board

Students admitted to Worcester State as resident students will be notified by the Director of Admissions. The information will be made available to the Residence Life Staff and subsequent correspondence regarding residence hall assignments should be sent to the Office of Residence Life and Housing. First-year residents, including first-year transfer students, are not permitted to have cars on campus.

Housing is guaranteed ONLY for the specified academic year for which a student signs an occupancy agreement.

Students residing in campus housing are assessed a room fee and a food service fee each semester. All students residing on campus are required to purchase a food service plan for the academic year. Upon acceptance, each resident student must pay a $150 non-refundable room deposit and a $100 damage deposit:

For First-Year and Transfer Students
  1. A separate check for $150 (non-refundable) must be submitted to the Admissions Office. Payment of this deposit and the resident’s receipt of an agreement signed by Worcester State will reserve a space for occupancy; half of the deposit is applied to the room charge for each semester.
  2. The $100 damage deposit will be billed with room rent.

For Returning Residents
  1. A $150 room deposit (non-refundable) along with a signed License Agreement Form must be submitted at the time of room selection for the following year; half of the deposit is applied to the room charge for each semester.
  2. The $100 damage deposit will be billed with room rent.

Food Service Plan: The food service plan is a board plan that permits the user to purchase a specific number of meals per week. Resident first-year students, sophomores, juniors, resident transfer students, and students residing in Dowden Hall are required to be on the full board plan for one academic year. This plan ($1,660 per semester) was designed to meet the needs of those students who plan to eat all their meals on campus. All other residents are required to purchase one of three block plans. The food service is available to meet with students to develop an appropriate food service plan. These plans are also available for commuter students.

Waiting List Procedure: First-year and transfer students may submit to the Admissions Office a $150 room deposit to be considered for room assignment. All other students may submit to the Residence Hall Office a $150 room deposit along with a signed License Agreement Form to be considered for room assignment. Students’ names will be placed on a waiting list until a room becomes available; assignments will be made on a first-come, first-served basis.

Evening Undergraduate, Graduate, and Summer Programs

Tuition for undergraduate courses is currently $130 per semester hour of credit. Tuition for graduate courses is currently $150 per semester hour of credit. Tuition is payable at the time of registration and may be made by bank check, money order, personal check, or credit card (MasterCard, Visa or Discover); cash will not be accepted.

Fees are charged and payable when and as applicable:
Financial Information

General Fee $ 95.00 — per credit
Capital Improvement Fee 18.50 — per credit
Parking & Pedestrian Access Fee 3.00 — per credit
Transcript 5.00 — per copy
Rush Transcript 10.00 — per copy
Laboratory Instruction 60.00 — per course
Nursing Clinical 320.00 — per course
Field Work Supervision/Internships/Teacher Education Practicum 15.00 — per credit hour

Tuition and fee charges are subject to change by the Board of Trustees.

Course Cancellation/Processing of Tuition Refunds
Worcester State reserves the right to cancel any course for which there is insufficient enrollment. Students may transfer to another course by completing appropriate forms in the Registrar’s Office. Processing of tuition refunds takes two to four weeks. Refunds are sent to the student at the address of record.

Student Health Insurance
Undergraduate degree seeking students enrolled in nine (9) or more credits per semester, and graduate degree seeking students enrolled in seven (7) or more credits per semester are required by State regulation to carry individual health insurance coverage. Students without such coverage will be billed a health insurance premium (currently $1,498 per year) for mandatory enrollment. Students who already have appropriate coverage must complete a waiver of insurance at the time of payment (before the first day of classes) in order to waive the mandatory insurance premium. Any student not completing a waiver will be billed for insurance. This charge may not be adjusted, and is non-refundable after the add/drop period.

General Worcester State Refund Policy

Applicability
This refund policy applies to all full- and part-time students enrolled in regularly scheduled courses at Worcester State other than those attending Worcester State for the first time (in the current academic year) and receiving financial aid. This policy applies to all tuition, room, board, fees, and other standard billed charges.

Withdrawal Requirements
All matriculated students, undergraduate and graduate, who wish to withdraw from Worcester State must do so in writing to the Registrar’s Office on the prescribed form. The official date of withdrawal is that on which the completed form is received and stamped by the Registrar.

All withdrawals from courses — rather than withdrawal from Worcester State entirely — must be done in writing to the Registrar’s Office, following the procedures established for that purpose.

Refund Policy
Refunds for withdrawal from Worcester State or withdrawal from courses will be made based on the following schedule if official notice of withdrawal has been received in writing and certified by the Registrar:

1. Prior to the first day of classes, or within the official add/drop period
   • Full refund of all tuitions and fees paid

2. After the official add/drop period
   • No refund of any tuitions or fees paid (unless registration is cancelled by Worcester State)

3. Room Charge (if applicable)
Financial Information

- A full refund of room fees, less the $150 room reservation deposit will be made if intention to withdraw is received by the Director of Housing in writing at least 30 days prior to the beginning of the semester, and Worcester State is able to fill the vacancy thus created.

- A pro-rata refund of room fees will be made if intention to withdraw is received by the Director of Housing in writing prior to November 1st (Fall semester) or April 1st (Spring semester), and Worcester State is able to fill the vacancy thus created.

- The Housing Contract is for the term of one (1) full academic year, unless otherwise specified in writing. To terminate this agreement, for any reason other than terminating his/her status as a student of Worcester State, a student must petition for release with the Director of Residence Life. Such release is not guaranteed, and Worcester State reserves the right to deny requests to terminate or cancel the agreement.

Return of Title IV Funds

Refund Policy for Students Who Receive Federal Financial Aid

Applicability
This refund policy applies only to all full- and part-time students enrolled in regularly scheduled courses at Worcester State who are receiving Federal Title IV Financial Aid. This policy is mandated by federal regulation.

Withdrawal Requirements
All matriculated students, undergraduate and graduate, who wish to withdraw from Worcester State must do so in writing to the Registrar's Office on the prescribed form. The official date of withdrawal for this refund policy is the date that the student begins the official withdrawal process or the date that the student officially notifies Worcester State of his or her intent to withdraw.

Refund Policy
Refund of Federal Title IV Financial Aid will be based on the date a student completely withdraws from Worcester State as described above. During the first 60% of the semester or summer term a student earns Title IV funds in direct proportion to the length of time he or she remained enrolled. A student who remains enrolled beyond the 60% point earns all aid for the semester or summer term.

The percentage of the semester or summer term that a student remains enrolled is derived by dividing the number of days a student remains in attendance by the number of days in a semester. Calendar days are used but breaks of at least five days are excluded from both the numerator and the denominator.

Unearned Federal Title IV aid other than Federal Work-Study must be repaid in the following order:

- Federal Unsubsidized Stafford Loan
- Federal Subsidized Stafford Loan
- Federal Perkins Loan
- Federal Parent Loan
- Federal Pell Grant
- Federal Supplemental Educational Opportunity Grant
- Other Title IV programs

Students must repay 100% of unearned loans according to the terms of their Promissory Note. Only 50% of unearned grants must be repaid within 30 days of withdrawal from Worcester State.
Financial Aid

General Information

All students are encouraged to apply for financial aid to help them meet their educational costs. To receive financial assistance from the University, students must be enrolled in a degree-granting or federally-approved certification program at Worcester State University. Second-degree students are eligible for Federal Loans and graduate students are eligible for Federal Loans and Federal Work Study funds. Applicants must also meet all Federal eligibility requirements and must be in good academic standing.

Financial aid is awarded to students with demonstrated financial need. Need is the difference between the total cost of college attendance (including reasonable costs for room, board, books, transportation, and other personal expenses) and the expected family contribution. Non-need based financial aid is available through several loan programs.

Complete information on financial aid programs, application procedures, and the award process is available in the Worcester State University Financial Aid Guide on the Financial Aid Office website at www.worcester.edu/financialaid. Applicants to the University, current students, and their families should feel free to contact the Financial Aid Office at 508-929-8056.

Application Process

All students applying for financial aid must complete and submit a Free Application for Federal Student Aid (FAFSA) and a Worcester State University Financial Aid Application. Priority for financial aid is given to students who comply with the deadlines listed below. Please note that funding from the Federal Pell Grant and Federal Direct Loan programs is available to all late applicants who qualify.

All applicants are encouraged to apply for any scholarship assistance awarded by the state in which they legally reside. Students are urged to contact the appropriate agency in their home state for further information.

Financial aid is not automatically renewable. A new application for financial aid must be submitted for each academic year.
Financial Aid

Financial Aid Application Deadlines

March 1
- priority date for filing the Free Application for Federal Student Aid (FAFSA). All students who wish to be considered for financial aid, must file the FAFSA. Late applications will be considered subject to the availability of funds.

May 1
- deadline for applying for the MASSGrant.
- deadline for on-time consideration for financial aid for students entering in the upcoming fall

November 1
- deadline for on-time consideration for financial aid for students entering in the upcoming spring

Sources of Financial Aid

Worcester State University has numerous financial aid programs available to assist students in meeting college costs. Funding for these programs comes from federal, state, institutional and private sources. Types of programs include grants, scholarships, waivers, loans, and employment. Please go to www.studentaid.ed.gov for more information on federal aid and www.osfa.mass.edu for more information on state aid.

Federal Grants and Benefits

Federal Pell Grant
The Federal Pell Grant is available to undergraduate students enrolled in a degree program who do not already have a bachelor’s degree. For the 2013/2014 academic year, Pell Grants range from $596 to $5,645. All eligible students will receive the Federal Pell Grant amount to which they are entitled.

Federal Supplemental Educational Opportunity Grant
The Federal Supplemental Educational Opportunity Grant (FSEOG) is a federal grant administered by the University. These Grants are limited to undergraduate students who do not already have a bachelor’s degree. Priority is given to students with exceptional need and to Pell Grant recipients. SEOG awards are determined by the Financial Aid Office.

Veterans Benefits
The Veterans Administration has approved Worcester State University for the purpose of providing Veteran’s Educational Benefits to veterans pursuing undergraduate and graduate study. Massachusetts veterans entitled to educational benefits must provide the Registrar’s Office with a copy of their Form DD-214. Upon receipt of this certificate and the veteran’s application, the University will prepare a notice of enrollment and notify the Veterans Administration to determine eligibility for, and initiate payments to the student. Questions concerning veteran’s benefits should be directed to the Office of the Registrar.
Financial Aid

Grants and Waivers for Massachusetts Residents

**MassGrant Program**

The MASSGrant Program is administered and awards are made by the Office of Student Financial Assistance under the MA Department of Higher Education. Scholarship eligibility is verified by the Financial Aid Office. For the 2013-2014 academic year, scholarship awards at Worcester State University range from $300 to $900. Application is made by completing the FAFSA. Massachusetts residents applying for financial aid who will enroll full-time must apply for MASSGrant by May 1. MASSGrant eligibility is limited to eight semesters.

**Worcester State University Need-Based Tuition Waiver and Massachusetts Cash Grant Program**

Full and partial need-based tuition waivers are awarded to selected students who demonstrate financial need and who are:

- undergraduate students
- in good academic standing
- legal residents of Massachusetts.

Waivers may not exceed a semester's tuition charge and other waivers and/or tuition remissions for which a student is eligible will be deducted from the tuition charged before the need-based tuition waiver amount is determined. Award amounts are determined by the Financial Aid Office.

Massachusetts Cash Grant is awarded based on need and cannot exceed tuition and fees. Award amounts are determined by the Financial Aid Office.

**Categorical Tuition Waivers**

Worcester State University students may be considered for tuition waivers based on the following designations (contact the Bursar about providing documentation of eligibility):

**Veterans Tuition Waiver:** As provided in M.G.L. Chapter 4, Section 7(43) including: Spanish War, World War I, World War II, Korean, Vietnam, Lebanese Peace Keeping Force, Granada Rescue Mission, the Panamanian Intervention Force, or the Persian Gulf.

For purposes of tuition waivers, the term "veteran" shall also include any individual who served in the Army, Navy, Marine Corps, Coast Guard or Air Force of the United States for not less than ninety days at least one of which was served in the theatre of operation for the Somalian mission known as "Operation Restore Hope" and whose last discharge or release was under honorable conditions.

**Native American Tuition Waiver:** Available and certified by the Bureau of Indian Affairs.

**Senior Citizen Tuition Waiver:** Available for persons over the age of 60.

**Armed Forces Tuition Waiver:** Available for an active member of the Armed Forces including Army, Navy, Air Force, or Coast Guard stationed and residing in Massachusetts.

**Clients of the Massachusetts Rehabilitation Commission or Commission for the Blind:** Available as certified by the respective commission.

**John and Abigail Adams Scholarship Program:** Awards non-need-based state-supported undergraduate tuition waivers to students who are awarded John and Abigail Adams Scholarship by the Department of Education. Completion of a FAFSA, continuous full-time enrollment at a state college or university, and a 3.0 are required.
Tuition Advantage Program (TAP): Available to students who have completed a Joint Admissions academic program at a public community college and have maintained a 3.0 grade point average at the time of graduation. The award equals the difference between tuition at Worcester State University and tuition at the community college.

Department of Social Services Adopted Children Tuition Waiver: This tuition waiver encompasses 100% of tuition for state-supported courses at all of the Massachusetts public institutions of higher education, excluding graduate courses. Eligible students include all students in the custody of the Department of Social Services adopted by eligible Massachusetts' residents through the Department of Social Services. Students must be twenty-four (24) or under. The Department of Social Services will provide certification of eligibility for the waiver; please contact them for further information.

Department of Social Services Foster Care Tuition Waiver: This tuition waiver encompasses 100% of tuition for state-supported courses at all of the Massachusetts public institutions of higher education, excluding graduate course. Eligible students include all students in the custody of the Department of Social Services placed in foster care with eligible Massachusetts’ residents through the Department of Social Services. Students must be twenty-four (24) or under. The Department of Social Services will provide certification of eligibility for the waiver; please contact them for further information.

Massachusetts National Guard Scholarships: Members of the Massachusetts Army or Air National Guard Office Recruitment Program are eligible for 100% tuition remission. Eligibility must be renewed after each 30 credits attempted. Contact the Massachusetts National Guard or the Registrar’s Office to speak to the Veteran’s Representative for more information.

Police Officer/Fire Fighter Waiver: Tuition waivers are available to police officers or fire fighters of a city or town of the Commonwealth of Massachusetts for full-time attendance as a matriculated student when proper certificates and credentials are submitted to the Bursar’s Office.

State Employees’ Tuition Remission: State Employees and their dependents that elect to take courses at Worcester State University may have some or all of their tuition waived. Documentation of eligibility should be submitted to the Bursar’s Office. Eligible persons should contact the Personnel Office at their place of employment for further details.

Army/Navy/Air Force ROTC Scholarship Programs: The ROTC Scholarship is designed to offer financial assistance to outstanding students in the four year programs. Normally, the award is made prior to the student’s first year of college; however, a student may enter the program in their first year. Recipients are required to serve on active duty in the branch of the Service they have elected for a period of four years, and then in the active reserve. Contact the ROTC Office at the College of the Holy Cross or Worcester Polytechnic Institute for further information.
Student and Parent Loans

Federal Direct Loans

The Federal Direct Loan Program is a federal loan program designed to help a student pay expenses at institutions of post-secondary education. All Federal Direct Loan applicants must demonstrate financial need in order to qualify for a subsidized loan. A student with no need or partial need may be eligible for an unsubsidized loan. A Free Application for Federal Student Aid (FAFSA) must be completed before a Federal Subsidized and/or Unsubsidized Direct Loan can be processed. The interest rate for Federal Direct Loans is variable but will not exceed 8.25%. The interest rate is adjusted each year on July 1. The repayment period for Federal Direct Loans begins six months after the student/borrower is graduated, ceases to be at least a half-time student or withdraws from school.

- **Dependent/Independent undergraduates** can receive subsidized Direct Loans up to: 1) Students who have completed 1-29 credit hours of study are eligible for $3,500, 2) Students who have completed 30-59 credit hours of study are eligible for $4,500, 3) Students who have completed 60 or more credit hours of study are eligible for $5,500. Also, all students are eligible for up to $2,000 in additional unsubsidized Direct Loans.

- **Independent students** and dependent students whose parents are unable to obtain a PLUS loan can borrow additional amounts from the Unsubsidized Federal Direct Loan Program, in the amount of $4,000 for their first and second years of study and $5,000 for their third and fourth year.

- **Graduate students** can borrow up to $20,500 from the Unsubsidized Federal Direct Loan Program if their cost of education warrants these amounts.

Direct Loan borrowers should go to www.studentloans.gov for specific information on repayment, deferment, cancellation and default provisions.

Federal Perkins Loans

The Federal Perkins Loan Program is administered by the University and offers long term, low-interest loans to undergraduate and graduate students. Federal Perkins Loan awards are determined by the Financial Aid Office.

No interest is charged during periods of at least half-time enrollment and during the grace period. The interest rate is 5% per year during repayment periods. Loan repayment begins six months after the borrower leaves school or drops below half-time status (6 credits at Worcester State University). Minimum repayment is $120 per quarter. Loan repayment may not exceed 10 years.

Federal Parent Loan to Undergraduate students (PLUS)

This loan enables parents of dependent undergraduates to borrow for their dependent’s education. A FAFSA is required to receive a Federal Plus Loan. Repayment of this loan begins within 60 days of the date that the loan is disbursed. However, parents may apply for a deferment through their servicer. The interest rate is variable, adjusted annually, not to exceed 9%. Parents may borrow up to the cost of attendance annually, less any financial aid awarded to the student. Parents can apply for PLUS loans and get specific information on repayment, deferment, cancellation and default provisions at www.studentloan.gov.

Private Education Loans

Private education loans may be available to assist students who have received the maximum financial aid award(s) allowed through grants, workstudy, and loans but still have remaining University expenses.

You may search online for more information regarding private education options.
Student Employment

Federal College Work-Study Program

The Federal Work-Study Program (FWSP) is a need-based program that provides federally subsidized employment opportunities on campus for enrolled students. A student’s financial aid award letter indicates the FWS award and maximum earnings limit, typically $1,500, depending on availability of funds and individual need. Students are paid only for hours actually worked. The FWSP wage rate is variable depending on placement. FWSP earnings are not applied directly to the student’s tuition account without the student’s written consent. These wages are paid directly to the student. Students employed under the FWSP Program are not eligible for unemployment compensation benefits or worker’s compensation for on-the-job accidents. Students are encouraged to participate in employment that complements and reinforces their educational goals.

Other On-Campus Employment

Some departments on campus—including the Student Center, the bookstore, the campus food service contractor, the Learning Resource Center, and the Residence Life Office—offer part-time jobs to students. Contact the department(s) for information on possible openings and application procedures. Students are encouraged to see if they qualify for FWSP funding before applying for these jobs.

Tuition Payment Plan

Worcester State University participates in a tuition payment plan offered through Sallie Mae. The plan offers the family a low-cost, flexible method of paying for educational expenses by prorating these costs over 10 months. This is not a loan program. For more information visit www.tuitionpay.salliemae.com or call 800-635-0120
Worcester State University Merit Scholarships for Entering Students

Worcester State University recognizes superior academic achievement by awarding a number of academic scholarships to incoming first year students. Merit Scholarships can provide up to full in-state tuition and fees and are awarded for a full academic year. They are renewable for full-time students who maintain a specific GPA. Applying for admission to WSU automatically constitutes consideration for these scholarships. No additional application is required. A limited number of merit scholarships are available and students must meet minimum academic standards in order to be eligible. Meeting minimum academic standards does not guarantee the awarding of a merit scholarship. Additional factors beyond a student's GPA and SAT scores are considered in the selection process.

Tsongas Scholarship

Awarded each year to Massachusetts residents for full in-state day school tuition and fees. They must have a recalculated GPA of a 3.75 (using DHE methodology) and a combined SAT (CR&M) of 1200. The scholarship is renewable for a maximum of four contiguous years to recipients who maintain a minimum cumulative GPA of 3.3.

Presidential Scholarship

Awarded each year for full in-state day school tuition and fees. The student must have a recalculated GPA of 3.75 or above (using DHE methodology) and a combined SAT (CR&M) of 1200 (sub-score minimums of 500). The scholarship is renewable for a maximum of four contiguous years to recipients who maintain a minimum cumulative GPA of 3.3.

Merit Scholarship

Awarded each year for $3,000 each. The student must have a recalculated GPA of 3.5 or above (using DHE methodology) and a combined SAT (CR&M) of 1150 (sub-score minimums of 500). The scholarship is renewable for a maximum of four contiguous years to recipients who maintain a minimum cumulative GPA of 3.0.

Achievement Scholarship

Awarded each year for $1,500 each. The student must have a recalculated GPA of 3.2 or above (using DHE methodology) and a combined SAT (CR&M) of 1100 (sub-score minimums of 500). The scholarship is renewable for a maximum of four contiguous years to recipients who maintain a minimum cumulative GPA of 3.0.

Access Scholarship

Awarded each year to Massachusetts residents of under-represented populations including African American, Latino/a, Asian, and Native American applicants and first-generation, low-income applicants for $1000 each. The student must have a recalculated GPA of 2.5 (using DHE methodology) and a combined SAT (CR&M) of 920 with sub-score minimums of 460. The scholarship is renewable for a maximum four contiguous years provided recipients maintain a specific minimum cumulative GPA requirement.
Worcester State University Academic Scholarships for Returning Students

Academic scholarships provided by generous donors are available to undergraduate students at Worcester State University who meet the eligibility criteria. These scholarships are available to a wide variety of class years, majors, backgrounds, and interests, as well as varying levels of academic success and financial need. Applications are accepted annually between February 1 and April 1. Students are required to apply online. Details are available online at www.worcester.edu/scholarships.
# Academic Calendar

## FALL 2013 ACADEMIC CALENDAR

### September
- **3** Pre-College Conference
- **4** Classes begin: day, evening, graduate
- **11** Last day to add day courses (state-supported)
- **18** Last day to drop day courses (state-supported)
- **18** Last day to add/drop evening/graduate courses (non state-supported)

### October
- **8** Last day to makeup Incomplete grades from Spring/Summer 2013
- **14** Columbus Day: NO CLASSES
- **16** Last day to declare/change major or minor
- **21** Failure warnings due in the Registrar’s Office
- **25** Failure warnings issued to students
- **10/28-11/8** Advising for pre-registration

### November
- **1** Last day to withdraw from courses/school
- **11** Veterans’ Day NO CLASSES
- **12** Last day to elect Pass/Fail option
- **12-26** Pre-registration for Spring 2014
- **27-30** Thanksgiving Recess

### December
- **2-6** Student evaluation of the faculty
- **9** All classes end
- **10** Reading Day
- **11-19** Final Exams-day classes
- **20, 23** Make-up days for exams postponed due to inclement weather
- **31** Semester ends

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## EXAMINATION SCHEDULE: FALL 2013

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### SPRING 2014 ACADEMIC CALENDAR

**January**
- 20: Martin Luther King Day: NO CLASSES
- 21: Classes begin: day, evening, graduate
- 28: Last day to add day courses (state-supported)

**February**
- 4: Last day to drop day courses (state-supported)
- 4: Last day to add/drop evening, graduate courses (non state-supported)
- 17: President’s Day: NO CLASSES
- 25: Last day to make up Incompletes from Fall 2013

**March**
- 12: Last day to declare/change major or minor
- 17: Failure warning due in Registrar’s Office
- 21: Failure warnings issued to students

**April**
- 7-23: Pre-registration for Fall 2014
- 9: Last day to elect Pass/Fail status
- 21: Patriot’s Day: NO CLASSES
- 4/28-5/2: Student evaluation of faculty

**May**
- 6: All classes end
- 7: Reading Day
- 8-16: Final Exams-day classes
- 17: Commencement and end of semester

### EXAMINATION SCHEDULE SPRING 2014

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OFFICE OF ACADEMIC AFFAIRS

Dr. Charles Cullum
Provost and Vice President for Academic Affairs

Dr. Patricia A. Marshall
Associate Vice President for Academic Affairs

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Assistant Vice President for Assessment and Planning

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Director of Academic Affairs Administrative Support

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Director of Retention

TBD
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Oversight of the School of Humanities and Social Sciences

Dr. Stephanie M. Chalupka
Associate Dean of Nursing

Dr. Raynold Lewis
Associate Dean of Education, School of Education, Health and Natural Sciences
Global Studies
Global Studies Concentration

Director
Josna E. Rege, Professor of English, Director of Global Studies
B.A., Harvard University; M.A., Ph.D., University of Massachusetts, Amherst

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B.A., St. John's College; M.A., M.A.T., Ph.D., Boston University

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B.Sc., University of Aberdeen; Ph.D., Worcester Polytechnic Institute

Jacqueline Brennan, Assistant Professor
B.S., University of Connecticut; M.A., Assumption College; M.S., Boston University

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B.A., Illinois Wesleyan University; M.A., Southern Illinois University; Ph.D., Kent State University

Madeline Otis Campbell, Assistant Professor
B.A., M.A., Brown University; M.A., Ph.D., University of California, Davis

Guillermina Elissondo, Professor of Spanish and World Languages
B.A., Universidad Católica de Mar del Plata, Argentina; M.A., Michigan State University; Ph.D., University of North Carolina – Greensboro

Anne M. Falke, Professor of Chemistry
B.A., University of Rhode Island; Ph.D., University of New Hampshire

Sue Fan Foo, Associate Professor of Education
M.Ed., Ed.D., University of Cincinnati

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B.A., Escola Superior de Meios de Comunicacao Social, Lisbon; M.A., Ph.D., University of Massachusetts, Amherst

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B.A., University of North Carolina-Asheville; M.A., Ph.D., University of Texas-Austin

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B.A., M.A., Ph.D., University of California, Santa Barbara

Stephen Healy, Associate Professor of Geography
B.A., Hampshire College; M.S., Ph.D., University of Massachusetts

Judith Jeon-Chapman, Professor of French, Spanish and World Languages
B.A., College of St. Benedict; M.A., Ph.D. University of Washington, Seattle

Matthew Johnsen, Associate Professor of Sociology
A.B., Dartmouth College, Hanover, NH; M.S., New Hampshire College, Manchester; Ph.D., North Carolina State University, Raleigh

Margaret E. Kerr, Professor of Chemistry
B.S., University of Maine; Ph.D., Wesleyan University

Harry Lo, Assistant Professor of Business Administration and Economics
Diploma in Economics, New Asia College; M.A., Ph.D., University of Georgia

Augustus N. Luparelli, Professor of Business Administration
B.A., Fitchburg State College; M.A., Worcester State College; Ph.D., University of Connecticut

Fortunata S. Makene, Assistant Professor of Sociology
B.A., University of Dar Es Salaam, Tanzania; M.S., St. Cloud State University, Minnesota; Ph.D., University of Minnesota, Twin Cities

JoAnne Maynard, Associate Professor of Health Sciences
B.S., Fitchburg State College; M.A., Emerson College; M.P.A., Harvard University; M.P.H., University of Massachusetts; Ph.D., Brandeis University

José J. Mendoza, Assistant Professor
B.A., University of California at San Diego; M.A., San Francisco State University; Ph.D., University of Oregon

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B.A., University of Montana; Ph.D., Boston University

Juan Orbe, Professor of Spanish and World Languages
B.A., Universidad Nacional de La Plata, Argentina; M.A., Ph.D., Michigan State University

Bonnie Orcutt, Professor of Economics
B.S., Worcester State College; M.A., Ph.D., Clark University

Rodney Oudan, Associate Professor of Business Administration
CIM, Chartered Institute of Marketing; PGCert, University of the West Indies, (UWI); M.M., Cambridge College; D.B.A., Nova Southeastern University

Margarita Perez, Professor of Education
B.A., Mount Holyoke; M.A., Ed.D., Teachers College, Columbia University

Ana Pérez-Manrique, Associate Professor of Spanish and World Languages
B.A., Universidad de Málaga, Spain; M.A., University of South Carolina; Ph.D., Florida State University

Maureen E. Power, Professor of Urban Studies
A.B., Emmanuel College; M.S.W., Ph.D., Brandeis University
Global Studies

Global Studies is an interdisciplinary academic area that draws from a wide range of disciplines in the Humanities, the Sciences and the Arts to examine global processes and events and their effects at a local level. For the last two decades the world has been undergoing a sustained reorganization along economic, social, political, cultural, technological and environmental lines that cut across national boundaries. We have also experienced an increased global connectivity, integration and interdependence, and witnessed the emergence of planet wide issues such as climate change, poverty, new technologies and entrenched wars. In response to these real world events, Global Studies has emerged as a dynamic interdisciplinary academic field to study the forces shaping these complex processes.

The mission of the Global Studies concentration is to prepare students to understand international affairs and provide them with a solid background for decision-making in an increasingly interdependent world community. Students are encouraged to connect their knowledge of a particular region of the world to larger transnational processes and to examine their identities in a global frame. The interdisciplinary concentration in Global Studies will give students added skills to function in a global market and the depth of understanding necessary to be responsible citizens of planet Earth.

Requirements for a Concentration in Global Studies: 15 credits

Students are required to take a total of five Global Studies courses starting with GL 150 Introduction to Global Studies (Required) plus four electives chosen from across various disciplines. One of the elective courses has to be at a 200 level and another at either a 300 or 400 level. No more than two courses can be counted from the same department. Students are strongly encouraged to elect a world language course other than English and/or a study abroad course that meets the Global Studies criteria.
Global Studies Courses

*For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

Courses marked with an asterisk (*) are approved for the concentration only during those semesters when they are listed under Global Studies in the Course Schedule

GL 150 Introduction to Global Studies
This course analyzes the forces reorganizing the planet along economic, social, political, cultural, technological and environmental lines across national boundaries.
Offered every year, 3 credits.

GL/AB 210 Intermediate Arabic I
LASC—Thought, Language and Culture
Introduction in advanced rules of Arabic grammar and verb system, and in advanced writing and reading.
Offered every year. 3 credits.

*GL/AR 112 World Art Survey I
LASC—Creative Arts; Thoughts, Language and Culture
Surveys the world's major cultural achievements in the visual arts from the prehistoric period to ca1400.
Offered every year. 3 credits.

*GL/AR 113 World Art Survey II
LASC—Creative Arts; Thoughts, Language and Culture
Major cultural achievements in the visual arts from ca1400 to the early twentieth century.
Offered every year. 3 credits.

GL/BA 494 International Marketing
Prerequisites: EC 120, BA 318
With the rapid and continuous changes in a global environment we will examine the complex issues in international marketing faced by today's manager.
Offered every year. 3 credits.

GL/BI 112 Diseases and Mankind
Diseases of ancient and modern man; the impact on history, religion, science, art and philosophy.
Offered every year. 3 credits.

GL/BI 114 Plants and Human Affairs
LASC—Global Perspectives; Natural Systems and Processes
Man's dependence upon plants and their influence on civilization and its art, religions, literature, folklore, medicine, and human behavior.
Offered every 2 years. 3 credits.

*GL/BI 199 Selected Topics in Biological Sciences
Each topic is a lecture and/or laboratory course in a selected area of the biological sciences presented by a departmental instructor. Topics will be announced in advance.
Offered every year. 1-4 credits.

GL/BI 380 Biodiversity and Conservation Biology
Prerequisites: BI 105 and 106 or BI 140, BI 141
A theoretical and quantitative approach to species, genetic, ecosystem and community diversity in the context of modern conservation biology principles.
Offered every 3 years. 4 credits

*GL/BA 440 International Business
Prerequisites: BA 316, BA 318
Focuses upon the international dimensions of management, finance, and marketing as they impact corporate policy and strategy.
Offered every 2 years. 3 credits.
Global Studies

*GL/CH 191 Selected Topics
Paper or Plastic? A lecture or laboratory course designed to introduce a selected topic(s) of interest. 
Offered every 3 years. 1-4 credits.

GL/CH 320 Environmental Chemistry
Prerequisites: CH 120, CH 121 and CH 111 or CH 201
Chemistry of the atmosphere, soil, and natural water systems, air and water pollution water treatment, hazardous wastes and pollution control.
Offered every 2 years. 3 credits.

GL/CM 270 Media and Globalization
This course examines the emergence of global media and its impact on the development of a global world.
Offered every 2 years. 3 credits.

*GL/CM 350 Intercultural Communication
Prerequisite: CM 100
Introductory communication theory and practice across cultural groups defined by race, ethnicity, gender, religion, age, nationality, politics and economics.
Offered every 2 years. 3 credits.

GL/CM 390 Alternative Communication
Prerequisite: CM 103
This course introduces students to the theory and practice of alternative communication and its relationship with culture and politics.
Offered every 3 years. 3 credits.

*GL/CM 410 Seminar: Topics in Communication
Prerequisites: Permission of Instructor
Amazon Expedition; Oil, and Indigenous Survival. This course engages students in advanced examination of emerging communication topics and of topics in a faculty’s area of expertise.
Offered every 2 years. 3 credits.

*GL/EC 206 Urban Economics
Prerequisites: EC 110; EC 120
The theory and policy of the growth and development of metropolitan areas; some of the policy-related problems discussed are poverty, residential and commercial land use, and traffic congestion.
Offered every 2 years. 3 credits.

GL/EC 210 Current Economic Issues
Prerequisites: EC 110; EC 120
This course is designed to connect economic knowledge and theory acquired at the introductory level to current economic issues and policy. National and international topics of importance will be considered. For example, pollution, trends in productivity, profitability and distribution, debt and deficits, patterns of investment, trade, and globalization and the economic issues of race, gender and poverty may be covered.
Offered every year. 3 credits.

GL/EC 301 Economic Development
Prerequisites: EC 110, EC 120
A survey of contemporary economic theories concerning less developed countries; social, cultural, and political forces shaping the development of such countries are also investigated.
Offered every 3 years. 3 credits

*GL/EC 307 International Finance
Prerequisites: EC 110, EC 120
Study of how international trade and investment is financed in a world of floating, fixed and managed exchange rate systems.
Offered every 2 years. 3 credits.

*GL/EC 308 International Trade
Prerequisites: EC 110, EC 120
Reasons why nations gain by spatial specialization and exchange with other countries. Analysis of the mechanism by which international equilibrium is restored. Study of trade and foreign exchange policies.
Offered every 2 years. 3 credits.
GL/EN 132 World Literature: Survey of Asian, African and Latin American Literature
LASC—Global Perspectives; Thought, Language and Culture; Diversity Across the Curriculum
Representative poems, stories, plays, both ancient and modern, from Asia, Africa, and Latin America.
Offered every year. 3 credits.

GL/EN 167 Literature and Human Rights
LASC—Global Perspectives; Diversity Across the Curriculum
An analysis of international creative writing dealing with the subject of human rights. Resource persons from different fields will be utilized.
Offered every 3 years. 3 credits.

*GL/EN 169 Ethnic Literature in the U.S.
LASC—Thought, Language and Culture; United States and Its Role in the World; Diversity Across the Curriculum
Offered every year. 3 credits.

GL/EN 240 Survey of Postcolonial and Transcultural Literature
LASC—Global Perspectives
Prerequisite: EN 102
Introduction to literatures in English from formerly colonized countries in Africa, Asia, and the Caribbean, and from the postcolonial diaspora.
Offered every year. 3 credits.

GL/EN 348 Postcolonial Women's Writing
LASC—Global Perspectives
Prerequisite: EN 102
Writing by women from colonized and formerly colonized countries on local and global issues shaping women's lives and creative expression.
Offered every 3 years. 3 credits.

*GL/EN 450 Special Topics in English
Prerequisite: EN 102
Specific content will vary in response to particular student and faculty interests.
Offered every year. 3 credits.

*GL/FR 401 Seminar in French Studies
Prerequisite: For advanced students
Francophone Literature. Special topics in French language, literature or civilization.
Offered every 3 years. 3 credits.

GL/GE 102 Human Geography
LASC—Global Perspectives
Introduction to human geography, emphasizing globalization, human-environment relations and spatial patterns of population, development, economics, politics, urbanization and culture.
Offered every year. 3 credits.

GL/GE 110 World Regional Geography I
LASC—Global Perspectives; Human Behavior and Social Processes
Analysis of the physical, cultural and economic regions of Eurasia.
Offered every year. 3 credits.

GL/GE 111 World Regional Geography II
LASC—Global Perspectives; Human Behavior and Social Processes
Analysis of the physical, cultural and economic regions of Africa, Oceania and the Americas.
Offered every year. 3 credits.

GL/GE 255 Geography of Africa
Prerequisite: ONE of the following: GE/GL 102, GE/GL 111, GL 150, SO 100, SO 110, UR 101 or permission of instructor
Analysis of the physical and human geography of Africa.
Offered every year. 3 credits.
Global Studies

GL/GE 258 Global Environmental Change
Introduction to the science, political economy and ethics of global environmental change.
**Offered every year. 3 credits**

GL/GE 285 Sustainable Communities
LASC—Human Behavior and Social Processes; United States and Its Role in the World
Prerequisite: ONE of the following: GE/GL 102, GL 150, EC 110, EC 120 or permission of instructor
Exploration of changes in U.S. and global economic landscape, 1970 to present. Approaches to sustainable economic development.
**Offered every year. 3 credits.**

GL/GE 308 Environment and Development
Prerequisite: GE 258 or permission of instructor
The global ecology of rich and poor. Environmental implications of poverty, economic development, mass consumption, globalization and demographic change.
**Offered every 3 years. 3 credits.**

GL/HE 390 Environmental Health
Prerequisite: HE 100
Examination of the issues affecting the environment and their impact on individual and global health.
**Offered every year. 3 credits.**

GL/HI 103 World Civilization I
LASC—Global Perspectives; Thought, Language and Culture
Surveys economic, social, political, and intellectual development of world civilizations and their inter-relationship from ancient times to 1500
**Offered every year. 3 credits.**

GL/HI 104 World Civilization II
LASC—Global Perspectives; Thought, Language and Culture
Surveys economic, social, political, and intellectual development of world civilizations and their inter-relationship from 1500 to 1914
**Offered every year. 3 credits.**

GL/HI 105 World Civilization III
LASC—Global Perspectives; Thought, Language and Culture
Surveys economic, social, political, and intellectual development of world civilizations and their inter-relationship from 1914 to the present.
**Offered every year. 3 credits.**

*GL/HI 112 US History II
LASC—Constitutions; United States and Its Role in the World
From the Civil War era to the present. Topics include politics, society, economy, and culture in modern America.
**Offered every year. 3 credits.**

GL/HI 191 Special Topics in History
History of Child Labor. This introductory level course will cover topics in history which are of special interest to first-year students.
**Offered every year. 3 credits.**

GL/HI/PO 201 International Relations I
LASC—Global Perspectives; United States and Its Role in the World; Writing Across the Curriculum
Prerequisite: PO 101 or HI 103 or HI 104
Theory and practice of international security (realism and internationalism) and international political economy (liberalism and protectionism) in their historical context.
**Offered every year. 3 credits.**

GL/HI/PO 202 International Relations II
LASC—Global Perspectives; United States and Its Role in the World; Writing Across the Curriculum
Prerequisite: PO 101 or HI 103 or HI 104
The promise and problems of globalization (spread of free market capitalism and political democracy).
**Offered every year. 3 credits.**
GL/HI 205 Native America
This survey covers the broad sweep of Native American history and focuses on the encounter between American and European civilizations and how Native culture has adapted through the centuries.
Offered every 2 years. 3 credits.

GL/HI 208 American Immigrant History
Survey of immigration. Topics such as old-world background, impact on US, nativism, cultural pluralism, religion, mobility, family and politics.
Offered every year. 3 credits.

GL/HI 214 Modern Latin America
The people of Latin America from independence to the present, focusing on race, sex and power.
Offered every year. 3 credits.

*GL/HI 216 Economic History of the US
An introduction to United States economic development; particular attention will be paid to industrialization and the labor force.
Offered every year. 3 credits

GL/HI 221 African-American History I
The people of African descent from the emergence of the slave trade to the Civil War, focusing on race, gender, and power.
Offered every year. 3 credits.

GL/HI 230 Nicaragua, the US and the World
LASC—United States and Its Role in the World; Diversity Across the Curriculum
The course will examine the impact of globalization and imperialism on the lives of Nicaraguans at home and in their diasporic communities.
Offered every year. 3 credits.

GL/HI 249 US Labor History I
The relationship between workers, their employers, and the surrounding community between 1815 and World War II.
Offered every 2 years. 3 credits.

GL/HI 261 Middle East History I
LASC—Global Perspectives; Thought, Language and Culture
The rise and expansion of Islam: the Caliphate, Muslim religion, civilization, and its impact on the West, decline of medieval Islam.
Offered every 2 years. 3 credits.

GL/HI 262 Middle East History II
LASC—Global Perspectives; Thought, Language and Culture; Writing Across the Curriculum
The Ottoman Empire: expansion, institutions, impact on Europe, decline of the Empire.
Offered every 2 years. 3 credits.

GL/HI 263 US - Middle East Relations
Prerequisite: HI 103 or HI 104 or HI 111 or HI 112
Course will discuss the influence the Middle East has had on US policy since US independence to the present.
Offered every 2 years. 3 credits.

*GL/HI 271 Women and Work in Historical Perspective
Prerequisite: HI 103 or HI 104 or HI 111 or HI 112
This course undertakes to examine women’s work conditions and the opposition to its continuation in Europe and America, 16th-19th centuries.
Offered every 2 years. 3 credits

*GL/HI 274 Sex, Marriage and the Family in Historical Perspective
LASC—Thought, Language and Culture; Diversity Across the Curriculum
Prerequisite: HI 103 or HI 104 or HI 111 or HI 112
This course will undertake a study of courtship, marriage and family life-cycle patterns in England and America during the 19th century.
Offered every 2 years. 3 credits.
Global Studies

GL/HI/PO 323 Empire
Prerequisite: HI 103 and HI 104
Theories and models of colonization, the reaction of colonized peoples, and the way historians analyze imperialism from 1400 to 1920’s.
Offered every three years. 3 credits.

GL/HI/PO 330 Politics of the Middle East I
Prerequisite: HI 104 or HI 105 or HI 111 or HI 112 or PO 101 or HI 261 or HI 314
Discusses governments and politics of eastern Arab countries, Turkey, Iran, and Israel. International rivalries in the area are also discussed.
Offered every year. 3 credits.

GL/HI 333 Women in Latin America
Prerequisite: HI 233 or equivalent
Examines the roles of women in diverse societies including Mexico, Brazil and Caribbean nations. Emphasis on the modern period.
Offered every 3 years. 3 credits.

GL/HI 350 Native American Women
Prerequisite: HI 205 or equivalent
Examines Indian women from the time of European contact to the modern era. Emphasizes culture, community and arenas of power.
Offered every 3 years. 3 credits.

*GL/HI 450 Special Topics in History
Selected areas of interest to students and instructors.
Offered every year. 3 credits.

GL/MU 140 World Music
LASC—Creative Arts
An introduction to music of various cultures and continents including music of Africa, Asia, Latin America, The Middle East and India.
Offered every year. 3 credits.

GL/OT 411 International Service Learning
Instruction in occupational therapy methods with an experiential component providing intervention to an underserved population in a foreign country.
Offered every year. 2 credits.

GL/PH 150 Women in Western Ideas
Investigates the concept of woman from ancient Greece to the present.
Offered every 2 year. 3 credits.

GL/PH 170 Ancient Chinese Philosophies in a Cultural Perspective
LASC—Global Perspectives; Thought, Language and Culture
Ancient Chinese philosophies of Taoism, Confucianism, Buddhism, and neo-Confucianism in the context of contemporary developments in China; Communism, Capitalism, and Western influences considered.
Offered every year. 3 credits.

GL/PH 172 Asian Philosophies and Contemporary Perspectives
Studies the philosophies of India, China, Japan, and the vitality of ancient traditions in a time of cultural change: Buddhism, Taoism, Confucianism, Jainism, Hinduism and Islam.
Offered every year. 3 credits.

GL/PH 177 Latin American Philosophies
LASC—United States and Its Role in the World; Diversity Across the Curriculum; Writing Across the Curriculum
Will analyze the political, economic, social, and cultural impact of the interactions between and among the governments and people of the US and Latin America.
Offered every year. 3 credits.

GL/PH 230 Religious Philosophies, East and West
An examination of the major religious systems, both oriental and occidental.
Offered every 2 years. 3 credits.
GL/PH 241 Genocide and Human Rights
LASC—Global Perspectives; United States and Its Role in the World
This course treats the ethical, political, and other dimensions of systematic mass violence through case studies and general theoretical analyses.
Offered every 3 years. 3 credits.

GL/PH 250 Global Feminism
LASC—Global Perspectives; Thought, Language and Culture
Investigates the theoretical underpinnings of women's movements for equal rights around the globe.
Offered every 2 years. 3 credits.

GL/PH 251 Mass Violence Against Women
LASC—Global Perspectives; United States and Its Role in the World
A philosophy-based, interdisciplinary course examining historical and contemporary mass violence against women. Typically offered at least every three years.

*GL/PH 290 Advanced Special Topics in Philosophy
A treatment of current or special topics for students beyond the introductory level.
Offered every year. 3 credits.

GL/SO 299 Sustainable Communities
LASC—Human Behavior and Social Processes; United States and Its Role in the World
Prerequisite: ONE of the following: GE/GL 102, GL 150, EC 110, EC 120 or permission of instructor
Exploration of changes in U.S. and global economic landscape, 1970 to present. Approaches to sustainable economic development.
Offered every year. 3 credits.

GL/SO 425 Global Development
LASC—Global Perspectives; Human Behavior and Social Processes; Writing Across the Curriculum
This course gives an overview of the field of development and processes of development and underdevelopment in developing countries.
Offered every 2 years. 3 credits.

GL/SP 323 Advanced Conversational Spanish I
LASC—Thought, Language and Culture
Prerequisite: Two SP 200 level courses.
Intensive conversational practice for improving intonation, pronunciation, fluency, review of language usage. This course is for non-native Spanish speakers only.
Offered every year. 3 credits.

GL/SP 324 Advanced Conversational Spanish II
LASC—Thought, Language and Culture
Prerequisite: SP 323 or equivalent.
Continuation of SP 323.
Offered every year. 3 credits.

GL/SP 332 The Hispanic World Today
LASC—Global Perspectives; Diversity Across the Curriculum
Prerequisite: Two SP 200 level courses
Social, economic and political institutions; value systems and customs. Conducted in Spanish.
Offered every 2 years. 3 credits.

GL/SP 333 The Hispanic Presence in the United States
Prerequisite: Two SP 200 level courses
Sociocultural study of Hispanics in the United States, with a focus on major contemporary issues. Conducted in Spanish.
Offered every 2 years. 3 credits.

GL/SP 342 Introduction to Latin American Literature I
Prerequisite: SP 321, SP 323, SP 324 or instructor’s approval.
Study of the literature produced in Latin America from the pre-Columbian era until the first wars of independence.
Offered every 3 years. 3 credits.
GL/SP 349 Spanish-American Literature  
Prerequisite: SP 321, SP 323, SP 324 or instructor's approval.  
Representative works from South and Central American authors from the colonial period to the present.  
Offered every 3 years. 3 credits.

*GL/SP 401 Advanced Study: Special Topics  
Prerequisite: For advanced students  
Gender, Identity and Representation in Latin America. Special topics in language, literature, civilization or field work of mutual interest to student and instructor.  
Offered every 3 years. 3 credits.

GL/UR 191 Sustainable Communities  
LASC—Human Behavior and Social Processes; United States and Its Role in the World  
Prerequisite: ONE of the following: GE/GL 102, GL 150, EC 110, EC 120 or permission of instructor  
Exploration of changes in U.S. and global economic landscape, 1970 to present. Approaches to sustainable economic development.  
Offered every year. 3 credits.

*GL/UR 201 Analysis of Urban Systems  
LASC—Human Behavior and Social Processes  
Analysis of activities, programs, and policies designed to sustain and enhance the livability of individuals in an urban environment.  
Offered every 2 years. 3 credits.

*GL/UR 213 Human Identity and the Urban Environment  
Prerequisite: UR 101  
Study of factors affecting identity in contemporary urban settings including race, ethnicity, class, age, and sex categories and roles.  
Offered every year. 3 credits.

GL/UR 290 Gender and the City  
LASC—Global Perspectives; Human Behavior and Social Processes; Writing Across the Curriculum  
Exploration of ways in which gender, both male and female, structures responses of individuals to urban life and spaces.  
Offered every 2 years. 3 credits.

GL/UR 353 Aging in a Global Society  
LASC—Global Perspectives; Diversity Across the Curriculum  
Explores the ramifications of unrelenting Global Aging, focusing on the questions, what are old people for and the connections across generations.  
Offered every 2 years. 3 credits.

GL/UR 360 Environmental Systems and Public Policy  
Prerequisite: UR 101 or permission of instructor  
Examination of urban ecosystems, focusing on land uses designed to effectively utilize water, open space and other natural resources.  
Offered every 2 years. 3 credits.

*GL/UR 421 Selected Topics in Urban Studies  
Prerequisite: UR 101  
In-depth examination of topical issues challenging the intellectual and creative interests of advanced students in urban studies.  
Offered every year. 3 credits.

*GL/UR 422 Selected Topics in Gerontology  
Prerequisite: Consent of instructor  
In-depth examination of topical issues in gerontology which afford the advanced student the opportunity to pursue gerontological research.  
Offered every 2 years. 3 credits.
Faculty Coordinator
Aparna Mahadev, Professor of Computer Science (1999)
B.Sc., University of Madras, India; M. Sc., University of Madras, India;
M.S., Indian Institute of Technology, India; Ph.D University of Waterloo, Canada

The Information Technology minor is an interdisciplinary minor that gives students the opportunity to develop skills and capabilities for the effective use of information technology in their discipline. This minor is available for all non-Computer Science majors and is designed to address information technology needs and career interests whatever their major is.

To obtain a minor in information technology, students need to complete six (6) courses for a total of 18+ credits.

**Required Course:**

CS 101       Basics of Computer Science

**Two Courses from Group I:** Courses in this group will discuss the representation and manipulation of data in digital form. This may include the conversion process of the data from a form outside the computer, the issues and trade-offs involved in developing a representation, and the algorithms used for the manipulation and transformation of data.

**Two courses from Group II:** Courses in this group involve intensive, discipline-specific use of computers (beyond email, word processing, basic spreadsheets, presentation software and web browsing).

**One course from Group III:** Courses in this group will discuss information technology and its impact on society. At least 1/3 of the course content should relate to information technology.

The list of courses under each of the above three groups varies from semester to semester. Students are strongly encouraged to contact the Information Technology minor coordinator before registering for courses.
Women’s Studies
Women’s Studies Concentration

Director
Lori Dawson, Professor of Psychology
B.A., Suffolk University; M.A., Ph.D., University at Albany, State University of New York

Advisory Board
Maura Collins Pavao, Professor of Biology
B.S., Worcester Polytechnic Institute; M.S., Ph.D., Rutgers University
Sonya Conner, Assistant Professor of Sociology
B.S., University of Louisiana at Lafayette; M.A., Ph.D., University of Oklahoma
Michelle Corbin, Assistant Professor of Sociology
B.S., Western Michigan University; M.S. Eastern Michigan University;
Ph.D., University of Maryland
Suzanne Gainer, Professor of Communication
B.A., St. Vincent College; M.F.A., Rhode Island School of Design
Champika K. Soysa, Professor of Psychology
B.A., Mount Holyoke College, M.A., Ph.D., Clark University
Hye-Sun Kim, Assistant Professor of Criminal Justice
B.A., Dongguk University, South Korea; M.A., Ewha Women's University, South Korea;
M.A., John Jay College of Criminal Justice; Ph.D., Indiana University of Pennsylvania
Kristin Waters, Professor of Philosophy
A.B., Bard College; M.A., Ph.D., University of Connecticut

Teaching Faculty
Madeline Otis Campbell, Assistant Professor of Urban Studies (2012)
B.A., M.A., Brown University; M.A., Ph.D., University of California, Davis.
Alta Carroll, Professor of Communication
B.A., Texas A&M University; M.S., Columbia University; Ph.D., Purdue University
Bruce S. Cohen, Associate Professor of History
A.B., M.A., Rutgers University
Sonya Conner, Assistant Professor of Sociology
B.S., University of Louisiana at Lafayette; M.A., Ph.D., University of Oklahoma
Michelle Corbin, Assistant Professor of Sociology  
B.S., Western Michigan University; M.S. Eastern Michigan University;  
Ph.D., University of Maryland  

Lori Dawson, Professor of Psychology  
B.A., Suffolk University; M.A., Ph.D., University at Albany, State University of New York  

Guillermina Elissondo, Professor of Spanish and World Languages  
B.A., Universidad Católica de Mar del Plata, Argentina; M.A., Michigan State University;  
Ph.D., University of North Carolina – Greensboro  

Carlos Fontes, Professor of Communication  
B.A., Escola Superior de Meios de Comunicacao Social, Lisbon;  
M.A., Ph.D., University of Massachusetts  

Julie Frechette, Professor of Communication  
B.A., University of New Hampshire; M.A., Ph.D., University of Massachusetts  

Suzanne Gainer, Professor of Communication  
B.A., St. Vincent College; M.F.A., Rhode Island School of Design  

Aldo V. Garcia Guevara, Associate Professor of History  
B.A., University of North Carolina-Asheville; M.A, Ph.D., University of Texas-Austin  

Barbara Ann Giguere, Professor of Nursing  
R.N., Worcester City Hospital School of Nursing; B.S., Worcester State College;  
M.S., University of Connecticut; Ed.D., University of Massachusetts  

Ruth P. Haber, Associate Professor of English  
B.A., M.A., Ph.D., University of California, Santa Barbara  

Tona J. Hangen, Assistant Professor of History  
B.S., Massachusetts Institute of Technology; Ph.D., Brandeis University  

Stephen Healy, Associate Professor of Geography  
B.A., Hampshire College; M.S., Ph.D., University of Massachusetts  

Vrinda Kalia, Assistant Professor of Psychology  
B.A., Jesus and Mary College; M.A., Ph.D., Clark University  

Robyn Leo, Associate Professor of Nursing  
R.N., Framingham Union Hospital; B.S.N., Worcester State College;  
M.S.N., University of Connecticut  

Lauren Mizock, Assistant Professor of Psychology  
B.A., Oberlin College; M.A., Ph.D., Suffolk University  

Christie B. Nigro, Professor of Music and Interdisciplinary Visual and Performing Arts  
B.M., Syracuse University; M.M., Yale University;  
Ph.D. University of Massachusetts, Amherst  

Steven J. Oliver, Associate Professor of Biology  
B.A., University of Montana; Ph.D., Boston University  

Maureen E. Power, Professor of Urban Studies  
A.B., Emmanuel College; M.S.W., Ph.D., Brandeis University  

Josna E. Rege, Professor of English, Director of Global Studies  
B.A. Harvard University; M.A., Ph.D. University of Massachusetts, Amherst  

Mary Lynn D. Saul, Professor of English  
B.S., M.A., Ph.D., Ohio State University  

Helena B. Semerjian, Associate Professor of Health Sciences  
B.S., M.Ed., Fitchburg State College; M.Ed., Boston University
Champika K. Soysa, Professor of Psychology
B.A., Mount Holyoke College, M.A., Ph.D., Clark University

Maureen C. Stefanini, Professor of Business Administration
B.S., Ed.M., Worcester State College; M.S., Management, Massachusetts Institute of Technology; Ed.D., Boston University

Henry C. Theriault, Professor of Philosophy
B.A., Princeton University; Ph.D., University of Massachusetts

Marc J. Wagoner, Assistant Professor of Psychology
B.A., Morehouse College, Atlanta, GA; Ph.D. University of Minnesota

Karen Woods Weierman, Professor of English
B.A., Georgetown University; Ph.D., University of Minnesota

Sharon R. Yang, Professor of English
B.A., University of Massachusetts, Lowell; M.A., Clark University; Ph.D., University of Connecticut

Active Faculty

Patricia A. Benjamin, Associate Professor of Geography
B.A., University of Oregon; M.L.S., University of Maryland; M.A., Ph.D., Clark University

Richard Bisk, Professor of Mathematics
B.A., Drew University; M.S., University of New Hampshire; A.S.A., Society of Actuaries; Ph.D., Clark University

Lynn Bloomberg, Associate Professor of Health Sciences
B.A., University of Hawaii; M.Ed., University of Texas; M.P.H., Dr.P.H., University of California at Berkeley

Sibyl Brownlee, Vice President, Student Affairs
B.A., California State College, Los Angeles; M.A., California State University, Los Angeles; Ph.D., University of Massachusetts, Amherst

Carol Burns Donnelly, Professor of Education
A.B., Wellesley College; M.A., University of Miami; M.Ed., Harvard University; Ed.D, Boston University

Anne M. Falke, Professor of Chemistry
B.A., University of Rhode Island; Ph.D., University of New Hampshire

James E. Foley, Associate Professor of English
B.A. Tufts University; M.A., Ph.D., Indiana University, Bloomington

Maria G. Fung, Associate Professor of Mathematics
B.A., M.S., Ph.D., Cornell University

Anne W. Gathuo, Associate Professor of Urban Studies
B.Ed., Kenyatta University; M.B.A., University of Nairobi; Grad Certificate, M.S., Ph.D., University of Massachusetts, Boston

Judith Jeon-Chapman, Professor of French, Spanish and World Languages
B.A., College of St. Benedict; M.A., Ph.D. University of Washington, Seattle

Matthew Johnsen, Associate Professor of Sociology
A.B., Dartmouth College, Hanover, NH; M.S., New Hampshire College, Manchester; Ph.D., North Carolina State University, Raleigh
Women’s Studies is an interdisciplinary, academic course of study which lies at the intersection of the traditional academic disciplines such as literature, history, and philosophy in the humanities, psychology and sociology in the social sciences, as well as biology and geography in the natural sciences. Women’s Studies has also found a prominent place in newer and interdisciplinary areas such as education, communications, urban studies and health sciences. Wherever gender issues are germane to a discipline, Women’s Studies can be found, in part as a corrective to the centuries-long tendency of the traditional disciplines to focus mainly or exclusively on men and in part to bring new models of understanding to all areas of study.

The undergraduate concentration in Women’s Studies brings together courses that focus on women and provide a critical analysis of gender and the related categories of class, race and other dimensions of social power. Gaining knowledge about women and men and understanding knowledge generated by Women's Studies helps students to move through our complex contemporary world.

Requirements for a Concentration in Women’s Studies: 15 credits

The Women’s Studies concentration is interdisciplinary; it uses a broad variety of academic disciplines in achieving its goals. Students are required to take a total of five Women’s Studies courses from at least two disciplines. It is recommended that students take an introductory course such as WO/UR 103: Introduction to Women’s Studies or WO/PH 150: Women in Western Ideas. Students are also encouraged to engage in some sort of specialized experience such as an independent study, a directed readings course leading to a major paper, a creative project or an internship. Students in Women’s Studies may use courses to simultaneously count for a concentration in Women’s Studies and other Worcester State University requirements.
Women’s Studies Courses

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

Courses marked with an asterisk (*) are approved for the concentration only during those semesters when they are listed under Women’s Studies in the Course Schedule.

WO/CM 213 Gender and Media
LASC—Human Behavior and Social Processes; Thought, Language and Culture; Diversity Across the Curriculum; Writing Across the Curriculum
Prerequisite: CM 100
This course will examine how difference is socially constructed along gender lines, and will explore intersections of gender, identity and power.
Offered every 2 years. 3 credits.

*WO/CM 350 Intercultural Communication
Prerequisite: CM 100
Introductory communication theory and practice across cultural groups defined by race, ethnicity, gender, religion, age, nationality, geography, politics, and economics.
Offered every 2 years. 3 credits.

*WO/ED 330 Elementary Social Studies and Multiculturalism (only for Elementary Education Majors)
Prerequisite: must be admitted to stage 2 in the elementary education program.
Goals, curriculum, skills, teaching strategies in educating culturally diverse populations in a global context.
Offered every year. 3 credits.

WO/EN 132 World Literature: Survey of Asian, African and Latin American Literature
LASC—Global Perspectives; Thought, Language and Culture; Diversity Across the Curriculum
Representative poems, stories, plays, both ancient and modern, from Africa, Asia, Latin America.
Offered every year. 3 credits.

WO/EN 172 Women and Literature
Explores basic issues and problems in literature by and about women.
Offered every 2 years. 3 credits.

WO/EN 174 Women Poets
A close reading and analysis of poetry written by women from a historical as well as contemporary feminist perspective.
Offered every 3 years. 3 credits.

WO/EN 345 Women in American Literature
Prerequisite: EN 102
The American woman as she is found in fiction, non-fiction, and poetry.
Offered every 3 years. 3 credits.

*WO/FR 341 Introduction to French Literature
LASC—Thought, Language and Culture
Prerequisite: Two FR 200 level courses or equivalent
Major periods and genres of French literature: for majors and minors. Conducted in French.
Offered every 3 years. 3 credits.

WO/HC 234 Multiculturalism and Health
Examination of diverse ethnic/racial and cultural beliefs and practices affecting health and illness.
Offered every 2 years. 3 credits.

WO/HE 210 Women’s Health Issues
Interactive processes of politics, power, and media influence on research and public health policies; current health issues are addressed.
Offered every year. 3 credits.

*WH/HI 191 ST: The History of Child Labor
A comparative history course that will analyze the socio-economic influence of industrialization, de-industrialization and globalization on children and young women, including the "Lowell Girls."
Offered every 3 years. 3 credits.
*WO/HI 209 Afro-American History
The role of blacks in American society from the seventeenth century to the present, emphasizing the institution of slavery.
*Offered every 3 years. 3 credits.

*WO/HI 216 Economic History of the US
An introduction to United States economic development; particular attention will be paid to industrialization and the labor force
*Offered every year. 3 credits.

*WO/HI 232 European Intellectual History II
Prerequisite: HI 103 or HI 104
The main theoretical frameworks, philosophic, psychological, and scientific, of the nineteenth and twentieth centuries.
*Offered every 3 years. 3 credits.

*WO/HI 249 US Labor History I
The relationship between workers, their employers, and the surrounding community between 1815 and World War II.
*Offered every 2 years. 3 credits.

WO/HI 270 Writings on Feminism in Historical Perspective
This course examines the writings of Euro-American male and female feminists who promoted the interests of women during the 16th - 19th centuries
Offered every 2 years. 3 credits.

WO/HI 274 Sex, Marriage and the Family in Historical Perspective
LASC—Thought, Language and Culture; Diversity Across the Curriculum
Prerequisite: HI 103 or HI 104 or HI 111 or HI 112
This course will undertake a study of courtship, marriage and family life-cycle patterns in England and America during the 19th century.
Offered every 2 years. 3 credits.

WO/HI 333 Women in Latin America
Prerequisite: HI 233 or equivalent
Examines the roles of women in diverse societies including Mexico, Brazil, and the Caribbean nations. Emphasis on the modern period.
*Offered every other year. 3 credits.

WH/HI 350 Native American Women
Prerequisite: HI 205 or equivalent
Examines Indian Women from the time of European contact to the modern arena. Emphasizes culture, community and arenas of power.
*Offered every other year. 3 credits.

*WO/HI 353 The Age of Reform: 1877-1920
Prerequisites: HI 111, HI 112
An analysis of the transformation of America, including the reform response to the Gilded Age's industrialization, urbanization, and immigration patterns.
Offered every 2 years. 3 credits.

WO/HI 372 The Evolution of Women’s Rights
This course analyzes the evolution of Women’s Rights with emphasis on its role in the twentieth century's International Law of Human Rights
Offered every 2 years. 3 credits.

*WO/HI 450 ST: New England History
A topical history course in which class, ethnic and gender changes will be considered in the pre-industrial, industrializing, industrial, de-industrializing and post-industrial periods in the six state region.
*Offered every 3 years. 3 credits.

WO/MU 231 Women in Music
A survey of the role of women in music, particularly the great women composers from Medieval to Contemporary times.
Category 1. 3 credits.

*WO/NU 310 Nursing Science I
Prerequisites: NU 210; BI 262; SO 215 or SO 220
Corequisite: CH 240
Students will apply the nursing process when caring for the childbearing family and adult medical-surgical patients. Concepts of wellness, disease and health behaviors will be examined as the nursing process is operationalized in the care of adult medical-surgical patients and the childbearing family. Lecture and off-campus clinical experiences in maternal-child health nursing and medical-surgical nursing are included in this course.

**WO/PH 150 Women in Western Ideas**  
LASC—Human Behavior and Social Processes; Thought, Language and Culture; Diversity Across the Curriculum  
Investigates the concept of woman from ancient Greece to the present.  
Offered every 2 years. 3 credits.

**WO/PH 240 Political Theory**  
LASC—Thought, Language and Culture; United States and Its Role in the World  
Investigates concepts including political power, equality, revolution, liberties, slavery, socialism and liberalism, patriarchal power, race and gender.  
Offered every 3 years. 3 credits.

**WO/PH 241 Genocide and Human Rights**  
LASC—Global Perspectives; United States and Its Role in the World  
This course treats the ethical, political, and other dimensions of systematic mass violence through case studies and general theoretical analysis.  
Offered every 3 years. 3 credits.

**WO/PH 250 Global Feminism**  
LASC—Global Perspectives; Thought, Language and Culture  
Investigates the theoretical underpinnings of women’s movements for equal rights around the globe.  
Offered every 2 years. 3 credits.

**WO/PS 255 Psychological Foundations of Diversity**  
Prerequisite: PS 101  
Explores the gender, racial/ethnic, multiple-group membership, cultural, social class, religious, disability and sexual orientation facets of diversity.  
Offered every 3 years. 3 credits.

**WO/PS 260 Psychology of Human Sexuality**  
Prerequisite: PS 101  
Sexuality as a foundation of personality. The wide range of human sexuality is explored: sexual development, roles, attitudes and behaviors.  
Offered every 2 years. 3 credits.

**WO/PS 263 Psychology of Women**  
Prerequisite: PS 101  
Women’s psychological development throughout the lifespan will be examined, including female development, achievement, stereotyping, stress, violence and psychological disorders.  
Offered every 2 years. 3 credits.

**WO/PS 315 Physical and Sexual Abuse**  
Prerequisite: PS 101  
Etiology, characteristics, consequences, treatment, and prevention of various forms of physical, sexual, and emotional abuse in children, adolescents, and adults.  
Offered every 2 years. 3 credits.

**WO/PS 335 Abnormal Psychology**  
Prerequisite: PS 101  
Etiology, dynamics, and treatment of psychopathology and their relation to normal personality are considered from traditional and contemporary perspectives.  
Offered every 2 years. 3 credits.

**WO/SO 205 Issues in American Society**  
Prerequisite: SO 100  
Identification and analysis of current social issues facing contemporary American society, and critique of policies and programs designed to resolve these issues.  
Offered every 2 years. 3 credits.
**WO/SO 240 Sociology of Education**
Prerequisite: SO 100 or SO 110
Study of modern educational systems, emphasizing the social, political and economic factors that influence its organization and its functions.
Offered every 2 years. 3 credits.

**WO/SO 285 Race, Class and Gender**
An introduction to dominant-minority group relations through the investigation of the patterns and dynamics of differentiation, inequality and discrimination.
Offered every 3 years. 3 credits.

**WO/SO 300 Social Change**
Prerequisites: Two courses at 200-level
A study of the conditions, patterns, and consequences of social transformations with emphasis on institutional and individual patterns of adjustments and adaptation.
Offered every 3 years. 3 credits.

**WO/SO 350 Social Stratification**
Prerequisites: Two courses at 200-level
Investigation of the recurrent patterns of social differentiation, social ranking, and the unequal distribution of rewards.
Offered every 2 years. 3 credits.

**WO/SO 355 Gender & Sexuality**
This course examines how social institutions and cultural norms construct particular gender roles and sexual identities within society.
Offered every year. 3 credits.

**WO/UR 103 Introduction to Women’s Studies**
This course uses a variety of academic disciplines to study the situation of women around the world.
Offered every year. 3 credits.

**WO/UR 202 Aging in Metropolitan Society**
An introduction to gerontology, stressing the social, economic and political aspects of aging in the urban environment.
Offered every 2 years. 3 credits.

**WO/UR 216 Women and Aging in the Urban Environment**
Investigation of the aging process for women in urban society, focusing on their great longevity, lower income status, and major caregiving role.
Offered every 2 years. 3 credits.

**WO/UR 290 Gender and the City**
Exploration of ways in which gender, both male and female, structures responses of individuals to urban life and urban spaces.
Offered every 2 years. 3 credits.

**WO/PS 312 Psychology of Adolescence**
Prerequisite: PS 101
The mental, emotional, social, and physical changes of contemporary adolescence are examined with emphasis on family, peer and school influences.
Offered every year. 3 credits.

**WO/UR 360 Environmental Systems and Public Policy**
Prerequisite: UR 101 or permission of instructor
Examination of urban ecosystems, focusing on land uses designed to effectively utilize water, open space and other natural resources.
Offered every 2 years. 3 credits.

**WO/UR 380 Public Policy and Cultural Diversity**
Prerequisite: UR 101
This course will examine contemporary policy issues and problems deriving from cultural diversity. These will include areas such as immigration, population, demographics, affirmative action, public assistance, integration, separatism, political correctness, gender equity, and the role of organized religion in contemporary politics.
Offered every 2 years. 3 credits.
SCHOOL OF EDUCATION, HEALTH AND NATURAL SCIENCES

Dean
TBD

LOCATION
Kalyan K. Ghosh Science and Technology Building
First Floor, Room ST-101

Biology
Chemistry
Communication Sciences and Disorders
Computer Science
Education
Health Sciences
Mathematics
Nursing
Occupational Therapy
Physical and Earth Sciences
Faculty

Latifeh Amini-Kormi, Professor (1994)
B.S., Teheran University; Ph.D., University of Pennsylvania

Daron C. Barnard, Associate Professor (2006)
B.A., Middlebury College; Ph.D., Vanderbilt University

Peter M. Bradley, Professor (1993)
B.Sc., University of Aberdeen; Ph.D., Worcester Polytechnic Institute

Nirvana Filoramo, Assistant Professor (2011)
B.S., University of Massachusetts, Amherst; M.S., Iowa State University; Ph.D., University of Connecticut

Ellen F. Fynan, Professor (1993)
B.S., University of Maine; Ph.D., Thomas Jefferson University

Jennifer Hood-DeGrenier, Assistant Professor (2012)
B.A., Williams College; Ph.D., Harvard University

Dr. Steven J. Oliver, Associate Professor (2003), Department Chair
B.A., University of Montana; Ph.D., Boston University

Surindar M. Paracer, Professor (1970)
B.S., Punjab University; M.S., South Dakota State University; Ph.D., University of California

Maura Collins Pavao, Professor (2001)
B.S., Worcester Polytechnic Institute; M.S., Ph.D., Rutgers University

Maureen D. Shamgochian, Professor (1993)
B.S., Worcester State College; Ph.D., University of Massachusetts

Antonio S. Tan, Professor (1993)
B.S., M.S., University of San Carlos; Ph.D., University of Southern Mississippi

Randall Tracy, Associate Professor (2003)
B.S., M.S., University of Connecticut; Ph.D., Arizona State University

Sebastián Vélez, Assistant Professor (2012)
B.S., University of Puerto Rico; M.S., University of Notre Dame; Ph.D., Harvard University

The Biology program provides students with a broad knowledge in the biological sciences through a core curriculum and upper-level courses in specialized areas of study. A hands-on approach for teaching laboratory techniques and field work is emphasized. Throughout
the program, students are encouraged to develop effective communication skills and an awareness of the societal and global implications of biology. Both a major and minor in Biology are offered and, as part of the Biology major, students may choose to concentrate in Nuclear Medicine Technology or Bioinformatics. In addition, the pre-requisites necessary to meet the requirements of medical, dental and veterinary school as well as the Accelerated Pharmacy Program with MCPHS can be completed through the Biology major.

Undergraduate biology students who have demonstrated academic excellence and an interest in biological research may participate in the Honors in Biology program. The Chi Iota Chapter of the national biological honor society, Beta Beta Beta provides recognition to outstanding students majoring in Biology and Biotechnology.

**Requirements for a Major in Biology**

*Required Biology courses: 38 credits*

- BI 140  Introduction to Organismal Biology
- BI 141  Introduction to Cellular and Molecular Biology
- BI 200  Human Biology
- BI 202  Principles of Ecology
- BI 203  Genetics
- BI 204  Microbiology
- BI 404  Biology Seminar
- 3 Upper Division Electives

*Ancillary Requirements: 28-34 credits*

- MA 110 & MA 150  College Algebra and Statistics or
- MA 200 & MA 201  Calculus I and II
- PY 221 & PY 222  General Physics I and II or
- PY 241 & PY 242  Physics I and II
- CH 120 & CH 121  General Chemistry I and II
- CH 201 & CH 202  Organic Chemistry I and II

*Upper division Biology electives*

**Cellular/Molecular Biology**

- BI 324  Endocrinology
- BI 371  Molecular Biology
- BI 372  Immunology
- BI 375  Virology
- BI 410  Biochemistry
- BT 375  Tissue Culture
- BT 376  Biotechnology
- BT 378  Bioinformatics

**Organismal Biology**

- BI 304  Comparative Vertebrate Anatomy
- BI 306  Developmental Biology
- BI 313  Histology
- BI 315  Neurosciences
- BI 321  Comparative Physiology
- BI 340  Plant Sciences
- BI 341  Mycology
- BI 342  Plant Physiology
- BI 360  Animal Behavior

**Population and Environmental Biology**

- BI 301  Invertebrate Zoology
- BI 302  Entomology
- BI 303  Parasitology
- BI 331  Marine Biology
- BI 333  Vertebrate Natural History Ectotherms
- BI 334  Wildlife Investigational Techniques
- BI 344  Soil Biology
- BI 352  Symbiosis and Evolution
- BI 380  Biodiversity and Conservation Biology

*(Note: Pre-med and Graduate school candidates should also take CH 203 & CH 204 Organic Chemistry laboratory in addition to CH 201 and CH 202)*
A minimum of three upper division laboratory courses (BI 300- or BI 400-level) are to be selected from three categories of Biology electives. No more than two courses can be taken from any single group. The courses should be selected with the advice and consent of the faculty advisor. A grade point average of 2.0 must be maintained in biology courses and in the ancillary science and mathematics courses. Students considering graduate and professional work should take, as a recommended minimum, courses in general physics, calculus, introduction to computer science and statistics.

### Department of Biology Sample Timeline for Completion of Degree

#### YEAR ONE

**Semester One**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI 140</td>
<td>Introduction to Organismal Biology</td>
<td>4</td>
</tr>
<tr>
<td>CH 120</td>
<td>General Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>EN 101</td>
<td>English Composition</td>
<td>3</td>
</tr>
<tr>
<td>MA 110</td>
<td>College Algebra (LASC QR)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>First-Year Seminar</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Subtotal**: 17

**Comments**: EN 101 and 102 satisfies LASC Writing. Math Requirements: MA 110 requires an Accuplacer score of 5 or higher & MA 150 requires an Accuplacer score of 4 or higher or MA 200 & MA 201.

**Semester Two**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI 141</td>
<td>Introduction to Cellular and Molecular Biology</td>
<td>4</td>
</tr>
<tr>
<td>CH 121</td>
<td>General Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>EN 102</td>
<td>English Composition II</td>
<td>3</td>
</tr>
<tr>
<td>MA 150</td>
<td>Statistics (LASC QR)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Subtotal**: 14

**Comments**: EN 101 and 102 satisfies LASC Writing. Math Requirements: MA 110 requires an Accuplacer score of 5 or higher & MA 150 requires an Accuplacer score of 4 or higher or MA 200 & MA 201.

#### YEAR TWO

**Semester Three**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH 201</td>
<td>Organic Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (ICW*)</td>
<td>3</td>
</tr>
<tr>
<td>BI 200</td>
<td>Human Biology</td>
<td>4</td>
</tr>
<tr>
<td>LASC</td>
<td>US Constitution</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (USW*)</td>
<td>3</td>
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</table>

**Semester Subtotal**: 16
### Semester Four

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH 202</td>
<td>Organic Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>BI 204</td>
<td>Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (GP*)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (CA*)</td>
<td>3</td>
</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Subtotal 16**

**Comments**
Pre-med and Graduate school candidates should also take CH 203 & CH 204 Organic Chemistry Laboratory in addition to CH 201 and CH 202. 200 level courses may be taken in any order.

### YEAR THREE

#### Semester Five

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI-202</td>
<td>Principles of Ecology</td>
<td>4</td>
</tr>
<tr>
<td>PY 221</td>
<td>*General Physics</td>
<td>4</td>
</tr>
<tr>
<td>LASC</td>
<td>Ancillary or LASC Distribution</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (TLC*)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Subtotal 14**

#### Semester Six

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>BI 203</td>
<td>Genetics</td>
<td>4</td>
</tr>
<tr>
<td>BI</td>
<td>300 or 400 Major Elective</td>
<td>3</td>
</tr>
<tr>
<td>PY 222</td>
<td>General Physics II</td>
<td>4</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (HBS*)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Subtotal 14**

**Comments**
Physics Requirements: PY 221 & PY 222 or PY 241 & PY 242 satisfies LASC NSP.

### YEAR FOUR

#### Semester Seven

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI</td>
<td>300 or 400 Major Elective</td>
<td>4</td>
</tr>
<tr>
<td>Major</td>
<td>Additional Science</td>
<td>4</td>
</tr>
<tr>
<td>BI 404</td>
<td>Biology Seminar</td>
<td>2</td>
</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Subtotal 16**
Semester Eight

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI</td>
<td>300 or 400 Major Elective</td>
<td>4</td>
</tr>
<tr>
<td>Major</td>
<td>Additional Science</td>
<td>4</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Subtotal** 14

**TOTAL CREDITS= 121**

Note: The sequence of LASC courses marked with * is a suggestion but serves as a reminder that LASC designated courses must be taken to satisfy the LASC requirements.

**Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.**

**Honors Program in Biology**

The Honors Program in Biology is designated as a distinction bestowed on those outstanding undergraduate Biology majors who have demonstrated distinct competence in overall biology course work and who have completed an independent research project of substantial merit. This program offers motivated students the opportunity to develop research and communication skills in preparation for graduate school or a professional career.

**Requirements for the Honors Program in Biology**

- All courses required for the major in Biology:
  - BI 205 Research Methods and Experimental Design (2 credits)
  - BI 402 Independent Study in Biology (3-5 credits)*
  - Written thesis describing original research

* "Commendation in Biology" requires 3 credits of BI 402 Independent Study in Biology and a minimum 3.0 GPA in biology courses. "Honors in Biology" requires 5 credits of BI 402 Independent Study in Biology and a minimum of 3.5 GPA in biology courses.

For more information and specific program requirements, contact Dr. Randall Tracy in the Department of Biology.

**Requirements for a Minor in Biology**

- BI 140 Introduction to Organismal Biology
- BI 141 Introduction to Cellular and Molecular Biology

Four additional 200-level or higher Biology or Biotechnology laboratory courses.

**Requirements for a Major in Biology, Concentration in Nuclear Medicine Technology:**

48 credits

Worcester State University offers, in conjunction with the University of Massachusetts Medical School, a concentration in Nuclear Medicine Technology (NMT), administered by a program advisory committee and accredited by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology.
Nuclear medicine is a study of techniques developed in hospitals, particularly in radiology, pathology and internal medicine departments. These techniques are used for both diagnostic and therapeutic purposes. Students interested in being considered candidates for admission to the program should contact either the program coordinator or the nominating committee as early in their college career as possible. The program is limited to a relatively small number of students.

Prerequisites for the program include successful completion of:

- BI 161 & BI 162  Human Anatomy and Physiology I and II
- CH 110 & CH 111  Introduction to General, Organic & Biochemistry I and II
- CH 120 & CH 121  General Chemistry I and II
- PY 221 & PY 222  General Physics I and II
- PY 241 & PY 242  Physics I, II

Math Requirement

Two math courses based on Accuplacer scores and Departmental Major Requirements selected as a minimum from these four courses:

- MA 110  College Algebra
- MA 190  Precalculus
- MA 200  Calculus I
- MA 201  Calculus II

Note: MA 150 Statistics is not acceptable. Higher level math courses that require Calculus as a prerequisite are acceptable.

Candidates must visit the Medical School Nuclear Medicine Department and file intent to enroll forms with the Worcester State University Nuclear Medicine Technology coordinator prior to being considered a candidate for the program.

Technical specialty courses of the NMT Program are:

- Introduction and Hospital Orientation (no credit)
- BL 252  Radiation Biology
- BI/PY 451 & BI/PY 452  Nuclear Instrumentation I and II
- BI 461, BI 462, BI 463, & BI 464  NMT Clinical Practicum I, II, III and IV
- BI/CH 453  Radiopharmaceuticals
- BI/CH 465 & BI/CH 466  Clinical Nuclear Medicine Technology I and II

Students majoring in Biology, Biotechnology, Chemistry or Natural Science may pursue the Concentration in Nuclear Medicine Technology.

Major in Biology, Concentration in Bioinformatics

The purpose of this interdisciplinary concentration is to prepare students to enter the computer-intensive fields of bioinformatics, computational biology, computational chemistry, and molecular modeling including genomics and proteomics. With the advent of the Human Genome Project, an explosion of genomic information has occurred, and databases such as GenBank and EMBL have grown at a rate that now requires storage, organizing and indexing of the information. Questions of gene expression have led to computational biology, the process of analyzing genomic sequences and to the field of proteomics, the understanding of protein structure and function. The information obtained by computational biology and computational chemistry is used in the design of new drugs to treat a variety of diseases. Major drug and biotechnology companies are seeking people trained in bioinformatics.
In addition to the requirements for the Major in Biology:

- BT 378 Bioinformatics* 4
- CS 140 Introduction to Programming 4
- CS 242 Data Structures 3
- CS 282 UNIX Systems Programming 3
- CS 265 Database Applications 3

*BT 378 Bioinformatics fulfills an upper division Cellular/Molecular Biology elective. (requires BI 141 or BI 203 as a prerequisite)

Requirements for a Major in Biology and to meet the prerequisites for the Accelerated Pharmacy Program with Massachusetts College of Pharmacy and Health Science

(Please see program description on page 55)

All of the courses listed for a major in biology plus:
- CH 203 Organic Chemistry Laboratory I
- CH 204 Organic Chemistry Laboratory II

Department of Biology: WSU/MCPHS 3+3 Curriculum Guide for Biology Majors
Sample Timeline for Completion of Degree

YEAR ONE

**Fall Semester 1st Year**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN 101</td>
<td>English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>CH 120</td>
<td>General Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>BI 140</td>
<td>Introduction to Organismal Biology</td>
<td>4</td>
</tr>
<tr>
<td>LASC</td>
<td>First-Year Seminar</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

Semester Subtotal 17

**Spring Semester 1st Year**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN 102</td>
<td>English Composition II</td>
<td>3</td>
</tr>
<tr>
<td>CH 121</td>
<td>General Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>BI 141</td>
<td>Introduction to Cellular and Molecular Biology</td>
<td>4</td>
</tr>
<tr>
<td>MA 150</td>
<td>Statistics (QR)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (Constitutions)</td>
<td>3</td>
</tr>
</tbody>
</table>

Semester Subtotal 17

**Comments**

Winter session or Summer after 1st and 2nd years: one course that meets LASC requirements (6 credits total)
LASC requirements should include: Introduction to Psychology, Introduction to Sociology, a course that fulfills the Constitutions, Economics, and an upper level (beyond first semester) behavioral science (Psychology or Sociology)
### YEAR TWO

#### Fall Semester 2nd Year

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI 203</td>
<td>Genetics</td>
<td>4</td>
</tr>
<tr>
<td>CH 201/203</td>
<td>Organic Chemistry I w/Lab</td>
<td>5</td>
</tr>
<tr>
<td>PY 221*</td>
<td>General Physics I</td>
<td>4</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (HBS)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Subtotal**: 16

#### Spring Semester 2nd Year

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI 204</td>
<td>Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>CH 202/204</td>
<td>Organic Chemistry II w/Lab</td>
<td>5</td>
</tr>
<tr>
<td>PY 222*</td>
<td>General Physics II</td>
<td>4</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (ICW)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Subtotal**: 16

**Comments**: PY 241 and PY 242 can be taken in place of PY 221 and PY 222, however these should be taken concurrently or after calculus. The 200 level Biology courses may be taken in any order.

### YEAR THREE

#### Fall Semester 3rd Year

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BI 200</td>
<td>Human Biology</td>
<td>4</td>
</tr>
<tr>
<td>MA 200</td>
<td>Calculus I</td>
<td>4</td>
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<tr>
<td>LASC</td>
<td>Distribution Elective (USW)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (GP)</td>
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</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (CA)</td>
<td>3</td>
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</tbody>
</table>

**Semester Subtotal**: 17

#### Spring Semester 3rd Year

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI 202</td>
<td>Ecology</td>
<td>4</td>
</tr>
<tr>
<td>BI 404</td>
<td>Biology Seminar</td>
<td>2</td>
</tr>
<tr>
<td>MA 201</td>
<td>Calculus II</td>
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</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (TLC)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (DAC)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Subtotal**: 16

**Comments**: Total Credits taken at WSU=105. Remaining credits are transferred from MCPHS and fulfill upper level biology electives.
Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.

Biology Courses (Undergraduate)

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

BI 101 Concepts of Biology
LASC—Natural Systems and Processes
Unifying principles in biology; diversity and evolution of plant and animal life at cellular and organismic levels. Three lecture hours and a two hour laboratory per week
Offered every year. 4 credits.

BI 111 Social Biology
LASC—Human Behavior and Social Processes; Natural Systems and Processes; Global Perspectives
This course considers the interface between current biological technologies and the social, cultural, legal, and moral postures of modern man.
Offered every year. 3 credits.

BI 112 Diseases and Mankind
LASC—Global Perspectives; Natural Systems and Processes
Diseases of ancient and modern man; the impact on history, religion, science, art and philosophy.
Offered every year. 3 credits.

BI 114 Plants and Human Affairs
LASC—Global Perspectives; Natural Systems and Processes
Man’s dependence upon plants and their influence on civilization and its art, religions, literature, folklore, medicine, and human behavior.
Offered every 2 years. 3 credits.

BI 116 Animal Biology
LASC—Natural Systems and Processes
Survey of animal kingdom with emphasis on animal diversity, morphology, life histories, ecological and evolutionary relationships. Three lecture hours and two laboratory hours per week.
Offered every 3 years. 4 credits.

BI 117 Humans and the Environment
LASC—Natural Systems and Processes
A survey of Anthropogenic environmental impacts and the underlying mechanisms involved. Three lecture hours and three laboratory hours per week.
Offered every 3 years. 4 credits.

BI 118 Dinosaurs
LASC—Natural Systems and Processes
A survey of dinosaurs; their evolution, anatomy, diversity and impact on evolutionary biology. Discussions of the changing views of dinosaurs in the media and public consciousness. Three lecture hours and two laboratory hours per week.
Offered every 3 years. 4 credits.

BI 120 Darwinian Revolution
LASC—TLC, NSP
An interdisciplinary perspective on the philosophical, religious, and social impacts of Darwin’s theory of evolution by the process of natural selection.
Offered every 2 years. 3 credits.

BI 140 Introduction to Organismal Biology
LASC—Natural Systems and Processes
Evolution, ecology, anatomy, physiology and diversity of organisms. Three lecture hours and three laboratory hours per week.
Offered every year. 4 credits.
BI 141 Introduction to Cellular and Molecular Biology
LASC—Natural Systems and Processes
Prerequisite: CH 120
Cellular and molecular concepts in biology. Emphasis on the structure and varied functions of the cell. Three lecture hours and three laboratory hours per week.
Offered every year. 4 credits.

BI 161 Human Anatomy and Physiology I
Considers human cellular biology, tissues, integumentary, nervous, endocrine, skeletal and muscular systems. Three lecture hours and three laboratory hours per week.
Offered every year. 4 credits.

BI 162 Human Anatomy and Physiology II
LASC—Natural Systems and Processes
Prerequisite: BI 161
Considers digestive, respiratory, cardiovascular, urinary, immune and lymphatic systems; water and electrolyte balance, reproduction and embryology. Three lecture hours and three laboratory hours per week.
Offered every year. 4 credits.

BI 193 Special Topics in Biology for First-Year Students
All "193" courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval. Introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar.
Offered every year. 3 credits.

BI 199 Selected Topics in Biological Sciences
Each topic is a lecture and/or laboratory course in a selected area of the biological sciences presented by a departmental instructor. Topics will be announced in advance.
Offered every year. 1-4 credits.

BI 200 Human Biology
Prerequisites: BI 140, BI 141
A systemic approach to the study of human biology. The course will emphasize structure/function relationships and homestatic mechanisms. Three hour lecture and three hour lab.
Offered every year. 4 credits.

BI 202 Principles of Ecology
LASC—Writing Across the Curriculum
Prerequisites: BI 140, 1 college math course (algebra, stats or calculus)
Basic ecological theory relating to organism-environment interactions; population dynamics and ecosystems. Three lecture hours and three laboratory hours per week.
Offered every year. 4 credits.

BI 203 Genetics
LASC—Quantitative Reasoning Across the Curriculum
Prerequisites: BI 141, minimum Accuplacer score of 3
Introductory genetics with examples of human inheritance and recent developments in genetic engineering. Three lecture hours and three laboratory hours per week.
Offered every year. 4 credits.

BI 204 Microbiology
Prerequisites: Introductory chemistry and biology courses
The structure and replication of microorganisms. Infectious diseases and immune responses are emphasized. Three lecture hours and three laboratory hours per week.
Offered every year. 4 credits.

BI 205 Research Techniques and Experimental Design
Prerequisites: BI 140, BI 141, MA 150
Investigations in experimental design and research methodologies required for the Honors program in Biology. Two lecture hours per week.
Offered every year. 2 credits.
Biology

BI 206 Medical Microbiology
LASC—Natural Systems and Processes
Prerequisite: BI 161
A study of growth and control of pathogenic microorganisms with emphasis on infectious disease transmission, immune responses, prevention and treatment. Three lecture and three laboratory hours per week. 
Offered every year. 4 credits.

BI 252 Radiation Biology
Prerequisites: BI 140/BI 141 or BI 162
Basic theories of interaction of ionizing radiations with living and non-living matter; industrial and clinical applications. 
Offered every 3 years. 3 credits.

BI 266 Biology of Aging
Considers characteristics of the aging process utilizing the newest theories based upon dynamics, function and metabolic regulations, disease and the acceleration of the aging process. 
Offered every 3 years. 3 credits.

BI 271 Basic Kinesiology
LASC—Natural Systems and Processes
Prerequisites: BI 161
Structure and function of human skeletal muscles in relation to motion and general body mechanics under normal and stress conditions. 
Offered every year. 3 credits.

BI 301 Invertebrate Zoology
Prerequisites: BI 140, BI 141
Considers anatomy, taxonomy (including selected articles of the International Code of Zoological Nomenclature), natural history, and evolutionary relationships of selected invertebrate phyla. Three lecture hours and three laboratory hours per week. 
Offered every 2 years. 4 credits.

BI 302 Entomology
Prerequisite: BI 140
Considers insects and their allies, chemical and biological control, and special references to agricultural pests and medical entomology. Three lecture hours and three laboratory hours per week. 
Offered every 3 years. 4 credits.

BI 303 Parasitology
Prerequisite: BI 140
Basic concepts in symbiology, life cycles, epidemiology, disease development, control and prevention of selected human parasites. Three lecture hours and three laboratory hours per week. 
Offered every 2 years. 4 credits.

BI 304 Comparative Vertebrate Anatomy
Prerequisites: BI 140 and BI 141
Considers prochordate and chordate taxonomy and phylogeny; systematic morphological comparison of representative chordates to establish homology, analogy, and evolution. Three lecture hours and three laboratory hours per week. 
Offered every 3 years. 4 credits.

BI 306 Developmental Biology
Prerequisites: BI 140, BI 141 and BI 203
Study of developmental patterns, cellular differentiation and cell interactions resulting in cellular diversity, organization, and perpetuation of the germ line. Three lecture hours and three laboratory hours per week. 
Offered every 3 years. 4 credits.

BI 313 Histology
Prerequisites: BI 140 and BI 141
The structure and function of animal tissues. Each student is required to prepare tissues using histological methods. Three lectures hours and three laboratory hours per week. 
Offered every 2 years. 4 credits.
BI/NS 315 Neurosciences
Prerequisites: BI 161, BI 162 or BI 140, BI 141 or BI 200
Structural and functional organization of the central and peripheral nervous system. Principles of normal and abnormal transmission, integration, and storage of information in neuronal pathways. Three lecture hours and three laboratory hours per week.
Offered every year. 4 credits.

BI 321 Comparative Physiology
Prerequisites: BI 140 and BI 141
A comparison of select physiological functions of different animal taxa with mammals used as a reference. Three lecture hours and three laboratory hours per week.
Offered every 2 years. 4 credits.

BI 324 Endocrinology
Prerequisites: BI 140 and BI 141
The role of endocrine glands in the normal integration of animals; mechanisms of hormone action, function, and interrelationships. Three lecture hours and three laboratory hours per week.
Offered every 2 years. 4 credits.

BI 331 Marine Biology
Prerequisites: BI 140 and BI 141
Considers the marine environment, its flora and fauna, distribution and production of plankton-nekton-benthos; zoogeography, bioeconomic factors and potential. Three lecture hours and three laboratory hours per week.
Offered every 2 years. 4 credits.

BI 333 Vertebrate Natural History of Ectotherms
Prerequisites: BI 140 and BI 141
Life histories, adaptations, distribution, systematics, and economic importance of ectothermic (cold-blooded) vertebrates (fish, amphibians, and reptiles) in northeastern U.S. Three lecture hours and three laboratory hours per week.
Offered every 2 years. 4 credits.

BI 334 Wildlife Investigative Techniques
Prerequisites: BI 140 and BI 202
Considers procedures for collection and analysis of field and laboratory data on vertebrate game populations useful to wildlife biologists. Three lecture hours and three laboratory hours per week.
Offered every 2 years. 4 credits

BI 340 Plant Sciences
Prerequisites: BI 140 and BI 141
Morphology, anatomy, physiology of flowering plants with studies on life cycles, ecological relationships, biochemical processes and evolution of plant diversity. Three lecture hours and three laboratory hours per week.
Offered every 3 years. 4 credits.

BI 341 Mycology
Prerequisite: BI 140
The morphology, cytology, and evolution and classification of the fungi. Three lecture hours and three laboratory hours per week.
Offered every 2 years. 4 credits.

BI 344 Soil Biology
Prerequisites: BI 140 and BI 141
Includes study of nutrient cycling, relations between plants, animals and microbes, ecology of polluted soils and soil biotechnology. Three lecture hours and three laboratory hours per week.
Offered every 3 years. 4 credits.

BI 352 Symbiosis and Evolution
Prerequisites: BI 140 and BI 141
Origin and nature of microbial life, evolution of multicellular organisms and the central role played by biological symbioses. Lecture and Laboratory.
Offered every 2 years. 4 credits.
BI 360 Animal Behavior  
Prerequisite: BI 202  
Survey of ethology and behavioral ecology from an historical and evolutionary perspective. Laboratory involves observation and recording of animal behavior.  
Offered every year. 4 credits

BI 371 Molecular Biology  
Prerequisites: BI 141, BI 204; or CH/BI 410  
Emphasis on the molecular biology of the gene. Topics include structure, function, replication, transcription, recombination, mutability, repair and regulation of DNA. Three lecture hours and three laboratory hours per week.  
Offered every 2 years. 4 credits.

BI 372 Immunology  
Prerequisites: BI 140, BI 141, BI 204  
Study of immune system elements and defense mechanisms. Immunological disorders will be discussed. Three lecture hours and three laboratory hours per week.  
Offered every 2 years. 4 credits.

BI 375 Virology  
Prerequisites: BI 140, BI 141 and BI 204  
Physical structure and replication schemes of viruses; role of viruses in human disease, research and commercial applications. Three lecture hours and three laboratory hours per week.  
Offered every 3 years. 4 credits.

BT 375 Tissue Culture  
Prerequisite: CH 120, CH 121  
A review of the methods of animal and plant tissue culture. Media preparation, aseptic techniques and cell culture technology. Three lecture hours and three laboratory hours per week.  
Offered every year. 4 credits.

BT 376 Biotechnology  
Prerequisite: CH 120, CH 121, BI 141  
Principles and applications of recombinant DNA (molecular & microbial aspects). The Biotechnology Industry, including bioreactor manufacturing standards and government rules. Three lecture hours and three laboratory hours per week.  
Offered every year. 4 credits.

BT 378 Bioinformatics  
Prerequisites: BI 141 or BI 203  
Provides an overview of Bioinformatics including database structure, genomics, computational biology and proteomics.  
Offered every 2 years. 4 credits.

BI 380 Biodiversity and Conservation Biology  
Prerequisites: BI 140 and BI 141  
A theoretical and quantitative approach to species, genetic, ecosystem and community diversity in the context of modern conservation biology principles.  
Offered every 3 years. 4 credits.

BI 401 Selected Topics in Biological Sciences  
Prerequisites: Consent of department and instructor  
Each topic is a lecture and/or laboratory course in a selected area of the biological sciences presented by a departmental instructor and/or guest lecturers when appropriate; topic announced in advance.  
Offered every 3 years. 1-4 credits.

BI 402 Independent Studies In Biology  
Prerequisites: Consent of department and instructor  
Advanced semi-independent study (by qualified upper-level Biology majors) of an approved biological problem. Faculty supervision required.  
Offered every year. 1-6 credits.

BI 403 Biology Internship  
Prerequisite: Consent of department  
Intended for qualified, upper-level biology majors. Faculty advisor required. (Should not be used for major requirements.)  
Offered every year. 1-6 credits.
BI 404 Biology Seminar
Prerequisite: Senior Standing
Preparation and presentation of biological topics, chosen with the advice and consent of a faculty advisor. Offered every year. 2 credits.

BI/CH 410 Biochemistry I
Prerequisite: CH 201, CH 202
The chemistry of proteins, nucleic acids, carbohydrates, and lipids; enzymes, biological oxidations; and correlations in intermediary metabolism. Three lecture hours and three laboratory hours per week. Offered every 2 years. 4 credits.

BI/CH 411 Biochemistry II
Prerequisite: BI/CH 410
The generation and storage of metabolic energy; biosynthesis of macromolecular precursors, DNA, RNA, and protein; and biochemical regulation. Three lecture hours and three laboratory hours per week. Offered every 2 years. 4 credits.

BI/PY 451 Nuclear Instrumentation I
Prerequisite: Consent of NMT coordinator
Structure, functions, and interactions of particulate and nonparticulate radiations with matter; detection, calibration, dosage, and statistical methods. Offered every year. 4 credits.

BI/PY 452 Nuclear Instrumentation II
Prerequisite: Consent of NMT coordinator
Designed to further the skills of operating, calibrating, and performing routine maintenance on scanners, gamma cameras, well-counters, and liquid scintillation counters. Offered every year. 4 credits.

BI/CH 453 Radiopharmaceuticals
Prerequisite: Consent of NMT coordinator
Fundamental concepts of radiopharmaceutical production and use; includes basic radiochemistry. Offered every year. 4 credits.

BI 461/BI 462 NMT Clinical Practicum I and II
Prerequisite: Consent of NMT coordinator
Students will spend several days a week in a hospital observing the ongoing activities and procedures of a nuclear medicine facility. Offered every year. BI 461, 2 credits; BI 462, 4 credits.

BI 463 NMT Practicum III
Prerequisite: Consent of NMT coordinator
Guided and supervised by clinical instructors, students begin to acquire manual skills essential to nuclear medicine technology; and in performing all routine nuclear medicine examination and laboratory procedures. Offered every year. 6 credits.

BI 464 NMT Practicum IV
Prerequisite: Consent of NMT coordinator
Upon completion of this practicum, students should be skilled in performing both routine and non-routine nuclear medicine examinations and laboratory procedures. Offered every year. 8 credits.

BI/CH 465 Clinical Nuclear Medicine Technology I
Prerequisite: Consent of NMT coordinator
Considers why a specific test is indicated; which radiopharmaceutical is preferred; and how the basic image appearance, and/or numerical data may be altered by pathological states. Offered every year. 4 credits.

BI/CH 466 Clinical Nuclear Medicine Technology II
Prerequisite: Consent of NMT coordinator
Case presentations using formulas, charts, tables, and calculations to arrive at examination parameters such as dose, number of counts, speed of instrument, etc. Offered every year. 4 credits.
Worcester State University offers a program in biotechnology to meet the need for skilled laboratory associates in the experimental laboratory and in manufacturing facilities of the biotechnology industry. Biotechnology graduates are trained in tissue culture, molecular biology, protein purification, analytical chemistry, regulatory affairs and are eligible for internships.

Graduates are qualified for careers in research and development, quality assurance, quality control, and manufacturing as well as for further (graduate) education.

The Biotechnology major is sponsored jointly by the departments of Biology and Chemistry.

Requirements for a Major in Biotechnology

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI 141</td>
<td>Introduction to Cell and Molecular Biology</td>
<td>4</td>
</tr>
<tr>
<td>BI 204</td>
<td>Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>BT 375</td>
<td>Tissue Culture</td>
<td>4</td>
</tr>
<tr>
<td>BT 376</td>
<td>Biotechnology</td>
<td>4</td>
</tr>
<tr>
<td>BT 410</td>
<td>Biotechnology Seminar</td>
<td>1</td>
</tr>
<tr>
<td>CH 120 &amp; CH 121</td>
<td>General Chemistry I &amp; II</td>
<td>8</td>
</tr>
<tr>
<td>CH 201 &amp; CH 203</td>
<td>Organic Chemistry I, plus Lab</td>
<td>5</td>
</tr>
<tr>
<td>CH 210</td>
<td>Chemical Analysis</td>
<td>4</td>
</tr>
<tr>
<td>CH 410</td>
<td>Biochemistry I</td>
<td>4</td>
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</tbody>
</table>
Plus two major electives that include:

**Major Electives**

- BI 372 Immunology 4
- BI 371 Molecular Biology 4
- BI 252 Radiation Biology 4
- BI 375 Virology 4
- CH 350 Medicinal Chemistry 3
- CH 202 Organic Chemistry II 3
- CH 204 Organic Chemistry II Lab 2
- PY 310 Modern Physics 3
- CH 411 Biochemistry II 4
- BI 341 Mycology 4
- BT 377 Fermentation Technology 4
- BT 378 Bioinformatics 4

And certain other BI 300, CH 300 and PY 300 level courses.

In addition, majors are expected to complete the following ancillary courses:

MA 190 Precalculus (may be waived), MA 200 Calculus I, MA 201 Calculus II or BI 203 Genetics, MA 150 Statistics, PY 221 & PY 222 General Physics I & II, CS 120 Microcomputer Applications, EN 252 Technical Writing or EN 253 Business Communications.

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**Department of Biology: Biotechnology**

**Sample Timeline for Completion of Degree**

**YEAR ONE**

**Semester One**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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*Semester Subtotal: 17*

**Semester Two**

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<td>BI 141</td>
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*Semester Subtotal: 15*

**Comments**

EN 101 and 102 satisfies LASC writing. MA 110 requires and Accuplacer score of 5 or higher.
### YEAR TWO

#### Semester Three

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**Semester Subtotal**: 15

#### Semester Four

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<td>Statistics</td>
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<tr>
<td>LASC or CH 202/204</td>
<td>Distribution Elective or Organic Chemistry II+Lab</td>
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**Semester Subtotal**: 16-18

**Comments**: MA 150 requires an Accuplacer score of 4 or higher.

### YEAR THREE

#### Semester Five

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**Semester Subtotal**: 14

#### Semester Six

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<tr>
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<td>Tissue Culture</td>
<td>4</td>
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<td>PY 222</td>
<td>Physics II (LASC NSP)</td>
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<td>LASC</td>
<td>Distribution Elective (GP*)</td>
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<td>LASC</td>
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**Semester Subtotal**: 14
YEAR FOUR

Semester Seven

<table>
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<tbody>
<tr>
<td>CH 210</td>
<td>Chemical Analysis</td>
<td>4</td>
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<tr>
<td>BI/BT</td>
<td>Upper Level Elective</td>
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<td>LASC</td>
<td>Distribution Elective (Constitutions*)</td>
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<td>Distribution Elective (WAC*)</td>
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Semester Subtotal 14

Semester Eight

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<th>Course Name</th>
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<tbody>
<tr>
<td>BT 450 or BI 401</td>
<td>Internship or Independent Research Project or upper elective</td>
<td>4-6</td>
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<tr>
<td>BT 410</td>
<td>Biotechnology Seminar</td>
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<tr>
<td>CH 410</td>
<td>Biochemistry</td>
<td>4</td>
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<td>LASC</td>
<td>Distribution Elective (QRAC*)</td>
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<td>LASC</td>
<td>Distribution Elective (DAC*)</td>
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</table>

Semester Subtotal 14-17

TOTAL CREDITS= 120-125

Note: The sequence of LASC courses marked with * is a suggestion but serves as a reminder that LASC designated courses must be taken to satisfy the LASC requirements.

Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.

Requirements for a Major in Biotechnology and to meet the prerequisites for the Accelerated Pharmacy Program with Massachusetts College of Pharmacy and Health Science (Please see program description on page 55)

All of the courses listed for a major in biotechnology plus:

<table>
<thead>
<tr>
<th>Course ID</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>BI 140</td>
<td>Introduction to Organismal Biology</td>
</tr>
<tr>
<td>BI 141</td>
<td>Introduction to Cellular and Molecular Biology</td>
</tr>
<tr>
<td>CH 202</td>
<td>Organic Chemistry II</td>
</tr>
<tr>
<td>CH 204</td>
<td>Organic Chemistry Laboratory II</td>
</tr>
</tbody>
</table>

Major in Biotechnology, Concentration in Bioinformatics

The purpose of this interdisciplinary concentration is to prepare students to enter the computer-intensive fields of bioinformatics, computational biology, computational chemistry, and molecular modeling including genomics and proteomics. With the advent of the Human Genome Project, an explosion of genomics information has occurred, and databases such as GenBank and EMBL have grown at a rate that now requires storage, organizing and indexing of the information. Questions of gene expression have led to computational biology, the process of analyzing genomic sequences and to the field of proteomics, the understanding of protein structure and function. The information obtained by computational biology and computational chemistry is used in the design of new drugs to treat a variety of diseases. Major drug and biotechnology companies are seeking people trained in bioinformatics.
In addition to the requirements for the Major in Biotechnology:

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BT 378</td>
<td>Bioinformatics*</td>
<td>4</td>
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<tr>
<td>CS 140</td>
<td>Introduction to Programming</td>
<td>4</td>
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<tr>
<td>CS 242</td>
<td>Data Structures</td>
<td>3</td>
</tr>
<tr>
<td>CS 282</td>
<td>UNIX Systems Programming</td>
<td>3</td>
</tr>
<tr>
<td>CS 265</td>
<td>Database Applications</td>
<td>3</td>
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</table>

*counts as an upper division Cellular/Molecular Biology elective.

Requirements for a Major in Biotechnology, Concentration in Nuclear Medicine Technology: See program description under Biology.

Honors Program in Biotechnology
The Honors Program in Biotechnology is designated as a distinction bestowed on those outstanding undergraduate Biotechnology majors who have demonstrated distinct competence in overall biotechnology course work and who have completed an independent research project of substantial merit. This program offers motivated students the opportunity to develop research and communication skills in preparation for a graduate or professional career.

Requirements for the Honors Program in Biotechnology
- A written thesis describing the student's original research
- Grade point average in science courses of at least 3.5
- Successful completion of BI 205, Research Techniques and Experimental Design
- Enrollment in a minimum of one semester of independent study credit (BI 402 Independent Study) totaling at least 4 credits

Combined BS/MS Program in Biotechnology
The Five Year Combined BS/MS in Biotechnology is open to eligible students and consist of three graduate courses (10 credits) that count toward both degrees. These three courses are Biotechnology and DNA (BI 921), Tissue Culture, and a graduate elective. Also, students begin a research project in the spring semester of the fourth (senior) year. Application requirements include a minimum of 3.0 GPA, two letters of recommendation and the GRE.

Recommended Timeline for Completion of BS/MS Program: Biotechnology

<table>
<thead>
<tr>
<th>YEAR ONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester One</td>
</tr>
<tr>
<td>Course No.</td>
</tr>
<tr>
<td>EN 101</td>
</tr>
<tr>
<td>CH 120</td>
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### Semester Two

<table>
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<td>MA 190 or MA 200</td>
<td>Precalculus or Calculus I</td>
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<td>BI 141</td>
<td>Introduction to Cell and Molecular Biology</td>
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Semester Subtotal 15

### YEAR TWO

#### Semester One

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Semester Subtotal 15

#### Semester Two

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<td>Technical Writing, Business or Microcomputer Applications</td>
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<tr>
<td>LASC or CH 202/204</td>
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<tr>
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Semester Subtotal 16-18

### YEAR THREE

#### Semester One

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<td>Physics I</td>
<td>4</td>
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Semester Subtotal 14
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<td>4</td>
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**YEAR FOUR**

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<td>BI 401</td>
<td>Independent Study: Research Project</td>
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**Summer**

1. Biological Chemistry or Graduate Elective (3)
2. Graduate Elective (3)
3. Statistics requirement for graduate program (3)

**YEAR FIVE**

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<tr>
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<td>BI 990</td>
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**Semester Subtotal** 9

### Biotechnology Courses (Undergraduate)

**For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.**

**BT110 Introduction to Concepts of Biotechnology**  
*LASC—Natural Systems and Processes*  
The uses of Biotechnology. The scientific, economic, social, ethical, and political impact of Biotechnology.  
*Offered every 2 years. 3 credits.*

**BT 210 Introduction to Forensics**  
*LASC—Natural Systems and Processes*  
*Prerequisite: Complete one quantitative reasoning course*  
Survey of forensic case studies and the laboratory techniques used to solve crimes including microscopy, chromatography, entomology, botany, ballistics and DNA electrophoresis.  
*Offered every 3 years. 4 credits.*

**BT 375 Tissue Culture**  
*Prerequisite: CH 120, CH 121*  
A review of the methods of animal and plant tissue culture. Media preparation, aseptic techniques and cell culture technology. Three lecture hours and three laboratory hours per week.  
*Offered every year. 4 credits.*

**BT 376 Biotechnology**  
*Prerequisite: CH 120, CH 121, BI 141*  
Principles and applications of recombinant DNA (molecular & microbial aspects). The Biotechnology Industry including bioreactor manufacturing standards and government rules. Three lecture hours and three laboratory hours per week.  
*Offered every year. 4 credits.*

**BT 377 Fermentation Technology**  
*Prerequisites: BI 141, BI 204*  
Explores the application of biological and engineering principles involved in manufacturing pharmaceutical products.  
*Offered every 2 years. 4 credits.*

**BT 378 Bioinformatics**  
*Prerequisites: BI 203, BI 141*  
Provides an overview of Bioinformatics including database structure, genomics, computational biology and proteomics.  
*Offered every 2 years. 4 credits.*

**BT 410 Biotechnology Seminar**  
*Prerequisites: Consent of Department*  
Up-to-date developments in Biotechnology; preparation and presentation of technical literature. Students will study new techniques and procedures used by the industry.  
*Offered every year. 1 credit.*

**BT 450 Internship in Biotechnology**  
*Prerequisite: Consent of department*  
Qualified upper-level biotechnology majors can learn experimental techniques by working in a research laboratory or a professional manufacturing environment.  
*Offered every year. 3-6 credits.*
Faculty

Jeremy R. Andreatta, Assistant Professor (2012)  
B.S., Tarleton State University; Ph.D., Texas A&M University

Meghna Dilip, Assistant Professor (2008)  
B.Sc., University of Madros, India; M.Sc., Anna University, India;  
M.S., Ph.D., The University of Alabama

Anne M. Falke, Professor (1997)  
B.A., University of Rhode Island; Ph.D., University of New Hampshire

Eihab Jaber, Associate Professor (2006)  
B.A., Hunter College of New York City; M.S, Ph.D., State University of New York,  
Stony Brook

Margaret E. Kerr, Professor (2000), Department Chair  
B.S., University of Maine; Ph.D., Wesleyan University

Susan Mitroka (2013), Assistant Professor  
B.A., Rutger's University; Ph.D., Virginia Polytechnic Institute and State University

Jeffry C. Nichols, Associate Professor (2006)  
B.A., Texas Tech University; Ph.D., Rice University

Joseph G. Quattrucci, Assistant Professor (2011)  
B.A., University of Southern Maine; Ph.D., University of Massachusetts, Amherst

The chemistry program provides education and training in chemistry to students who wish to pursue careers in chemistry, biotechnology, medicine, dentistry, allied health fields, science teaching, environmental science, materials science and engineering. Chemistry is considered the central science because it is required for full understanding of many other sciences as well as medicine. The Chemistry Department offers courses for general education as well as for majors in chemistry, biology, biotechnology, and nursing. Besides the chemistry major and minor programs, the department also offers concentrations in nuclear medicine technology, biochemistry, green chemistry and environmental chemistry, materials science and inorganic chemistry, and bioinformatics. Majors in chemistry may also be eligible for the Accelerated Pharmacy Program with the Massachusetts College of Pharmacy and Health Sciences. The department has a chapter of the Gamma Sigma Epsilon National Honor Society in chemistry. The department offers opportunities for undergraduate research in organic chemistry, bioanalytical chemistry, nanoscience and molecular modeling. The Chemistry Department promotes green chemistry in its curriculum and research.
Requirements for a Major in Chemistry: 45 credits
Core: 33 credits
CH 120 & CH 121 General Chemistry I and II
CH 201 & CH 202 Organic Chemistry I and II (Lectures)
CH 203 & CH 204 Organic Chemistry Laboratory I and II
CH 301 & CH 302 Physical Chemistry I and II (Lectures)
CH 303 Physical Chemistry Laboratory I
CH 210 Chemical Analysis: An Introduction to Modern Methods
CH 475 Chemistry Seminar

Plus a minimum of 12 credits at the 300 level or above, at least one of which must be a lab course. Internships and Independent Study may contribute no more than 3 credits toward this requirement.

In addition, majors are expected to complete the following ancillary courses: MA 200 & MA 201 Calculus I and II, PY 221 & PY 222 General Physics I and II or PY 241 & PY 242 Physics I and II.

Department of Chemistry Sample Timeline for Completion of Degree

YEAR ONE

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LASC</td>
<td>First-Year Seminar</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EN 101</td>
<td>English Composition I</td>
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<td></td>
</tr>
<tr>
<td>CH 120</td>
<td>General Chemistry I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Math and/or Physics</td>
<td>Calculus I (Preferred)* OR (LASC QR) General Physics I (if lower math taken) (LASC NSP)</td>
<td>4</td>
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</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (Constitutions)</td>
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Semester Subtotal 17

<table>
<thead>
<tr>
<th>Semester Two</th>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN 102</td>
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<td>3</td>
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<tr>
<td>LASC</td>
<td>U.S. Constitution</td>
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<td>CH 121</td>
<td>General Chemistry II</td>
<td>4</td>
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</tr>
<tr>
<td>Math and/or Physics</td>
<td>Calculus I (Preferred) OR (LASC QR) General Physics I (if lower math taken) (LASC NSP)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (LASC US)</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Subtotal 17

Comments
It is recommended that students take Calculus (MA 200/1) in their first year and calculus-based physics (PY241/2) in their second year. This sequence gives the best preparation for physical chemistry in the third year. Students who need additional math before taking Calculus may opt instead to take algebra-based General Physics (PY221/2) in their first year and Calculus in their second year. EN 101 & 102 satisfies LASC writing. MA 200/1 satisfies QR. PY221/2, PY 241/2 each satisfies NSP.
### Chemistry

#### YEAR TWO

**Semester Three**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH 201</td>
<td>Organic Chemistry I (Lectures)</td>
<td>3</td>
</tr>
<tr>
<td>CH 203</td>
<td>Organic Chemistry Laboratory I</td>
<td>2</td>
</tr>
<tr>
<td>PY 241</td>
<td>Physics I (preferred*) OR (LASC NSP) Calculus I (if not taken previously) (LASC QR)</td>
<td>4</td>
</tr>
<tr>
<td>CH 210</td>
<td>Chemical Analysis</td>
<td>4</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (ICW)</td>
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<td><strong>Semester Subtotal</strong></td>
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<td><strong>16</strong></td>
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**Semester Four**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CH 202</td>
<td>Organic Chemistry II (Lectures)</td>
<td>3</td>
</tr>
<tr>
<td>CH 204</td>
<td>Organic Chemistry Laboratory II</td>
<td>2</td>
</tr>
<tr>
<td>PY 241</td>
<td>Physics II (preferred*) OR (LASC NSP) Calculus II (if not taken previously) (LASC QR)</td>
<td>4</td>
</tr>
<tr>
<td>CH3/4XX</td>
<td>Chemistry Elective</td>
<td>3-4</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective</td>
<td>3</td>
</tr>
<tr>
<td><strong>Semester Subtotal</strong></td>
<td></td>
<td><strong>15-16</strong></td>
</tr>
</tbody>
</table>

**Comments**

* Students who took General Physics I & II in their first year do not have to take Physics (PY 241/2).

---

### YEAR THREE

**Semester Five**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH 301</td>
<td>Physical Chemistry I (Lectures)</td>
<td>4</td>
</tr>
<tr>
<td>CH 303</td>
<td>Physical Chemistry Laboratory I</td>
<td>2</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective**</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution (PH 130/1 TLC/HBS)</td>
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</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (LASC CA***)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Semester Subtotal</strong></td>
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</tr>
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### Semester Six

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CH 302</td>
<td>Physical Chemistry II (Lectures)</td>
<td>3</td>
</tr>
<tr>
<td>CH3/4XX</td>
<td>Chemistry Upper Level Elective</td>
<td>3-4</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (LASC GP***)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (LASC TLC***)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Subtotal** 15-16

**Comments**

* Students who took General Physics I & II in their first year do not have to take Physics (PY 241/2).

Pre-Pharmacy (3 + 3) students must take Chemistry Seminar in the Fall of Year Three.

### YEAR FOUR

#### Semester Seven

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH 475*</td>
<td>Chemistry Seminar**</td>
<td>2</td>
</tr>
<tr>
<td>CH3/4 XXX</td>
<td>Chemistry Upper Level Elective</td>
<td>3-4</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (LASC CA***)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (LASC HBS***)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (TLC*** )</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Subtotal** 14-15

### Semester Eight

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH3/4 XXX</td>
<td>Chemistry Upper Level Elective</td>
<td>3-4</td>
</tr>
<tr>
<td>SELECT</td>
<td>Free Elective (Chemistry or other)</td>
<td>3-4</td>
</tr>
<tr>
<td>SELECT</td>
<td>Free Elective (Chemistry or other)</td>
<td>3-4</td>
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<tr>
<td>LASC</td>
<td>Distribution Elective</td>
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</tbody>
</table>

**Semester Subtotal** 12-15

**Comments**

** Students who have not taken Chemistry Seminar (a Capstone Experience) must take it in their senior year fall semester.

**TOTAL CREDITS= 121-127**

Note: The sequence of LASC courses marked with *** is a suggestion but serves as a reminder that LASC designated courses must be taken to satisfy the LASC requirements.

Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.
Requirements for a Major in Chemistry, Concentration in Nuclear Medicine Technology: See program description under Biology.

Requirements for a Major in Chemistry, Concentration in Biochemistry:
All of the courses listed above as required for the major in chemistry plus both
CH 410 Biochemistry I and CH 350 Medicinal Chemistry

and any two of the following:
CH 330 Environmental Toxicology
CH 355 Molecular Pharmacology
CH 411 Biochemistry II
BI 375 Molecular Biology
CH 495 Fundamentals of Chemical Research (in appropriate topic for concentration)

Three credits of CH 480 (Chemistry Internship) or CH 490 (Independent Study) in an appropriate topic for the concentration may be substituted for one of the electives with departmental approval.

Requirements for a Major in Chemistry, Concentration in Green Chemistry and Environmental Chemistry:
All of the courses listed above as required for the major in chemistry plus both
CH 320 Environmental Chemistry and CH 335 Green Chemistry

and any two of the following:
CH 330 Environmental Toxicology
CH 336 Environmental and Chemistry Lab
CH 410 Biochemistry I
CH 470 Instrumental Analysis
CH 495 Fundamentals of Chemical Research (in appropriate topic for concentration)

Three credits of CH 480 (Chemistry Internship) or CH 490 (Independent Study) in an appropriate topic for the concentration may be substituted for one of the electives with departmental approval.

Requirements for a Major in Chemistry, Concentration in Materials Science and Inorganic Chemistry:
All of the courses listed above as required for the major in chemistry plus both
CH 340 Advanced Inorganic Chemistry and CH 360 Introduction to Materials Science

and any two of the following:
CH 304 Physical Chemistry Laboratory II
PY 310 Modern Physics
CH 470 Instrumental Analysis
CH 495 Fundamentals of Chemical Research (in appropriate topic for concentration)

Three credits of CH 480 (Chemistry Internship) or CH 490 (Independent Study) in an appropriate topic for the concentration may be substituted for one of the electives with departmental approval.
Requirements for a Major in Chemistry and to meet the prerequisites for the Accelerated Pharmacy Program with Massachusetts College of Pharmacy and Health Sciences:

*(Please see program description on page 55)*

All of the courses listed for the chemistry major core, plus:

- BI 140 Introduction to Organismal Biology
- BI 141 Introduction to Cellular and Molecular Biology
- PY 221 General Physics I
- MA 200 Calculus
- MA 201 Calculus II
- BI 204 Microbiology
- PY 221 General Physics I
- PY 222 General Physics II

Requirements for a Major in Chemistry, Concentration in Bioinformatics:

The purpose of this interdisciplinary concentration is to prepare students to enter computer-intensive fields of bioinformatics, computational biology, computational chemistry and molecular modeling including genomics and proteomics. With the advent of the Human Genome Project, an explosion of genomics information has occurred, and databases such as GenBank and EMBL have grown at a rate that now requires storage, organizing and indexing of the information. Questions of gene expression have led to computational biology, the process of analyzing genomic sequences and to the field of proteomics, the understanding of protein structure and function. The information obtained by computational biology and computational chemistry is used in the design of new drugs to treat a variety of diseases. Major drug and biotechnology companies are seeking people trained in bioinformatics.

In addition to the requirements for the Major in Chemistry:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI 201</td>
<td>Cell Biology or BI 203 Genetics+</td>
<td>4</td>
</tr>
<tr>
<td>BT 378</td>
<td>Bioinformatics</td>
<td>4</td>
</tr>
<tr>
<td>CS 140</td>
<td>Introduction to Programming</td>
<td>4</td>
</tr>
<tr>
<td>CS 242</td>
<td>Data Structures</td>
<td>3</td>
</tr>
<tr>
<td>CS 135</td>
<td>Programming for Non-CS Majors</td>
<td>3</td>
</tr>
<tr>
<td>CS 265</td>
<td>Database Applications</td>
<td>3</td>
</tr>
</tbody>
</table>

One course from:

- BI 201 Cell Biology 4
- BI 203 Genetics+ 4
- BI 204 Microbiology 4
- BI 306 Developmental Biology+ 4
- BI 353 Tree of Life: Evolutionary Systematics 4
- BI 371 Molecular Biology+ 4
- BI 375 Virology+ 4
- BT 376 Biotechnology 4

+ requires additional prerequisite courses beyond those required for the major and concentration.

Chemistry Honors Program:

The Chemistry Honors Program is an upper-level program designed to challenge students majoring in chemistry to excel in their course work, to encourage them to extend their program beyond the basic requirements of the major, and to reward and recognize them for so doing. Students are required to have a 3.5 GPA in chemistry and ancillary courses and a 3.2 GPA overall.
Students would need to complete the following courses in chemistry:

- CH 120 & CH 121  General Chemistry I and II
- CH 201 & CH 202  Organic Chemistry I and II (Lectures)
- CH 203 & CH 204  Organic Chemistry Laboratory I and II
- CH 210   Chemical Analysis: An Introduction to Modern Methods
- CH 301 & CH 302  Physical Chemistry I and II (Lectures)
- CH 303   Physical Chemistry Laboratory I
- CH 475   Chemistry Seminar

The following two courses must be taken as part of the required 12 credits of 300 and 400-level electives:

- CH 340  Advanced Inorganic Chemistry
- CH 410  Biochemistry I

Students would need to complete at least 6 semester hours of research under CH 490 (Independent Study) leading to the writing of a thesis.

In addition, students would be expected to complete the ancillary requirements for the chemistry major in calculus and physics.

**Requirements for a Minor in Chemistry: 18 credits**

- CH 120 & CH 121  General Chemistry I and II
- Ten (10) additional credits in 200- or higher level chemistry courses

**Chemistry Courses (Undergraduate)**

*For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.*

**CH 106 Paper or Plastics?**

*LASC—Natural Systems and Processes*

Students will study modern issues related to chemistry. These will include sustainability, green chemistry, climate change and the ozone layer.

*Offered every year. 3 credits.*

**CH 110 Introduction to General, Organic, and Biochemistry I**

*LASC—Natural Systems and Processes*

An introductory survey of chemistry. Topics include atomic structure, chemical bonding and reactions, acid-base theory, introduction to organic chemistry. Three lecture hours and three laboratory hours per week.

*Offered every year. 4 credits.*

**CH 112 Survey of Chemistry**

*LASC—Natural Systems and Processes*

Chemical and physical properties of inorganic, organic and biochemical compounds with implications for human health and the environment. Ancillary course—Nursing Program. Four lecture hours and two laboratory hours per week.

*Offered every semester. 5 credits*

**CH 120 General Chemistry I**

*LASC—QR, Accuplacer score of 3 required*

Modern survey of chemistry. Topics include chemical equations, properties of gases, atomic structure, periodic table, chemical bonding, chemistry of carbon. Three lecture hours and three laboratory hours per week. CH 120 and 121 provide the foundation for further courses in chemistry.

*Offered every year. 4 credits.*

**CH 121 General Chemistry II**

*Prerequisite: CH 120*

Continuation of CH 120. Topics include principles of thermodynamics, acids and bases, reaction rates, oxidation-reduction reactions, and electrochemistry. Three lecture hours and three laboratory hours per week.

*Offered every year. 4 credits.*
CH 191 Selected Topics
A lecture or laboratory course designed to introduce a selected topic(s) of interest.
Offered every 3 years. 1-4 credits.

CH 193 Special Topics in Chemistry for First-Year Students
All "193" courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval.
Introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar.
Offered every year. 3 credits.

CH 201 Organic Chemistry I (Lectures Only)
Prerequisites: CH 120, CH 121
Structure, reactions, mechanisms, and stereochemistry of the alkanes, alkenes, alkynes, dienes, alkyl halides.
Introduction to aromatic chemistry.
Offered every year. 3 credits.

CH 202 Organic Chemistry II (Lectures Only)
Prerequisite: CH 201
Continuation of CH 201. Reactions and mechanisms of aromatic chemistry; structures and reactions of alcohols, ethers, carboxylic acids, aldehydes, ketones.
Offered every year. 3 credits.

CH 203 Organic Chemistry Laboratory I
Prerequisite or Corequisite: CH 201
Techniques of preparation, purification, and identification of aliphatic compounds. One four-hour laboratory per week.
Offered every year. 2 credits.

CH 204 Organic Chemistry Laboratory II
Prerequisite: CH 203, Prerequisite or Corequisite: CH 202
Application of basic and more advanced techniques to increasingly complicated synthetic problems. One four-hour laboratory per week.
Offered every year. 2 credits.

CH 210 Chemical Analysis: An Introduction to Modern Methods
Prerequisites: CH 120, CH 121
Introduction to modern methods of chemical analysis including gravimetry, acid-base and redox titrations, potentiometry, uv-visible and atomic absorption spectrophotometry, and gas and HPLC chromatography. Two lecture hours and six laboratory hours per week.
Offered every year. 4 credits.

CH 240 Pharmacology
Prerequisites: CH 110, CH 111, BI 161, BI 162
Modes of action of some of the major categories of drugs, their biological activities and responses within the human system.
Offered every year. 3 credits.

CH 301 Physical Chemistry I (Lectures Only)
Prerequisites: CH 120, CH 121, MA 200, MA 201, PY 221 or 241, PY 222 or 242
Study of quantum theory, chemical bonding, spectroscopy, molecular structure and molecular modeling. Three lecture hours and one hour recitation per week.
Offered every year. 4 credits.

CH 302 Physical Chemistry II (Lectures Only)
Prerequisite: CH 301
Continuation of CH 301. Study of first, second and third laws of thermodynamics, and of kinetics, chemical solution and phase equilibria. Three lecture hours per week.
Offered every year. 3 credits.

CH 303 Physical Chemistry Laboratory I
Prerequisite or Corequisite: CH 301
Laboratory deals with methods of physical measurement of chemical systems and their application to the determination of molecular structure, spectroscopy and thermodynamic data. One four hour laboratory per week.
Offered every year. 2 credits.
CH 304 Physical Chemistry Laboratory II
Prerequisite or Corequisite: CH 302
Continuation of CH 303; project-oriented laboratory dealing with the study of reaction rates and mechanisms, electrochemistry, and molecular properties. One four hour laboratory per week.
Offered every 2 years. 2 credits.

CH 320 Environmental Chemistry
Prerequisites: CH 120, CH 121 or CH 201
Chemistry of the atmosphere, soil, and natural water systems, air and water pollution water treatment, hazardous wastes and pollution control.
Offered every 2 years. 3 credits.

CH 330 Environmental Toxicology
Prerequisites: CH 120, CH 121, BI 101
Topics include the pharmacological and biochemical properties of toxins and the effects of toxins on human health, including assessment of risk(s).
Offered every 3 years. 3 credits.

CH 335 Green Chemistry
Prerequisites: CH 120, 121
This course will provide an understanding of the fundamentals of green chemical design that either eliminates or reduces the use or generation of hazardous substances. Three hours of lecture/lab per week.
Offered every year. 3 credits.

CH 336 Environmental and Green Chemistry Laboratory
Prerequisites: CH 120/121 CH 320 or CH 335 (recommended)
Laboratory experiments will demonstrate principles of green chemistry and include topics in environmental sampling, analysis and toxicology. Four hour laboratory per week.
Offered every year. 2 credits.

CH 340 Advanced Inorganic Chemistry
Prerequisites: CH 120, CH 121, CH 201 or CH 202 recommended, CH 301
This course is a survey of the chemistry of the inorganic elements, focusing on the relationship between electronic structure, physical properties, and reactivity across the periodic table.
Offered every 2 years. 3 credits.

CH 350 Medicinal Chemistry
Prerequisites: CH 201, CH 202
A study of how drugs work and the science and technology of modern drug discovery illustrated with case histories. Three lecture hours per week.
Offered every 3 years. 3 credits.

CH 355 Molecular Pharmacology
Prerequisites: CH 201, CH 202, BI 140 and Prerequisite or Co-requisite CH 410
Course examines the interdisciplinary science of pharmacology from a chemical perspective. Topics include pharmacotherapeutics, pharmacokinetics, pharmacodynamics, pharmacognosy, pharmacy and toxicology. Three lecture hours per week.
Offered every two years. 3 credits.

CH/PY 360 Introduction to Materials Science
Prerequisites: CH 120, CH 121, and either PY 221, PY 222 or PY 241, PY 242
Offered every year. 3 credits.
Chemistry

CH/PY 370 Introduction to Nuclear Science
Prerequisites: CH 120, CH 121, MA 200 Calculus I, and either PY 221, PY 222 or PY 241, PY 242
Fundamentals of nuclear science. Topics include nuclear structure and forces, radioactive decays, nuclear reactions, and modern applications.
Offered every 2 years. 3 credits.

CH/BI 410 Biochemistry I
Prerequisites: CH 201, Prerequisite or Corequisite: CH 202
The chemistry of proteins, nucleic acids, carbohydrates, and lipids; enzymes, biological oxidations; and correlations in intermediary metabolism. Three lecture hours and three laboratory hours per week.
Offered every year. 4 credits.

CH/BI 411 Biochemistry II
Prerequisite: CH/BI 410
The generation and storage of metabolic energy; biosynthesis of macromolecular precursors, DNA, RNA, and protein; and biochemical regulation. Three lecture hours per week.
Offered every 3 years. 3 credits.

CH 415 Nucleic Acids Biochemistry
Prerequisites: CH 201, CH 202; CH 410 recommended
Structure and function of nucleic acids in prokaryotes and eukaryotes. Topics include nucleotide metabolism, replication, repair, and recombinant DNA techniques.
Offered every 3 years. 3 credits.

CH 425 Bioanalytical Chemistry
Prerequisites CH 201, CH 202 and CH 203
Separation, identification and analysis of biological compounds using modern biochemical methods. Two lecture hours and six laboratory hours per week.
Offered every 3 years. 4 credits.

CH 450 Computational Chemistry
Prerequisites: CH 301
Modern theoretical methods used in studying molecular structure, bonding, and reactivity. Application of these theories to various chemical systems.
Offered every 2 years. 3 credits.

CH/BI 453 Radiopharmaceuticals
Prerequisite: Consent of NMT coordinator
Fundamental concepts of radiopharmaceutical production including basic radiochemistry.
Offered every year. 4 credits.

CH 455 Special Topics in Chemistry
Prerequisites: 18 credits in Chemistry and consent of Department
Exploration of frontier areas of chemistry, including chemical kinetics, quantum chemistry, polymers, spectroscopy, materials science, environmental, bioinorganic and medicinal chemistry.
Offered every 3 years. 3-4 credits.

CH/BI 465 Clinical Nuclear Medicine Technology I
Prerequisite: Consent of NMT coordinator
Why a specific test is indicated; which radiopharmaceutical is preferred; and how the basic image appearance and/or numerical data may be altered by pathological states.
Offered every year. 4 credits.
Chemistry

CH/BI 466 Clinical Nuclear Medicine Technology II
Prerequisite: Consent of NMT coordinator
Case presentations using formulas, charts, tables, and calculations to arrive at examination parameters such as amount of dose, number of counts, speed of instrument, etc.
Offered every year. 4 credits.

CH 470 Instrumental Analysis
Prerequisites: CH 120, CH 121, together with CH 210 or CH 301 or two years of analytical laboratory experience
Advanced level survey of instrumental methods of separation and analysis including spectrophotometry, potentiometry, polarography, and chromatography. Laboratories are project-oriented. Two lecture hours and six laboratory hours per week.
Offered every 2 years. 4 credits.

CH 475 Chemistry Seminar
Prerequisite: Consent of department
Contemporary developments in chemistry, review of technical literature in both print and electronic format, preparation and presentation of technical paper.
Offered every year. 2 credits.

CH 480 Chemistry Internship
Prerequisite: Consent of department
Project completed at an institution other than Worcester State by a student with a non-Worcester State sponsor and Worcester State liaison.
Offered every year. 1-6 credits.

CH 485 Directed Study in Chemistry
Prerequisites: 18 credits in Chemistry and Consent of Department
Designed for the undergraduate who wishes to undertake individualized study in chemistry on topic mutually agreeable to student and instructor.
Offered every year. 3-4 credits.

CH 490 Independent Study in Chemistry
Prerequisite: Consent of department
Advanced independent work on a research problem in chemistry mutually agreed to by the student and the instructor.
Offered every year. 1-6 credits.

CH 495 Fundamentals of Chemical Research
Prerequisite: Consent of instructor required
Students will conduct research on an assigned project with individual guidance and supervision from the instructor.
One lecture hour and four laboratory hours per week.
Offered every semester. 3 credits.
Communication Sciences and Disorders
Department of Communication Sciences and Disorders

Faculty

Sharon M. Antonucci, Assistant Professor (2012)
B.A., Connecticut College; M.S. Teacher’s College, Columbia University;
Ph.D., University of Arizona

Joan E. Butterworth, Clinical Instructor (2008)
B.S., Northeastern University; M.S., Purdue University

Keith N. Darrow, Department Chair, Associate Professor (2010)
B.S., University of Massachusetts; M.S., Brooklyn College; Ph.D., Massachusetts
Institute of Technology and Harvard Medical School

Kara F. Medeiros (2013)
B.S., Elmhurst College; M.S., Texas A&M, Kingsville; Ph.D., University of Nebraska,
Lincoln

Kenneth S. Melnick, Associate Professor (2004)
B.A., University of Michigan; M.A., University of Cincinnati; Ph.D., Vanderbilt University

Susanna E. Meyer, Professor (1997)
B.A., M.S., Ph.D., University of Pretoria, South Africa

Roger L. Towne, Associate Professor (2004)
B.A., M.A., University of Montana; Ph.D., Southern Illinois University (Carbondale)

B.S., Boston College; M.S., Syracuse University

The goal of the Department of Communication Sciences and Disorders is to facilitate
an understanding of normal human communication processes as well as disorders in
communication that can develop or be acquired. Communication is defined as the sharing of
needs, experiences, ideas, thoughts, and feelings with other people through such modalities
as talking, listening, writing, reading, and nonverbal means. Undergraduate students in
Communication Sciences and Disorders begin by learning the scientific foundations of the
normal processes of communication. This scientific basis is followed by an introduction to
the disorders that can occur in speech, language, and/or hearing in children and adults.

The undergraduate program in Communication Sciences and Disorders immerses students
in an academically rigorous and challenging course of study. It provides students with a
strong preparation for graduate study in many fields including Speech-Language Pathology
and Audiology. In addition, a CSD baccalaureate degree prepares students to pursue
such opportunities as speech-language pathology assistants, audiology assistants, and
applied behavioral analysis technologists. Overall, the major provides students with a
range of abilities that will help them in either graduate school or in the workplace. These skills include interpersonal, critical thinking, problem-solving, scientific reasoning, writing, and presentation abilities.

A baccalaureate degree in Communication Sciences and Disorders forms an excellent basis for graduate study in many areas, primarily health-related and education. In particular, students are prepared for graduate school in speech-language pathology, audiology, or speech and hearing science. Speech-language pathologists work with a wide range of human communication and its disorders. They evaluate, diagnose, and treat speech, language, cognitive-communication, and swallowing disorders in individuals of all ages, from infants to the elderly. Audiologists are experts in the non-medical management of the auditory and balance systems. They specialize in the study of normal and impaired hearing, prevention of hearing loss, identification and assessment of hearing and balance problems, and rehabilitation of people with hearing and balance disorders.

To become a speech-language pathologist or audiologist, one must have a graduate degree. Students considering a profession in speech-language pathology or audiology should have an interest in helping people and the sensitivity, warmth, and perspective to be able to interact with people who have a communication problem. Scientific aptitude, patience, emotional stability, tolerance, resourcefulness, imagination, and persistence are necessary. In addition, students should have a commitment to work cooperatively with others and the ability to communicate well in both oral and written forms.

Requirements for a Major: 46 credits

CD 100 Introduction to Human Communication and its Disorders
CD 103 Language Science
CD 110 Anatomy and Physiology of Speech and Hearing
CD 115 Normal Development of Speech and Language
CD 201 Hearing Science
CD 202 Speech Science
CD 205 Phonetics
CD 230 Neuroscience for Communication Sciences and Disorders
CD 301 Directed Observations
CD 305 Introduction to Audiology
CD 310 Language Disorders
CD 320 Speech Disorders
CD 400 Introduction to Aural Rehabilitation
CD 401 Advanced Directed Observations
CD 410 Professional Guidelines and Skills
CD 475 Selected Topics in Communication Sciences and Disorders

The minimum grade students may be allowed to obtain in any prerequisite course before being allowed to take the subsequent courses in the CSD major is a C. In addition, the maximum number of times students may take a course in the CSD major is twice (i.e., one repetition).

Students will be screened for adequate speech and language patterns and recommendations made for therapy when appropriate.

Out of department requirements include: one biological science, one physical science, one math (college algebra or higher level), one statistics, and two social sciences of which one must be in developmental psychology. These requirements cannot be taken pass/fail. Communication Sciences and Disorders advisors will help students choose appropriate courses in these areas.

Department of Communication Sciences and Disorders
Sample Timeline for Completion of Degree
## YEAR ONE

### Semester One

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>LASC</td>
<td>First-Year Seminar</td>
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<tr>
<td>EN 101</td>
<td>English Composition I</td>
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<tr>
<td>CD 100</td>
<td>Introduction to Human Communication and Its Disorders</td>
<td>3</td>
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<tr>
<td>PS 101</td>
<td>General Psychology (LASC HBS)</td>
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</tr>
<tr>
<td>MA 110</td>
<td>College Algebra</td>
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Semester Subtotal 15

### Semester Two

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN 102</td>
<td>English Composition II</td>
<td>3</td>
</tr>
<tr>
<td>CD 103</td>
<td>Language Science</td>
<td>3</td>
</tr>
<tr>
<td>CD 110</td>
<td>Anatomy and Physiology of Speech and Hearing</td>
<td>3</td>
</tr>
<tr>
<td>STATISTICS</td>
<td>MA 150 or PS 275 (LASC QR)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (USW)</td>
<td>3</td>
</tr>
</tbody>
</table>

Semester Subtotal 15

Comments: MA 110 requires an Accuplacer score of 5 or higher. MA 150 requires an Accuplacer score of 4 or higher. EN 101 and 102 satisfy LASC Writing.

## YEAR TWO

### Semester Three

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD 201</td>
<td>Hearing Science (QRAC)</td>
<td>3</td>
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<tr>
<td>CD 205</td>
<td>Phonetics</td>
<td>3</td>
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<tr>
<td>BI*</td>
<td>BI 101 (LASC NSP) or BI 161</td>
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<td>Distribution Elective (CA**)</td>
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Semester Subtotal 16

### Semester Four

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD 115</td>
<td>Normal Development of Speech and Language</td>
<td>3</td>
</tr>
<tr>
<td>CD 230</td>
<td>Neuroscience</td>
<td>3</td>
</tr>
<tr>
<td>PS 210</td>
<td>Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Phys. Sci.*</td>
<td>PY 114, PY 105, NS 121, CH 105 (NSP)</td>
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<tr>
<td>LASC</td>
<td>Distribution Elective (TLC**)</td>
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</tbody>
</table>

Semester Subtotal 16

Comments: CD 201 requires an Accuplacer score of 3 or higher. BI 101 satisfies LASC NSP. * See your advisor for a full list of approved courses.

## YEAR THREE
### Semester Five

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD 202</td>
<td>Speech Science</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (HBS**)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (ICW**)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (DAC**)</td>
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<tr>
<td>SELECT</td>
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**Semester Subtotal** 15

### Semester Six

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>CD 301</td>
<td>Directed Observation</td>
<td>2</td>
</tr>
<tr>
<td>CD 310</td>
<td>Language Disorders</td>
<td>3</td>
</tr>
<tr>
<td>CD 320</td>
<td>Speech Disorders</td>
<td>3</td>
</tr>
<tr>
<td>CD 305</td>
<td>Introduction to Audiology</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (Constitutions)</td>
<td>3</td>
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<tr>
<td>SELECT</td>
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</tbody>
</table>

**Semester Subtotal** 17

**Comments**

CD 202 requires an Accuplacer score of 3 or higher.

**YEAR FOUR**

### Semester Seven

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD 400</td>
<td>Aural Rehabilitation Theory (DAC)</td>
<td>3</td>
</tr>
<tr>
<td>CD 401</td>
<td>Advanced Directed Observations</td>
<td>2</td>
</tr>
<tr>
<td>CD 410</td>
<td>Professional Guidelines and Skills (CAP)</td>
<td>3</td>
</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
</tr>
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</table>

**Semester Subtotal** 14

### Semester Eight

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD 475</td>
<td>Special Topics in Communication Sciences and Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
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<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Subtotal** 15

**Comments**

CD 301 with CD 401 satisfy LASC WAC.

**TOTAL CREDITS** 123
the course. The sequence of LASC courses marked with ** is a suggestion but serves as a reminder that LASC Distribution Electives must be taken to satisfy the LASC requirements. The second semester of year two or first semester of year three are the best choices for students who are interested in study abroad or NSE. Students should plan their semester abroad with their department advisor at least one year in advance to assure that they can complete CSD requirements in a timely manner.

Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.

**CSD Honors Program**

The CSD Honors Program is intended for outstanding students within the CSD major. Students completing the requirements will graduate with departmental honors. Applicants must submit a letter of application to the CSD Undergraduate Committee, a research proposal, and a letter of support from a faculty sponsor. Applications are due November 1st for Spring semester and April 1st for Fall semester.

To be part of the program, CSD students must have:
- A minimum GPA of 3.5
- No grade less that a B in all CSD courses and non-CSD required courses
- Completed a total of 60 credits
- Completed CD 110, 115, 201, 202, 205, and 230

Once accepted into the CSD Honors Program, students will:
- Complete a research project in collaboration with a CSD faculty mentor
- Defend the project before the CSD undergraduate committee
- Present the project in at least one venue

**Requirements for a Minor:** 18 credits within the department; 15 credits must include:

- CD 100 Introduction to Human Communication and its Disorders
- CD 103 Language Science
- CD 110 Anatomy and Physiology of Speech and Hearing
- CD 115 Normal Development of Speech and Language
- CD 205 Phonetics

For students taking prerequisites for the Speech-Language Pathology graduate program, two additional courses, CD 201 Hearing Science and CD 202 Speech Science, must be completed. Grades in these minor courses are heavily weighted in consideration for graduate admission.
Communication Sciences and Disorders Courses (Undergraduate)

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

CD 100 Introduction to Human Communication and its Disorders
LASC—Human Behavior and Social Processes; Individual and Community Well-Being
Offered every year. 3 credits.

CD 103 Language Science
LASC—Thought, Language, and Culture
Introduction to basic linguistic knowledge including theoretical areas of pragmatics, semantics, syntax, morphology and phonology in a multicultural perspective.
Offered every year. 3 credits.

CD 110 Anatomy and Physiology of Speech and Hearing
LASC—Natural Systems and Processes
Normal anatomy and physiology of the speech and hearing mechanism with emphasis on respiration, phonation, articulation, audition, and neurology.
Offered every year. 3 credits.

CD 115 Normal Development of Speech and Language
An in-depth coverage of the normal acquisition and development of speech and language, including phonology, morphology, syntax, semantics and pragmatics.
Offered every year. 3 credits.

CD 120 Introduction to Sign Language
Sign language systems and fingerspelling with emphasis on American Sign Language vocabulary and word order.
Offered every year. 3 credits.

CD 193 Special Topics in Communication Sciences and Disorders for First-Year Students
All "193" courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval.
Introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar.
Offered every year. 3 credits.

CD 201 Hearing Science
LASC—Quantitative Reasoning Across the Curriculum
Prerequisite: CD 110, Accuplacer Code>= 3
Basic concepts/information needed to study audiology and aural rehabilitation: physical acoustics, physiological acoustics, and psycho-acoustics.
Offered every year. 3 credits.

CD 202 Speech Science
Prerequisites: CD 110, CD 205, Accuplacer Code>= 3
An exploration of the psycho-acoustic aspects of speech with an emphasis on laboratory analysis, including spectrography.
Offered every year. 3 credits.

CD 205 Phonetics
The study of English speech sounds, their articulation and acoustic characteristics, and speech transcription using the International Phonetic Alphabet.
Offered every year. 3 credits.

CD 230 Neuroscience for Communication Sciences and Disorders
LASC—Natural Systems and Processes
Structure and function of the nervous system and its relation to normal and disordered speech, language, and hearing.
Offered every year. 3 credits.
CD 301 Directed Observations
LASC—Writing Across the Curriculum (on successful completion of CD 401)
Prerequisite: EN 101, EN 102, and permission of instructor
Beginning aspects of clinical issues including objectives, rapport, and timing. Therapy/diagnostic sessions will be viewed and highlighted by instructor.
Offered every year. 2 credits.

CD 305 Introduction to Audiology
Prerequisite: CD 201
Introduction to audiometric testing techniques and interpretation as related to ear pathologies.
Offered every year. 3 credits.

CD 307 Intermediate Sign Language
Prerequisite: CD 120
Students gain more facility in sign usage. Receptive and expressive vocabularies are expanded and fluency increased.
Offered every year. 3 credits.

CD 310 Language Disorders
Prerequisites: CD 100, CD 103, CD 110, CD 115, CD 205, CD 230
Examination of the processes interfering with normal language acquisition and the disorders which disturb established language skills in children and adults.
Offered every year. 3 credits.

CD 320 Speech Disorders
Prerequisites: CD 100, CD 110, CD 115, CD 201, CD 202, CD 205, CD 230
Study of the theoretical bases of articulation, voice and fluency disorders. Etiology, characteristics, evaluation and rehabilitation of these disorders.
Offered every year. 3 credits.

CD 400 Introduction to Aural Rehabilitation
LASC—Diversity Across the Curriculum
Prerequisites: CD 201, CD 202, CD 305, CD 310, CD 320
Study of the theoretical basis of the characteristics, evaluation and treatment of individuals with hearing impairment across the life span.
Offered every year. 3 credits.

CD 401 Advanced Directed Observations
LASC—Writing Across the Curriculum (on successful completion of CD 301)
Prerequisites: CD 301
Advanced aspects of clinical issues including procedures and material selection. Therapy/diagnostic sessions will be viewed and highlighted by the instructor.
Offered every year. 2 credits.

CD 410 Professional Guidelines and Skills
LASC—Capstone
Prerequisites: CD 305, CD 310, CD 320
Presentation of professional issues; observation and practice in evaluation and treatment of speech-language disorders.
Offered every year. 3 credits.

CD 475 Selected Topics in Communication Sciences and Disorders
Prerequisites: CD 310, CD 320
Selection of topics of mutual interest to the student and faculty. Timely topics and issues will be covered.
Offered every year. 1-3 credits.

CD 490 Independent Study in Communication Sciences and Disorders
Prerequisite: Junior and senior majors only
In-depth study, research, or field experience in an area of interest in speech-language pathology or audiology under faculty supervision.
Offered every year. 1-3 credits.
School of Education, Health and Natural Sciences

Computer Science
Department of Computer Science

Faculty

Elena Braynova, Associate Professor (2003), Department Chair
M.S., University at Buffalo, The State University of New York;
M.S., Ph.D., Moscow State University, Russia

Aparna Mahadev, Professor (1999)
B.Sc., University of Madras, India; M. Sc., University of Madras, India;
M.S., Indian Institute of Technology, India; Ph.D. University of Waterloo, Canada

Hemant Pendharkar, Professor (2001)
B.S., M.S., University of Bombay, India; M.S., Ph.D., University of New Hampshire

Karl R. Wurst, Professor (1999)
B.S., Central Connecticut State University; M.S., Ph.D., University of Connecticut

The Computer Science program offers an undergraduate education that promotes lifelong intellectual growth and prepares students for professional careers and advanced study. The program is grounded in the principles, theories, and application of the science of computing with a special emphasis in the areas of Big Data Analytics and Software Development.

Students will develop the ability to effectively apply discipline knowledge to solve real-world problems, adapt as the field changes, and make ethical decisions. The curriculum provides the foundations of team skills, and allows students to improve their interpersonal skills and professional attitudes. Students will have an opportunity to participate in an internship and in undergraduate research.

Program Outcomes for the Major in Computer Science

Upon completion of the Computer Science Major students will be able to:

- Analyze a problem, develop/design multiple solutions and evaluate and document the solutions based on the requirements.
- Communicate effectively both in written and oral form.
- Identify professional and ethical considerations, and apply ethical reasoning to technological solutions to problems.
- Demonstrate an understanding of and appreciation for the importance of negotiation, effective work habits, leadership, and good communication with teammates and stakeholders.
- Learn new models, techniques, and technologies as they emerge and appreciate the necessity of such continuing professional development.

It is highly recommended that entering students have four years of high school mathematics including the equivalent of pre-calculus.
Students wishing to apply courses transferred from other institutions to the Computer Science major should meet with the department chair to determine the applicability of the courses before registering for any Computer Science courses at Worcester State University.

Non-traditional students with more than 5 years of Computer Science work experience may be eligible to participate in the Next Step Program. The program offers an opportunity to gain credit in the major for writing a prior learning portfolio. The department chair can assist you in determining if the program will serve your educational goals.

**Requirements for a Major in Computer Science:** Students must complete a core of seven Computer Science courses, one of the two Computer Science concentrations, two Computer Science Elective courses, and 39 credits of Ancillary courses.

**Core Courses:** 24 Credits

- CS 101 Basics of Computer Science
- CS 140 Introduction to Programming
- CS 155 Computer Networking, Security and Databases
- CS 242 Data Structures
- CS 254 Computer Organization and Architecture
- CS 282 UNIX Systems Programming
- CS 373 Operating Systems

**Elective Courses:** 6 Credits in Computer Science courses at the 300 level or above. Up to 3 credits of Internship (CS 498) and up to 3 credits of Independent Study (CS 499) may be used to satisfy the major elective requirements.

**Ancillary Requirements:** 39 credits (may apply to LASC requirements). These ancillary courses cannot be taken on a pass/fail basis.

- CM 110 Public Speaking
- EN 252 Technical Writing
- UR 230 Technology, Public Policy & Urban Society
- MA 150 Statistics I
- MA 200 Calculus I
- MA 220 & MA 290 Discrete Mathematics I and II
- A math course above MA 200
- 2 lab science courses
- 1 approved math or science course chosen from a department-approved list of courses.

**Concentration in Big Data Analytics**

Data is being generated at high speed, in large volumes, and by a variety of systems around the world. In such a data-driven and information-centric world, the ability to analyze information and make informed decisions is crucial to every field including business, medicine, the sciences, entertainment, and government. This concentration provides students with the skills, techniques, and knowledge needed to pursue a career in this field.

**Requirements for the Concentration in Big Data Analytics:** 12 credits in addition to the Core, Elective, and Ancillary courses.

- CS 353 Information Organization, Management and Retrieval
- CS 383 Cloud, Parallel and Distributed Computing
- CS 453 Data Mining
- CS 483 Big Data Analytics Capstone
# Department of Computer Science: Big Data Analytics Concentration

**Sample Timeline for Completion of Degree**

## YEAR ONE

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CS 101</td>
<td>Basics of Computer Science</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>EN 101</td>
<td>English Composition I (WRI)</td>
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<tr>
<td></td>
<td>MA 190</td>
<td>Pre-calculus* (QR)</td>
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<tr>
<td></td>
<td>LASC</td>
<td>Freshmen Seminar (FYS)</td>
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<td>LASC</td>
<td>Distribution Elective (CON****)</td>
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<tr>
<td></td>
<td></td>
<td><strong>Semester Subtotal</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

**Comments**: *If the student's math placement score requires her/him to take MA 190 Pre-calculus, it should be taken this semester, so that MA 200 Calculus I can be taken in the Spring semester. EN 101 & 102 satisfy LASC writing requirements.*

<table>
<thead>
<tr>
<th>Semester Two</th>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CS 140</td>
<td>Introduction to Programming</td>
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</tr>
<tr>
<td></td>
<td>CM 155</td>
<td>Computer Networking, Security and Databases</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>EN 102</td>
<td>English Composition II (WR II)</td>
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<tr>
<td></td>
<td>MA 200</td>
<td>Calculus I (QR)</td>
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<td></td>
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<td><strong>Semester Subtotal</strong></td>
<td><strong>14</strong></td>
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## YEAR TWO

<table>
<thead>
<tr>
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<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>CS 242</td>
<td>Data Structures</td>
<td>4</td>
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<tr>
<td></td>
<td>EN 252</td>
<td>Technical Writing (WAC)</td>
<td>3</td>
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<tr>
<td></td>
<td>MA 220</td>
<td>Discrete Mathematics I (QR)</td>
<td>4</td>
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<td></td>
<td>UR 230</td>
<td>Technology, Public Policy and Urban Society (HBS)</td>
<td>3</td>
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<tr>
<td></td>
<td></td>
<td><strong>Semester Subtotal</strong></td>
<td><strong>14</strong></td>
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<table>
<thead>
<tr>
<th>Semester Four</th>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>CS 254</td>
<td>Computer Organization and Architecture</td>
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<tr>
<td></td>
<td>CS 282</td>
<td>UNIX Systems Programming</td>
<td>3</td>
</tr>
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<td></td>
<td>MA 290</td>
<td>Discrete Mathematics II</td>
<td>4</td>
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<td></td>
<td>CM 110</td>
<td>Public Speaking (TLC)</td>
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<td><strong>Semester Subtotal</strong></td>
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## YEAR THREE

### Semester Five

<table>
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<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CS 373</td>
<td>Operating Systems</td>
<td>3</td>
</tr>
<tr>
<td>CS 353</td>
<td>Information Organization, Management and Retrieval</td>
<td>3</td>
</tr>
<tr>
<td>MA 150</td>
<td>Statistics I (QR)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Lab Science** (NSP)</td>
<td>4</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (USW****)</td>
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</table>

**Semester Subtotal 16**

**Comments**

**All Math and Science courses must be selected from a list of department-approved courses.**

### Semester Six

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 383</td>
<td>Cloud, Parallel and Distributed Computing</td>
<td>3</td>
</tr>
<tr>
<td>CS</td>
<td>300+ Level Elective in Major</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>200+ Level Elective in Mathematics**</td>
<td>3-4</td>
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<tr>
<td>LASC</td>
<td>Lab Science** (NSP)</td>
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</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (DAC****)</td>
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</tr>
</tbody>
</table>

**Semester Subtotal 16-17**

**Comments**

**All Math and Science courses must be selected from a list of department-approved courses.**

## YEAR FOUR

### Semester Seven

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 453</td>
<td>Data Mining</td>
<td>3</td>
</tr>
<tr>
<td>CS</td>
<td>300+ Level Elective in Major</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (CA****)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (GP****)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (QRAC****)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Subtotal 15**

### Semester Eight

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 483</td>
<td>Big Data Analytics Capstone (CAP)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (ICW****)</td>
<td>3</td>
</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
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<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
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<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Subtotal 12**

**TOTAL CREDITS = 120**
† This four-year plan assumes a Math Placement score of at least 6.

Note: The sequence of LASC courses marked with **** is a suggestion but serves as a reminder that LASC designated courses must be taken to satisfy the LASC requirements.

Once LASC requirements are satisfied, students may select general requirements. Please refer to the University Catalog for specific curriculum details regarding your major and LASC requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.

**Concentration in Software Development**

Software systems impact all aspects of our lives, from our phones, to our cars, to our work lives, and beyond. Software developers analyze the software and infrastructure needs of people and organizations and then coordinate the design, implementation, and testing of the solutions. This concentration provides students with the skills, techniques, and knowledge needed to pursue a career in this field.

**Requirements for the Concentration in Software Development:** 12 credits in addition to the Core, Elective, and Ancillary courses.

- CS 343 Software Construction, Design and Architecture
- CS 348 Software Process Management
- CS 443 Software Quality Assurance and Testing
- CS 448 Software Development Capstone

---

**Department of Computer Science: Software Development Concentration**

**Sample Timeline for Completion of Degree †**

### YEAR ONE

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CS 101</td>
<td>Basics of Computer Science</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>EN 101</td>
<td>English Composition I (WRI)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MA 190</td>
<td>Pre-calculus* (QR)</td>
<td>4</td>
</tr>
<tr>
<td>LASC</td>
<td>Freshmen Seminar (FYS)</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (CON****)</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Semester Subtotal</strong></td>
<td></td>
<td><strong>16</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Comments</strong></td>
<td><em>If the students math placement score requires her/him to take MA 190 Pre-calculus, it should be taken this semester, so that MA 200 Calculus I can be taken in the Spring semester. EN 101 &amp; 102 satisfy LASC writing requirements.</em></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Two</th>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CS 140</td>
<td>Introduction to Programming</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>CM 155</td>
<td>Computer Networking, Security and Databases</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>EN 102</td>
<td>English Composition II (WRII)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MA 200</td>
<td>Calculus I (QR)</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td><strong>Semester Subtotal</strong></td>
<td></td>
<td><strong>14</strong></td>
</tr>
</tbody>
</table>
## YEAR TWO

### Semester Three

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 242</td>
<td>Data Structures</td>
<td>4</td>
</tr>
<tr>
<td>EN 252</td>
<td>Technical Writing (WAC)</td>
<td>3</td>
</tr>
<tr>
<td>MA 220</td>
<td>Discrete Mathematics I (QR)</td>
<td>4</td>
</tr>
<tr>
<td>UR 230</td>
<td>Technology, Public Policy and Urban Society (HBS)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Semester Subtotal</strong></td>
<td><strong>14</strong></td>
</tr>
</tbody>
</table>

### Semester Four

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 254</td>
<td>Computer Organization and Architecture</td>
<td>4</td>
</tr>
<tr>
<td>CS 282</td>
<td>UNIX Systems Programming</td>
<td>3</td>
</tr>
<tr>
<td>MA 290</td>
<td>Discrete Mathematics II</td>
<td>4</td>
</tr>
<tr>
<td>CM 110</td>
<td>Public Speaking (TLC)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Semester Subtotal</strong></td>
<td><strong>14</strong></td>
</tr>
</tbody>
</table>

## YEAR THREE

### Semester Five

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 373</td>
<td>Operating Systems</td>
<td>3</td>
</tr>
<tr>
<td>CS 343</td>
<td>Software Construction, Design and Architecture</td>
<td>3</td>
</tr>
<tr>
<td>MA 150</td>
<td>Statistics (QR)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Lab Science** (NSP)</td>
<td>4</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (USW****)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Semester Subtotal</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

**Comments**

**All Math and Science courses must be selected from a list of department-approved courses.**

### Semester Six

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 348</td>
<td>Software Process Management</td>
<td>3</td>
</tr>
<tr>
<td>CS</td>
<td>300+ Level Elective in Major</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>200+ Level Elective in Mathematics**</td>
<td>3-4</td>
</tr>
<tr>
<td>LASC</td>
<td>Lab Science** (NSP)</td>
<td>4</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (DAC****)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Semester Subtotal</strong></td>
<td><strong>16-17</strong></td>
</tr>
</tbody>
</table>

**Comments**

**All Math and Science courses must be selected from a list of department-approved courses.**
YEARS

YEAR FOUR

Semester Seven

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 443</td>
<td>Software Quality Assurance and Testing</td>
<td>3</td>
</tr>
<tr>
<td>CS</td>
<td>300+ Level Elective in Major</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (CA****)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (GP****)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (QRAC****)</td>
<td>3</td>
</tr>
</tbody>
</table>

Semester Subtotal 15

Semester Eight

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 448</td>
<td>Software Development Capstone (CAP)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (ICW****)</td>
<td>3</td>
</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

Semester Subtotal 12

TOTAL CREDITS= 120

† This four-year plan assumes a Math Placement score of at least 6.

Note: The sequence of LASC courses marked with **** is a suggestion but serves as a reminder that LASC designated courses must be taken to satisfy the LASC requirements.

Once LASC requirements are satisfied, students may select general requirements. Please refer to the University Catalog for specific curriculum details regarding your major and LASC requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.

Major in Computer Science, Concentration in Bioinformatics

The purpose of this interdisciplinary concentration is to prepare Computer Science students to enter science-intensive fields of bioinformatics, computational biology, computational chemistry and molecular modeling including genomics and proteomics. With the advent of the Human Genome Project, an explosion of genomics information has occurred, and databases such as GenBank and EMBL have grown at a rate that now requires storage, organizing and indexing of the information.

Questions of gene expression have led to computational biology, the process of analyzing genomic sequences and to the field of proteomics, the understanding of protein structure and function. The information obtained by computational biology and computational chemistry is used in the design of new drugs to treat a variety of diseases. Major drug and biotechnology companies are seeking people trained in bioinformatics.
In addition to the requirements for the Major in Computer Science:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI 141</td>
<td>Introduction to Cellular and Molecular Biology</td>
<td>4</td>
</tr>
<tr>
<td>BT 378</td>
<td>Bioinformatics</td>
<td>4</td>
</tr>
<tr>
<td>CH 120</td>
<td>General Chemistry I*</td>
<td>4</td>
</tr>
<tr>
<td>CH 121</td>
<td>General Chemistry II*</td>
<td>4</td>
</tr>
<tr>
<td>CS 400</td>
<td>Database Design**</td>
<td>3</td>
</tr>
<tr>
<td>MA 201</td>
<td>Calculus II***</td>
<td>4</td>
</tr>
<tr>
<td>MA 303</td>
<td>Mathematical Modeling</td>
<td>3</td>
</tr>
</tbody>
</table>

One course from:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI 203</td>
<td>Genetics+</td>
<td>4</td>
</tr>
<tr>
<td>BI 204</td>
<td>Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>BI 306</td>
<td>Developmental Biology+</td>
<td>4</td>
</tr>
<tr>
<td>BI 353</td>
<td>Tree of Life: Evolutionary Systematics</td>
<td>4</td>
</tr>
<tr>
<td>BI 371</td>
<td>Molecular Biology+</td>
<td>4</td>
</tr>
<tr>
<td>BI 375</td>
<td>Virology+</td>
<td>4</td>
</tr>
<tr>
<td>BI/CH 410</td>
<td>Biochemistry+</td>
<td>4</td>
</tr>
<tr>
<td>BT 376</td>
<td>Biotechnology</td>
<td>4</td>
</tr>
</tbody>
</table>

+requires additional prerequisite courses beyond those required for the major and concentration.

*count as the two Lab Science courses required in the CS major Ancillary requirements.

**counts as one of the two CS major Elective requirements.

***counts as the additional level 200+ Mathematics course required in the CS major Ancillary requirements.

Requirements for a Minor in Computer Science: (Minimum of 20 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 101</td>
<td>Basics of Computer Science</td>
<td></td>
</tr>
<tr>
<td>CS 135</td>
<td>Programming for Non-CS Majors</td>
<td></td>
</tr>
<tr>
<td>CS 140</td>
<td>Introduction to Programming</td>
<td></td>
</tr>
<tr>
<td>CS 155</td>
<td>Computer Networking, Security and Databases</td>
<td></td>
</tr>
<tr>
<td>CS 242</td>
<td>Data Structures</td>
<td></td>
</tr>
</tbody>
</table>

One more Computer Science courses at the 200 level or above.

Interdisciplinary Minor in Web Development: (18 Credits)

All courses must be chosen from the Computer Science (CS) and Communication (CM) department courses list (listed below).

Three (3) credits of the required 18 credits may be completed as an internship in the web development or web design area, in either the Computer Science or the Communication department in consultation with the CS department.

At least 9 credits (3 courses) must be completed from the CS courses list.

At least 6 credits must be completed from the CM courses list.

List of Computer Science Department Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 161</td>
<td>Basics of Web Design</td>
<td></td>
</tr>
<tr>
<td>CS 261</td>
<td>Advanced Web Design Using Scripting Languages</td>
<td></td>
</tr>
<tr>
<td>CS 235</td>
<td>Data Communication and Networking for Non-Majors</td>
<td></td>
</tr>
<tr>
<td>CS 265</td>
<td>Database Applications</td>
<td></td>
</tr>
</tbody>
</table>

List of Communication Department Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM 105</td>
<td>Media Writing</td>
<td></td>
</tr>
<tr>
<td>CM 160</td>
<td>Introduction to Digital Imaging</td>
<td></td>
</tr>
<tr>
<td>CM 180</td>
<td>Introduction to Advertising</td>
<td></td>
</tr>
<tr>
<td>CM 247</td>
<td>Introduction to Multimedia</td>
<td></td>
</tr>
<tr>
<td>CM 374</td>
<td>Advanced Multimedia</td>
<td></td>
</tr>
</tbody>
</table>
Computer Science Courses

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

CS 101 Basics of Computer Science
LASC—Quantitative Reasoning
Prerequisite: Familiarity with basic computer operations, Math placement code of 3 or above
A survey course that provides a foundation in the field of Computer Science by presenting a practical and realistic understanding of the field.
Offered every year. 3 credits.

CS 120 Microcomputer Applications
LASC—Quantitative Reasoning
Prerequisite: Familiarity with basic computer operations, Math placement code of 3 or above
Learning state-of-the-art application packages including but not limited to spreadsheets and database software.
Offered every year. 3 credits. (Credit will not be awarded for both CS 120 and CS 124.)

CS 124 Health Informatics
LASC – Quantitative Reasoning
Prerequisite: Familiarity with basic computer operations, Math placement code of 3 or above
Offered every year. 3 credits. (Credit will not be awarded for both CS 120 and CS 124)

CS 135 Programming for Non-CS Majors
LASC – Quantitative Reasoning
Prerequisite: Familiarity with basic computer operations, Math placement code of 3 or above
Introduction to programming. Emphasis on practical skills, working with data sets, doing analysis and visualization. No prior programming experience required.
Offered every year. 3 credits.

CS 140 Introduction to Programming
Prerequisite: CS 101
Introduction to fundamental structures and concepts of Computer Science including object-oriented programming; three lectures and one two-hour laboratory.
Offered every year. 4 credits.

CS 155 Computer Networking, Security and Databases
LASC – Quantitative Reasoning
Prerequisite: CS 101
This course covers network protocols and the Internet; computer security fundamentals; basics of relational databases and SQL queries.
Offered every year. 3 credits.

CS 161 Basics of Web Design
Introduces concepts needed for creation, design and implementation of effective web pages. Latest versions of mark-up language(s) will be used.
Offered every year. 3 credits.

CS 193 Special Topics in Computer Science for First-Year Students
All "193" courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval.
Introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar. 3 credits.

CS 242 Data Structures
Prerequisite: CS 140. Prerequisite or corequisite: MA 220
Introduces time complexity and covers fundamental data structures: lists, stacks, queues, search trees, dictionaries, priority queues, B-trees and inverted files.
Offered every year. 4 credits.
CS 253 Digital Computer Organization and Assembly Language  
*Prerequisites: CS 140, EN 252, MA 220*  
Design and analysis of combinational and sequential circuits; assembly language programming, digital computer organization. Three lectures and one two hour laboratory.  
*Offered every year. 4 credits.*

CS 254 Computer Organization and Architecture  
*Prerequisites: CS 140, EN 102. Prerequisite or corequisite: MA 290*  
Combinational and sequential circuits, assembly language programming, digital computer architecture, instruction sets, addressing modes, memory hierarchies, I/O, and control circuits. Three lecture hours and two laboratory hours per week.  
*Offered every year. 4 credits.*

CS 261 Advanced Web Design Using Scripting Languages  
*Prerequisite: CS 161*  
This course covers scripting languages and teaches how to make the web pages interactive by embedding executable scripts into them.  
*Offered every 2 years. 3 credits.*

CS 265 Database Applications  
*LASC – Quantitative Reasoning  
Prerequisite: Familiarity with basic computer operations, Math placement code of 3 or above*  
This course introduces basic database concepts and teaches how to create a database; use SQL; and create database applications.  
*Offered every 2 years. 3 credits.*

CS 282 UNIX Systems Programming  
*Prerequisite: CS 242*  
Problem solving and software design using C; introduction to UNIX programming utilities and text manipulation; low-level system programming in UNIX and C.  
*Offered every year. 3 credits.*

CS 297 Selected Topics in Computer Science  
Topics of mutual interest to students and faculty.  
1-4 credits.

CS 335 Networking and Web Security  
*Prerequisite: CS 282*  
This course covers web and security problems, solutions, and techniques. Encryption, worms, viruses, firewall, safer practices, etc. are covered.  
*Offered every 2 years. 3 credits.*

CS 343 Software Construction, Design and Architecture  
*Prerequisites: CS 242, EN 252*  
Software construction techniques and tools, software architectures and frameworks, design patterns, object-oriented design and programming. Efficiency, reliability and maintainability of software.  
*Offered every year. 3 credits.*

CS 345 Object Oriented Programming with C++  
*Prerequisite: CS 282*  
Introduction to the fundamentals of C++; Topics include objects/classes, single/multiple inheritance, friend functions, operator overloading, polymorphism and streams.  
*Offered every 2 years. 3 credits.*

CS 348 Software Process Management  
*Prerequisites: CS 343, CM 110, UR 230*  
Project management including planning, progress measurement, estimation, and risk assessment. Functional and non-functional requirements. Software licenses, contracts and intellectual property.  
*Offered every year. 3 credits.*
CS 352 Digital Computer Architecture
Prerequisite: CS 253
A study of the internal structure of a typical digital computer from both a logical and a hardware viewpoint; memory devices, arithmetic, and control circuits including LSI and MSI components.
Offered every year. 3 credits.

CS 353 Information Organization, Management and Retrieval
Prerequisites: CS 155, CS 242. Prerequisite or corequisite: CS 373
The course introduces fundamental concepts, standards, technologies and methods for information organization, storage, management, retrieval and recovery.
Offered every year. 3 credits.

CS 365 Client Server Computing Using the Internet
Prerequisite: CS 242
This course covers what client/server is and covers various client/server models and explores the Internet from a client/server perspective.
Offered every 2 years. 3 credits.

CS 371 Computability Theory
Prerequisites: CS 140, MA 290
This course provides an introduction to theoretical computer science. Covers the fundamentals of automata theory, formal languages, and computability theory.
Offered every 2 years. 3 credits.

CS 373 Operating Systems
Prerequisites: CS 254, CS 282, EN 252
Hardware and software as an integrated system; development of system software for process management, resource allocation, memory management and I/O processing.
Offered every year. 3 credits.

CS 375 Software Analysis and Design
Prerequisites: CS 242, CM 110, EN 252
This course introduces object-oriented software development concepts as a new way of thinking about problems using models organized around real-world concepts.
Offered every year. 3 credits.

CS 380 System Programming
Prerequisite: CS 282
The design and implementation of assemblers, linkers, loaders, editors, and high-level translation software. Algorithms solving specific problems of a system program are investigated.
Offered every 2 years. 3 credits.

CS 383 Cloud, Parallel and Distributed Computing
Prerequisite: CS 373
The course introduces basics of Cloud Computing and fundamental computing technologies used for Big Data platforms such as Parallel, Distributive and Cluster computing models.
Offered every year. 3 credits.

CS 400 Database Design
Prerequisites: CS 242, EN 252, CM 110
Introduces database models with emphasis on relational model; ER diagrams, relational calculus, relational algebra and SQL, normalization, transaction processing and recovery.
Offered every 2 years. 3 credits.
CS 401 Software Development Process
Prerequisite: CS 375
This course deals with software as an engineered product that requires planning, analysis, design, implementation, testing and maintenance.
Offered every year. 3 credits.

CS 405 Data Communications and Networking
Prerequisites: CS 373, EN 252, CM 110
Data transmission, encoding, interfacing, synchronization, data-link control, multiplexing, networking, circuit switching, packet switching, radio and satellite, local area networks, network access protocols.
Offered every 2 years. 3 credits.

CS 442 Algorithm Analysis
Prerequisites: CS 282, MA 200
Various complexity classes; algorithmic strategies, graph algorithms, pattern matching, cryptographic and geographic algorithms; NP-complete problems.
Offered every 2 years. 3 credits.

CS 443 Software Quality Assurance and Testing
Prerequisites: CS 343, MA 150
Requirements analysis and test plan design. Testing strategies and techniques. Test coverage using statistical techniques. Code reviews and inspections.
Offered every year. 3 credits.

CS 448 Software Development Capstone
Major Capstone
Prerequisites: CS 348, CS 373, CS 443
Development of a significant software system, following appropriate project and team management techniques. Requirements, design, implementation, quality assurance, professional, social and ethical issues.
Offered every year. 3 credits.

CS 453 Data Mining
Prerequisites: CS 242, CM 110, MA 150, UR 230
Topics include data warehousing and mediation techniques; data mining methods: rule-based learning, decision trees, association rules and sequence mining.
Offered every year. 3 credits.

CS 471 Artificial Intelligence
Prerequisites: CS 371, CS 242, EN 252
Introduction to central issues of constructing intelligence systems. Examines historical and future trends of AI research.
Offered every 2 years. 3 credits.

CS 472 Robotics
Prerequisites: CS 253, CS 282
Design and implementation of robotic systems, sensors and sensing, effectors, mechanics, control strategies and architectures, hardware and software issues.
Offered every 2 years. 3 credits.
CS 483 Big Data Analytics Capstone

Major Capstone
Prerequisites: CS 353, CS 383, CS 453
The course introduces methods and techniques used for Big Data analysis. The course discusses Analytics tools for a variety of data applications and includes a major team project.
Offered every year. 3 credits.

CS 497 Selected Topics in Computer Science
Prerequisite: CS 282
Selection of topics of mutual interest to students and faculty.
1-6 credits.

CS 498 Internship
Prerequisites: Approval by vote of Computer Science faculty; 21 credit hours in Computer Science courses including CS 282.
Working in and for an organization where skills can be tested in real situations in order to gain experience, increase knowledge in various functional areas, and establish important contacts with an organization.
Offered every year. 3 credits.

CS 499 Independent Study
Prerequisites: 18 credit hours in Computer Science including CS 282 and approval by vote of Computer Science faculty.
An opportunity for advanced students to examine topics not normally taught in other computer science courses. Geared to interests of both the student and the instructor.
Offered every year. 1-6 credits.
School of Education, Health and Natural Sciences

Education
Department of Education

DISCLAIMER: REGULATIONS FOR TEACHER LICENSURE ARE CURRENTLY UNDER REVIEW BY THE MASSACHUSETTS DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION. AS A RESULT, THE PROGRAMS DESCRIBED BELOW MAY BE SUBJECT TO CHANGE AT ANY TIME.

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Ph.D., University of Connecticut

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Ph.D., University of Colorado-Boulder

Douglas R. Dawson, Assistant Professor (2009)
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Ed.D, Boston University

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State College; Ed.D., Indiana University of Pennsylvania

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Ed.D., University of Massachusetts, Amherst
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University

Patrick J. O’Connor, Professor (1995)
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Margarita Perez, Professor (1999)
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Ph.D. Rutger’s University.

Sara L. Young, Assistant Professor (2010)
B.A., School for International Training; M.S.T., New School for Social Research; Ed.D.,
University of Massachusetts, Amherst.

The Education Department offers a wide range of undergraduate and graduate programs
in professional education. Students can become licensed to teach in early childhood
(PK-2) with and without disabilities, elementary (1-6), middle (5-8), or secondary (8-12)
schools or credentialed to teach in preschool and day care programs. The Department
programs offer a blending of classroom and fieldwork approaches. Kappa Delta Pi,
the International Honor Society in education, is available to outstanding upper-division
students. Graduate programs provide opportunities for students to prepare for careers in
Reading, Educational Administration, Moderate Special Needs and School Psychology,
as well as in Early Childhood, Elementary, Middle, or Secondary Education.

To teach in the Commonwealth of Massachusetts a teaching license is required. The
Worcester State University Teacher Education program is recognized by the Massachusetts
Department of Elementary and Secondary Education as having an approved program in the
fields of Early Childhood Education, Elementary Education, Middle School Education and
Secondary School Education. Students in the Elementary and Early Childhood Education
programs have two complete majors, one in a liberal arts and science area and one in
education. The Middle and Secondary school programs have a major in content and a minor
in education. The Massachusetts Test for Educator Licensure (MTEL) is embedded in the
program at various stages and must be passed for completion of the program and licensure.
**Early Childhood Education Major**

The Early Childhood Education major prepares candidates for the Massachusetts Department of Elementary and Secondary Education Initial License as a teacher of children in public school classrooms, PK through grade 2. The program of studies is based upon a broad liberal arts foundation and an integrated professional teacher preparation program. A course waiver process is available for transfer students where appropriate. Fieldwork accompanies most education courses and is a necessary component of the program. Student prepracticum experiences should include a wide variety of field settings. Students should attend different and varied schools in urban, rural and suburban settings. They should also vary their placements and grade levels in different school buildings within districts to insure a well rounded experience.

The Massachusetts Test for Educator Licensure (MTEL) is embedded in the program at various stages and must be passed for completion of the program and licensure.

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**Early Childhood Education Major Teacher Licensure Program (Massachusetts Public Schools, PK-2)**

**Requirements for a Major in Early Childhood Education leading to MA Department of Elementary and Secondary Education Initial Licensure (PK-2): 39 credits**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED 160</td>
<td>Early Childhood Education Today</td>
</tr>
<tr>
<td>ED 200</td>
<td>Best Practices for English Language Learners</td>
</tr>
<tr>
<td>ED 206</td>
<td>Young Children, Learning and Special Needs</td>
</tr>
<tr>
<td>ED 211</td>
<td>Integrating Science, Social Studies and the Arts into Early Childhood Education Curriculum</td>
</tr>
<tr>
<td>ED 286</td>
<td>Assessment of Development and Learning of Typical and Atypical Children</td>
</tr>
<tr>
<td>ED 307</td>
<td>ECE: Science</td>
</tr>
<tr>
<td>ED 308</td>
<td>ECE: Mathematics</td>
</tr>
<tr>
<td>ED 313</td>
<td>Practicum in Preschool Education</td>
</tr>
<tr>
<td>ED 314</td>
<td>Early Literacy with Young Children</td>
</tr>
<tr>
<td>ED 340</td>
<td>Language Arts and Literacy for the Primary Grades</td>
</tr>
<tr>
<td>ED 405</td>
<td>Classroom Management and Child Guidance Techniques in Early Childhood Education</td>
</tr>
<tr>
<td>ED 430</td>
<td>Practicum in Primary Education (6 credits)</td>
</tr>
</tbody>
</table>

**Prerequisite Courses:**

- MA 130 Numbers and Operations for Teachers
- PS 210 Developmental Psychology

**Recommended Courses:**

- HE 120 Health and Nutrition OR
- HE 100 Personal Health
- MA 132 Geometry, Measurement, Probability and Statistics for Teachers

Students are required to take specific liberal arts and science courses to satisfy foundation and distribution requirements.

**Early Childhood Education Teacher Licensure majors must also complete an academic major in Biology, Chemistry, English, Geography, History, Mathematics, Natural Science, Psychology, Sociology, Spanish, or Visual and Performing Arts.**
Admission to the Early Childhood Education Major

Early Childhood Education majors seeking the MA Department of Elementary and Secondary Education Initial License will progress through a three-stage process. Each stage must be satisfactorily completed before passage to the next stage.

Stage I: Early Childhood Major

1. Students demonstrate competence in communication skills by completing the following course with a grade of C or higher.
   EN 102 English Composition II (or equivalent)

2. Competence in Math with a grade of C or higher in the following course:
   MA 130 Numbers and Operations for Teachers

3. Students must submit a Criminal Offender Records Information (CORI) application and be approved prior to beginning classroom observations in the Worcester Public Schools. No student is allowed to do fieldwork unless approval of the CORI has been received from the state.

4. Students demonstrate potential for teaching children by completing all of the following courses with a grade of C+ or higher earning a cumulative GPA of 2.5.
   PS 210 Developmental Psychology
   ED 160 Early Childhood Education Today (10 hours fieldwork)
   ED 206 Young Children, Learning, and Special Needs (15 hours fieldwork)
   ED 211 Integrating Science, Social Studies and the Arts in Early Childhood Education (12 hours fieldwork)
   ED 286 Assessment of Development and Learning of Typical and Atypical Children (5 hours fieldwork)

5. Students must receive a passing score on the Massachusetts Test for Educator Licensure (MTEL) Communication and Literacy Skills Test.

6. Any departure from the prescribed program of study for teacher licensure must have Waiver Committee approval prior to advancement to Stage II.

Stage II: Admission into the Early Childhood Licensure Program

1. Upon satisfactory completion of Stage I requirements, students are eligible to apply for formal admission to the Early Childhood Education Licensure Program. The application must include a satisfactory physical examination, MTEL test results and transcripts of all previous course work. Approval by the Education Department is necessary for a student to progress to Stage II.

   During Stage II, students must complete all of the following courses with a grade of C+ or higher AND earn a cumulative GPA of 2.7. Fieldwork accompanies the following methods courses.
   ED 200 Best Practices for English Language Learners
   ED 307 ECE: Science (10 hours fieldwork)
   ED 308 ECE: Math (10 hours fieldwork)
   ED 313 Practicum in Preschool Education
   ED 314 Early Literacy with Young Children (10 hours fieldwork)
   ED 340 Language Arts and Literacy for the Primary Grades (10 hours fieldwork)

2. After completing 90 credits of academic work, students may apply for formal admission into ED 313: Practicum in PK Education. This application will be reviewed and acted upon by the Licensure Officer. Additional information regarding formal application for the Preschool practicum is available from the Education Department.
3. Students must have received a passing score on all portions of the Massachusetts Test for Educator Licensure (Communication and Literacy, Early Childhood, and Foundations of Reading).

**Stage III: Early Childhood Education Major – Practicum**

1. Upon satisfactory completion of Stage II requirements, students are eligible to apply for formal admission into ED 430: Practicum in Primary Education (Corequisite ED 405).
2. Students must have attained senior standing (90 credits of course work) to complete the Primary Practicum.
3. This application will be reviewed and acted upon by the Licensure Officer.
4. Students convicted of a felony may be denied admission to student teaching.

Additional information regarding formal application for the Primary Practicum is available from the Education Department.

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**Department of Education: Early Childhood Education & Psychology**

**Sample Timeline For Completion of Degree**

<table>
<thead>
<tr>
<th>YEAR ONE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester One</strong></td>
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<tr>
<td><strong>Course No.</strong></td>
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<tr>
<td>ED 160</td>
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<td>EN 101</td>
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<tr>
<td>LASC</td>
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<td>MA 130</td>
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<td>PS 101</td>
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<td><strong>Semester Two</strong></td>
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<td><strong>Course No.</strong></td>
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<tr>
<td>EN 102</td>
</tr>
<tr>
<td>HI 111</td>
</tr>
<tr>
<td>ED 206</td>
</tr>
<tr>
<td>PS 210</td>
</tr>
<tr>
<td>GS 101</td>
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<td><strong>Semester Subtotal</strong></td>
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</table>

**Comments**

EN 101 & 102 satisfies LASC writing. Students should take the Communication and Literacy Skills portion of the MTEL after completing EN 102
## YEAR TWO

### Semester Three

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ED 211</td>
<td>Integrating Social Studies and Fine Arts in ECE</td>
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<td>HI 112</td>
<td>US History II (LASC USW)</td>
<td>3</td>
</tr>
<tr>
<td>HE 100</td>
<td>Personal Health (LASC ICW)</td>
<td>3</td>
</tr>
<tr>
<td>MA 132</td>
<td>Geometry, Measurement, Probability &amp; Statistics for Teachers (LASC QR)</td>
<td>3</td>
</tr>
<tr>
<td>PS 275</td>
<td>Psychological Statistics (LASC QRAC)</td>
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<td><strong>Semester Subtotal</strong></td>
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### Semester Four

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<tbody>
<tr>
<td>ED 286</td>
<td>Assessment of Development and Learning in ECE</td>
<td>3</td>
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<tr>
<td>ED 339</td>
<td>Children's Literature: Multicultural Literature for PK-9 (LASC TLC)</td>
<td>3</td>
</tr>
<tr>
<td>PS 205</td>
<td>Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>PS 330</td>
<td>Theories of Personality</td>
<td>3</td>
</tr>
<tr>
<td>NS 120</td>
<td>Integrated Science (LASC NSP)</td>
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<tr>
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## YEAR THREE

### Semester Five

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<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ED 314</td>
<td>Early Literacy with Young Children</td>
<td>3</td>
</tr>
<tr>
<td>ED 307</td>
<td>ECE: Science</td>
<td>3</td>
</tr>
<tr>
<td>MU 237</td>
<td>Music in Schools (LASC CA)</td>
<td>3</td>
</tr>
<tr>
<td>HI 103</td>
<td>World Civilization (LASC GP)</td>
<td>3</td>
</tr>
<tr>
<td>PS 318</td>
<td>Behavior Management Techniques</td>
<td>3</td>
</tr>
<tr>
<td>PS 345</td>
<td>Cognitive Psychology (LASC WAC)</td>
<td>3</td>
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### Semester Six

<table>
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<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ED 308</td>
<td>ECE: Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>ED 340</td>
<td>Language Arts and Literacy in the Primary Grades</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ELECTIVE</td>
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</tr>
<tr>
<td>PS 307</td>
<td>Applied Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>PS 252</td>
<td>Applied Social Psychology</td>
<td>3</td>
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<td><strong>Semester Subtotal</strong></td>
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</table>

**Comments**

Students should take the Early Childhood portion of the MTEL by the end of their junior year.
**Education**

**YEAR FOUR**

<table>
<thead>
<tr>
<th>Semester Seven</th>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td></td>
<td>ED 200</td>
<td>Best Practices for English Language Learners (LASC DAC)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PS 310</td>
<td>Develop of Exceptional Children</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PS XXX</td>
<td>Psychology Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ED 400</td>
<td>Inclusive Early Childhood Education</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ED 313</td>
<td>ECE: Preschool Practicum</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Semester Subtotal</strong></td>
<td><strong>15</strong></td>
</tr>
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</table>

**Comments**
Students must successfully complete all sections of the MTEL before enrolling in ED 430 and ED 405

<table>
<thead>
<tr>
<th>Semester Eight</th>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ED 405</td>
<td>Classroom Management and Child Guidance in ECE</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ED 430</td>
<td>Student Teaching in ECE: Primary Practicum</td>
<td>6</td>
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<tr>
<td></td>
<td>PS XXX</td>
<td>Psychology Elective</td>
<td>3</td>
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<td></td>
<td></td>
<td><strong>Semester Subtotal</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

**TOTAL CREDITS= 121**

Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.

**Elementary Education Major**

**Teacher Licensure Program**

The Elementary Education major prepares candidates for Initial Licensure as a teacher of children in a public school classroom, grades 1 through 6. The program of study is based upon a broad liberal arts foundation and an integrated professional teacher preparation program. A course waiver process is available for transfer students where appropriate. Fieldwork accompanies most education courses and is a necessary component of the program. Student prepracticum experiences should include a wide variety of field settings. Students should attend different and varied schools in urban, rural and suburban settings. They should also vary their placements and grade levels in different school buildings within districts to insure a well rounded experience.

The Massachusetts Test for Educator Licensure (MTEL) is embedded in the program at various stages and must be passed for completion of the program and licensure.

**Requirements for a Major in Elementary Education: 42 credits**

- ED 148 Foundations of Reading
- ED 155 Teaching and Learning Elementary School
- ED 200 Best Practices for English Language Learners
- ED 250 Educational Psychology
- ED 275 Curriculum and Instruction in Elementary Education
- ED 320 Elementary Science
- ED 325 Elementary Math
**Education**

**ED 330** Elementary Social Studies and Multiculturalism  
**ED 343** Elementary Reading, Language Arts and Literature  
**ED 425** Seminar: Applying Educational Principles  
**ED 435** Student Teaching in the Elementary School

**Prerequisite Course:**
- **MA 130** Number and Operations for Teachers  
- **MA 131** Patterns, Functions and Algebra for Teachers  
- **MA 132** Geometry, Measurement, Probability and Statistics for Teachers  
- **PS 210** Development Psychology

**Recommended Courses:**
- **HE 100** Personal Health  
- **HE 120** Health and Nutrition

Students will also be required to take specific liberal arts and science courses to satisfy LASC requirements.

**Elementary Education majors seeking Initial Licensure must also complete an academic major in Biology, Chemistry, English, Geography, History, Mathematics, Natural Science, Psychology, Sociology, Spanish, or Visual and Performing Arts.**

**Admission to the Elementary Education Major**

Students planning to major in Elementary Education will progress through a three-stage process. Each stage must be satisfactorily completed before passage to the next stage.

**Stage I Elementary Education Major**

1. Competence in communication skills as demonstrated by completion of the following course with a grade of C or higher:
   - **EN 102** English Composition II (or equivalent)

2. Competence in Math with a grade of C or higher in the following courses:
   - **MA 130** Numbers and Operations for Teachers  
   - **MA 131** Patterns, Functions and Algebra for Teachers  
   - **MA 132** Geometry, Measurement, Probability and Statistics for Teachers

3. Students must submit a Criminal Offender Records Information (CORI) application and be approved prior to doing classroom observations in Worcester Public Schools. No student is allowed to do fieldwork unless approval of the CORI has been received from the state.

4. Students demonstrate potential for teaching children by completing all of the following courses with a grade of C+ or higher AND earn a cumulative GPA of 2.5:
   - **PS 210** Developmental Psychology  
   - **ED 155** Teaching and Learning in the Elementary School (15 hours fieldwork)  
   - **ED 250** Educational Psychology (10 hours fieldwork)  
   - **ED 275** Curriculum and Instruction in Elementary Education (10 hours fieldwork)

5. Students must have received a passing score on the Communication and Literacy Skills Test (MTEL).

6. Any departure from the prescribed program of study for teacher licensure must have Waiver Committee approval prior to advancement to Stage II.
Stage II Elementary Education Major

1. Upon satisfactory completion of Stage I requirements, the student is eligible to apply for formal admission to the Elementary Education Licensure Program. The application must include a satisfactory physical examination, MTEL test results and transcripts of all previous course work. Approval by the Education Department is necessary for a student to progress to Stage II.

2. During Stage II, students must complete all of the following courses with a grade of C+ or higher AND earn a cumulative GPA of 2.7. Fieldwork accompanies the following methods courses.

   - ED 200   Best Practices for English Language Learners
   - ED 320   Elementary Science (10 hours fieldwork)
   - ED 325   Elementary Math (10 hours fieldwork)
   - ED 330   Elementary Social Studies and Multiculturalism (10 hours fieldwork)
   - ED 343   Elementary Reading, Language Arts and Literature (20 hours fieldwork)

Stage III Elementary Education Major – Practicum

1. Upon satisfactory completion of Stage II requirements, the student is eligible to apply for formal admission into the Practicum, ED 435 Practicum Teaching: Elementary School (Corequisite ED 425).

2. Students must have received a passing score on the Massachusetts Test for Educator Licensure (MTEL) in Communication and Literacy Skills, Foundations of Reading and the new General Curriculum Test for Elementary Majors which includes a separately scored Mathematics subtest.

3. The Stage III application will be reviewed and acted upon by the Licensure Officer.

4. Students must have attained senior standing (90 credits of course work) to student teach.

5. Students convicted of a felony may be denied admission to student teaching.

Additional information regarding formal application into student teaching is available from the Education Department.

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Department of Education: Elementary Education & Psychology

Sample Timeline for Completion of Degree

<table>
<thead>
<tr>
<th>YEAR ONE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester One</strong></td>
</tr>
<tr>
<td><strong>Course No.</strong></td>
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<tr>
<td>LASC</td>
</tr>
<tr>
<td>EN 101</td>
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<tr>
<td>MA 130</td>
</tr>
<tr>
<td>PS 101</td>
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<tr>
<td>ED 155</td>
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<td><strong>Semester Subtotal</strong></td>
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</table>
### Semester Two

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>EN 102</td>
<td>English Composition II</td>
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</tr>
<tr>
<td>HI 111</td>
<td>U.S. History I (LASC USW)</td>
<td>3</td>
</tr>
<tr>
<td>MA 131</td>
<td>Patterns Functions and Algebra (LASC QR)</td>
<td>3</td>
</tr>
<tr>
<td>PS 210</td>
<td>Development Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PS 250</td>
<td>Social Psychology</td>
<td>3</td>
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</tbody>
</table>

**Semester Subtotal**: 15

**Comments**: EN 101 & 102 satisfies LASC writing. Students should take the Communication and Literacy Skills portion of the MTEL after completing EN 102.

### YEAR TWO

#### Semester Three

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ED 250</td>
<td>Educational Psychology</td>
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</tr>
<tr>
<td>HI 112</td>
<td>U.S. History II (LASC Constitutions)</td>
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</tr>
<tr>
<td>EN 132</td>
<td>World Literature (LASC GP, DAC)</td>
<td>3</td>
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<tr>
<td>MA 132</td>
<td>Geometry, Measurement, Probability &amp; Statistics for Teachers (LASC QR)</td>
<td>3</td>
</tr>
<tr>
<td>PS 205</td>
<td>Research Methods</td>
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</table>

**Semester Subtotal**: 15

**Comments**: Students should take the Mathematics portion of the MTEL after completing MA 130, 131 and 132.

#### Semester Four

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>ED 275</td>
<td>Curriculum and Instruction in Elementary Education</td>
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<td>PS 275</td>
<td>Psychological Statistics (LASC QRAC)</td>
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<td>TH 191</td>
<td>Introduction to Theatre (LASC CA)</td>
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<td>ED 148</td>
<td>Foundations of Reading</td>
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<td>NS 120</td>
<td>Integrated Science (LASC NSP)</td>
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**Semester Subtotal**: 17

### YEAR THREE

#### Semester Five

<table>
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<tr>
<th>Course No.</th>
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<tbody>
<tr>
<td>GS 101</td>
<td>Physical Geography (LASC NSP)</td>
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<td>ED 343</td>
<td>Reading Language Arts and Literature</td>
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<td>ED 325</td>
<td>Elementary Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>PS 318</td>
<td>Behavior Management Techniques</td>
<td>3</td>
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<tr>
<td>PS 325</td>
<td>Psychology of Learning (LASC WAC)</td>
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**Semester Subtotal**: 18

**Comments**: Students should take the Foundations of Reading portion of the MTEL after completing ED 343.
**Semester Six**

<table>
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<tr>
<th>Course No.</th>
<th>Course Name</th>
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<tbody>
<tr>
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<td>Elementary Social Studies</td>
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<td>ED 320</td>
<td>Elementary Science</td>
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<td>HE 100</td>
<td>Personal Health (LASC ICW)</td>
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<td>PS 335</td>
<td>Abnormal Psychology</td>
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<td>PS 345</td>
<td>Cognitive Psychology (LASC WAC)</td>
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**Semester Subtotal** 15

**YEAR FOUR**

**Semester Seven**

<table>
<thead>
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<th>Course Name</th>
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<tbody>
<tr>
<td>PS 307</td>
<td>Applied Research Methods</td>
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<td>Development of Exceptional Children</td>
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<td>PS XXX</td>
<td>Psychology Elective</td>
<td>3</td>
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<tr>
<td>HI 104</td>
<td>World Civilization (TLC)</td>
<td>3</td>
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<tr>
<td>ED 200</td>
<td>Best Practices for English Language Learners (DAC)</td>
<td>3</td>
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**Semester Subtotal** 15

**Comments**

Students must successfully complete all sections of the MTEL before enrolling in ED 425 and ED 435.

**Semester Eight**

<table>
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<tr>
<th>Course No.</th>
<th>Course Name</th>
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<td>ED 425</td>
<td>Seminar: Applying Educational Principles</td>
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<td>ED 435</td>
<td>Student Teaching in ELE</td>
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</tr>
</tbody>
</table>

**Semester Subtotal** 12

**TOTAL CREDITS= 122**

*Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.*

**Middle School Education (Grades 5–8) Initial Teacher Licensure Program**

Worcester State University offers the Initial Licensure Program in Middle School Education (grades 5-8). The Massachusetts Test for Educator Licensure (MTEL) is embedded in the program at various stages and must be passed for completion of the program and licensure.

Fieldwork accompanies most education courses and is a necessary component of the program. Student prepracticum experiences include a wide variety of field settings. Students should attend different and varied schools in urban, rural and suburban settings. They should also vary their placements and grade levels in different school buildings within districts to insure a well rounded experience.
The Department of Elementary and Secondary Education offers Initial Licensure programs in the following areas in cooperation with liberal arts and sciences departments in the Worcester State University Education Program.

Teacher of Biology
Teacher of Chemistry
Teacher of English
Teacher of History
Teacher of General Science
Teacher of Health/Family and Consumer Sciences
Teacher of Political Science
Teacher of Mathematics
Teacher of Earth Science
Teacher of Spanish

For required courses in these areas students should consult their liberal arts/science advisor.

**Admission Requirements: Undergraduate Program.**

Students planning to minor in Middle School Education will progress through a three-stage process. Each stage must be completed satisfactorily prior to passage to the next stage. **Students will major in the Liberal Arts and Science content area which they intend to teach.**

**Stage I: Middle School Education Minor**

1. Completion of EN 102 English Composition II with a grade of C or higher.
2. Completion of 15 semester hours in the subject major.
3. Students must submit a Criminal Offender Records Information (CORI) application and be approved prior to beginning classroom observations for Education courses. No student is allowed to do fieldwork unless approval of the CORI has been received from the state.
4. Students demonstrate potential for teaching children by completing all of the following courses with a grade of C+ or higher AND earning a cumulative GPA of 2.5.
   - ED 149 Introduction to the Teaching Profession (5 hours fieldwork)
   - PS 210 Developmental Psychology
   - ED 250 Educational Psychology (10 hours fieldwork)
   - ED 251 Foundations of Education (15 hours fieldwork)
   - ED 270 Diversity and Multicultural Education (20 hours fieldwork)
5. Students must have received a passing score on the Massachusetts Test for Educator Licensure (MTEL) Communication and Literacy Skills Test.
6. Any departure from the prescribed program of study for teacher licensure must have Waiver Committee approval prior to advancement to Stage II.

**Stage II: Middle School Education Licensure Program**

1. Upon satisfactory completion of Stage I requirements, the student is eligible to apply for formal admission into the middle school education minor. The application must include a satisfactory physical examination, MTEL test results and transcripts of all previous course work. Approval by the Education Department is necessary for a student to progress to Stage II.
2. During Stage II, students must complete all of the following courses with a grade of C+ or higher AND earn a cumulative GPA of 2.7. Fieldwork accompanies the following methods courses.
ED 200  Best Practices for English Language Learners
ED 352  Principles of Curriculum and Evaluation in the Middle School
         (10 hours fieldwork)
ED 354  Effective Teaching in the Middle School (15 hours fieldwork)

3. Students must have received a passing score on the Massachusetts Test for Educator Licensure (MTEL) in their major subject area and communication and literacy skills.

Stage III: Middle School Education Minor – Practicum

1. Upon satisfactory completion of Stage II requirements, the student is eligible to apply for:
   ED 485 Practicum in Teaching Middle School (9 credits)
   ED 424 Seminar (3 credits)

2. Students must have attained senior standing (90 credits of course work) to student teach.

3. The Stage III application will be reviewed and acted upon by the Licensure Officer.

4. Students convicted of a felony may be denied admission to student teaching.

Additional information regarding formal application into student teaching is available from the Education Department.

Secondary School Education (Grades 8–12)
Initial Teacher Licensure Program

Worcester State University offers the Initial Licensure in Secondary School Education (grades 8-12). The Massachusetts Test for Educator Licensure (MTEL) is embedded in the program at various stages and must be passed for completion of the program and licensure.

Fieldwork accompanies most education courses and is a necessary component of the program. Student prepracticum experiences include a wide variety of field settings. Students should attend different and varied schools in urban, rural and suburban settings. They should also vary their placements and grade levels in different school buildings within districts to insure a well rounded experience.

The Department of Elementary and Secondary Education offers Initial Licensure programs in the following areas in cooperation with the liberal arts and sciences departments in the Worcester State University Education Program.

Teacher of English (8-12)
Teacher of History (8-12)
Teacher of Political Science (8-12)
Teacher of Mathematics (8-12)
Teacher of Chemistry (8-12)
Teacher of Biology (8-12)
Teacher of Earth Science (8-12)
Teacher of Health/Family and Consumer Sciences (5-12)
Teacher of Spanish (5-12)

For required courses in these areas, students should consult their liberal arts/science advisor.
Admission Requirements: Undergraduate Program.

Students planning to minor in Secondary Education will progress through a three-stage process. Each stage must be completed satisfactorily prior to passage to the next stage. Students will major in Liberal Arts and Science content areas which they intend to teach.

Stage I: Secondary School Education Minor

1. Completion of EN 102 English Composition II with a grade of C or higher.
2. Completion of 15 semester hours in the subject major.
3. Students must submit a Criminal Offender Records Information (CORI) application and be approved prior to beginning observations for Education courses. No student is allowed to do fieldwork unless approval of the CORI has been received from the state.
4. Students demonstrate potential for teaching children by completing all of the following courses with a grade of C+ or higher AND earning a cumulative GPA of 2.5.
   - ED 149 Introduction to the Teaching Profession (5 hours fieldwork)
   - PS 210 Developmental Psychology
   - ED 250 Educational Psychology (10 hours fieldwork)
   - ED 251 Foundations of Education (15 hours fieldwork)
   - ED 270 Diversity and Multicultural Education (20 hours fieldwork)
5. Students must have received a passing score on the Massachusetts Test for Educator Licensure (MTEL) Communication and Literacy Skills Test.
6. Any departure from the prescribed program of study for teacher licensure must have Waiver Committee approval prior to advancement to Stage II.

Stage II: Secondary School Education Minor

1. Upon satisfactory completion of Stage I requirements, the student is eligible to apply for formal admission into the Secondary School Education minor. The application must include a satisfactory physical examination, MTEL test results and transcripts of all previous course work. Approval by the Education Department is necessary for a student to progress to Stage II.
2. During Stage II, students must complete all of the following courses with a Grade of C+ or higher AND earn cumulative GPA of 2.7. Fieldwork accompanies the following methods courses:
   - ED 200 Best Practices for English Language Learners
   - ED 351 Principles of Curriculum and Evaluation in the Secondary School (10 hours fieldwork)
   - ED 353 Effective Teaching in the Secondary School (15 hours fieldwork)
3. Received a passing score on the Massachusetts Test for Educator Licensure (MTEL) in their major subject area and communication and literacy skills.

Stage III: Secondary School Education Minor – Practicum

1. Upon satisfactory completion of Stage II requirements, the student is eligible to apply for:
   - ED 480 Practicum in Teaching Secondary School (9 credits)
   - ED 424 Seminar (3 credits)
2. Students must have attained senior standing (90 credits of course work) to student teach.
3. The Stage III application will be acted upon by the Licensure Officer.
4. Students convicted of a felony may be denied admission to student teaching.

Additional information regarding formal application into student teaching is available from the Education Department.
Early Education and Care Program

(Early Intervention, Head Start, Private Preschool, and Group Day Care)

The Early Childhood Education major prepares students to enter the field of Early Education and Care and work in areas such as Early Intervention, Head Start, private preschool and group day care. The program integrates studies in liberal arts and sciences with the guidelines and standards presented by the MA Department of Early Education and Care. Fieldwork accompanies most education courses and is a necessary component of the program. A course waiver process is available for transfer students, and articulation agreements are in place with regional community colleges.

Requirements for Early Education and Care: 33 Credits

ED 160 Early Childhood Education Today
ED 206 Young Children, Learning, and Special Needs
ED 211 Integrating Science, Social Studies and the Arts into ECE Curriculum
ED 286 Assessment of Development and Learning of Typical and Atypical Children
ED 307 ECE: Science
ED 308 ECE: Math
ED 313 Practicum in Preschool Education
ED 314 Early Literacy with Young Children
ED 319 Advanced Field Experience in Early Childhood Education
ED 340 Language Arts and Literacy for the Primary Grades
ED 400 Inclusive ECE

Prerequisite Course:
PS 210 Development Psychology

Recommended Courses:
ED 200 Best Practices for English Language Learners.
HE 120 Health and Nutrition OR
HE 140 Creative Arts and Health
MA 130 Numbers and Operations for Teachers
MA 132 Geometry, Measurement, Probability and Statistics for Teachers

Students are required to take specific liberal arts and science courses to satisfy foundation and distribution requirements. See your advisor and consult degree audit.

Early Education and Care majors must either complete an academic major in the arts or sciences offered at Worcester State University and approved by the Department or complete a cluster of 30 credits of course work which address the MA Department of Early Education and Care’s Core Teacher Competencies. A list of possible courses is available in the Education Department.

Admission to Early Education and Care

Early Education and Care students will progress through a three-stage process. Each stage within this track must be satisfactorily completed before passage to the next stage.

Stage I: Early Education and Care

1. Students demonstrate competence in communication skills by completing the following course with a grade of C or higher.
   EN 102 English Composition II (or equivalent)

2. Students must submit a CORI application and be approved prior to beginning classroom observations in the Worcester Public Schools. No student is allowed to do fieldwork unless approval of the CORI has been received from the state.
Education

3. Students demonstrate potential for teaching children by completing all of the following courses with a grade of C+ or higher in AND earning a cumulative GPA of 2.5 or higher.

   ED 160 Early Childhood Education Today
   ED 206 Young Children, Learning, and Special Needs
   ED 211 Integrating Science, Social studies and the Arts in Early Childhood Education
   ED 286 Assessment of Development and Learning of Typical and Atypical Children

4. Any departure from the prescribed program of study must have Waiver Committee approval prior to advancement to Stage II.

Stage II: Early Education and Care

1. Upon satisfactory completion of Stage I requirements, the student is eligible to apply for formal admission to the Early Education and Care Program. The application must include a satisfactory physical examination, and transcripts of all previous course work. Approval by the Education Department is necessary for a student to progress to Stage II.

   During Stage II, students must complete all of the following courses with a grade of C+ or higher.

   Stage II will consist of the following courses. Fieldwork accompanies the following methods courses.

   ED 307 ECE: Science
   ED 308 ECE: Math
   ED 314 Early Literacy with Young Children
   ED 340 Language Arts and Literacy for the Primary Grades

Stage III: Early Education and Care

1. ED 313 Practicum in Preschool Education
   *ED 319 Advanced Field Experience in Early Childhood Education
   ED 400 Inclusive Early Childhood Education

   *90 credits must be completed prior to taking ED 319. ED 400 should be taken as a corequisite with ED 319. ED 313 and ED 319 may be taken in the same semester.

2. Students must apply for formal admission to ED 313 and ED 319: Advanced Field Experience in Early Childhood Education. This application will be reviewed and acted upon by the Licensure Officer. Additional information regarding formal application for the advanced practicum is available from the Education Department.

   This program provides preparation for certification through the Department of Early Education and Care as a Lead Teacher for Preschool.

Note: This program does not lead to Massachusetts Department of Elementary and Secondary Education public school licensure. Students who complete this program and apply to the WSU post-baccalaureate non-degree initial licensure program must provide evidence that they have worked in the field for 3 years. Any departure from the prescribed program of study must have approval from the Department Chair.
Education Courses (Undergraduate)

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

MOST EDUCATION COURSES REQUIRE FIELDWORK

ED 148 Introduction to the Foundations of Reading
This course provides an opportunity for prospective elementary and early childhood level teachers to acquire a strong foundation in current knowledge, perspective and procedures for teaching literacy in grades PK through 6. Offered every year. 3 credits.

ED 149 Introduction to the Teaching Profession. Middle/Secondary School
LASC—Human Behavior and Social Processes
This course will provide a basic understanding to the teaching aspects in middle and secondary classrooms. It will explore the Massachusetts Department of Education Professional Standards for Teachers and give students a general orientation to the profession. Principles of the teaching/learning process and related skills will be addressed, in addition to observable behaviors in the classroom setting(s). Students will be required to do 10 fieldwork observation hours in an accredited middle/secondary school.
Offered every year. 3 credits. Fieldwork: 5 hrs.

ED 155 Teaching and Learning in Elementary School
LASC—Individual and Community Well-Being
Overview of the teaching profession, examination of a variety of learning environments, organizing and managing classrooms, integrating curricula, observational techniques.
Offered every year. 3 credits. Fieldwork: 15 hrs.

ED 160 Early Childhood Education Today
LASC—Human Behavior and Social Processes
Exploration of programs, emphasizing developmentally appropriate practice, creativity motor skills. Discussion of families, community resources, play, integration of special needs.
Offered every year. 3 credits. Fieldwork: 12 hrs.

ED 193 Special Topics in Education for First-Year Students
All *193* courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval. Introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar.
Offered every year. 3 credits.

ED 200 Best Practices for English Language Learners
LASC—Thought Language and Culture; Diversity across the curriculum
Prerequisite: Admitted into Stage II
Research-based grade level subject matter instructional strategies, and performance assessments of English Language Learners are the focus of discussions and class projects.
Offered every year. 3 credits.

ED 206 Young Children, Learning and Special Needs
LASC—Individual and Community Well-Being; Diversity Across the Curriculum; Writing Across the Curriculum
Prerequisites: ED 160
Analysis of development and learning based on current psychological theory. Structuring experiences to foster progress for typical and atypical children.
Offered every year. 3 credits. Fieldwork: 15 hrs.

ED 211 Integrating Science, Social Studies and the Arts in Early Childhood Curriculum
Prerequisites: PS 210, ED 160, ED 206
Designing and implementing programs, physical environment, regulations, planning, Massachusetts Curriculum Frameworks. Students design integrated units and implement activities.
Offered every year. 3 credits. Fieldwork: 12 hrs.
**ED 250 Educational Psychology**  
*Prerequisite: PS 210*  
Learning and developmental processes of typical and atypical learners. Motivation, relationships of intelligence, affect, and achievement. Application to teaching and learning.  
*Offered every year. 3 credits. Fieldwork: 10 hrs.*

**ED 251 Foundations of Education**  
*Prerequisites: PS 210, ED 250*  
Critical examination of social, psychological, and philosophical factors, which underlie educational thought and practices in America, noting relevant historical antecedents.  
*Offered every year. 3 credits. Fieldwork: 15 hrs.*

**ED 270 Diversity and Multicultural Education**  
*Prerequisites: PS 210, ED 250, ED 251*  
Analysis of goals, values and practices in educating culturally diverse student populations. Includes bilingual, special needs and gifted students.  
*Category 1. 3 credits. Fieldwork: 20 hrs.*

**ED 275 Curriculum and Instruction in Elementary Education**  
*Prerequisites: ED 155, ED 250, and PS 210*  
Analysis of interactions in effective elementary schools through participation in and exploration of curriculum, teaching and learning roles. Field experience.  
*Offered every year. 3 credits. Fieldwork: 10 hrs.*

**ED 286 Assessment of Development and Learning of Typical and Atypical Children**  
*Prerequisites: PS 210, ED 160, ED 206, ED 211*  
Development of skills to asses young children and identify special needs. Focus on child development and Massachusetts Curriculum Frameworks.  
*Offered every year. 3 credits. Fieldwork: 5 hrs.*

**ED 301 ECE: Math and Science**  
*Prerequisite: Admitted into Stage II*  
Focus on early mathematical education and inquiry-based science program for young children in an integrated curriculum.  
*Offered every year. 3 credits.*

**ED 307 ECE: Science**  
*Prerequisite: Admitted into Stage II*  
Teaching strategies that focus upon exploration, discovery, problem solving, experimentation, Piagetian theory. Addresses nationally recognized science education curricula guidelines.  
*Offered every year. 3 credits. Fieldwork: 10 hrs.*

**ED 308 ECE: Math**  
*Prerequisite: Admitted into Stage II*  
Focus on Piaget's early mathematical theory. Techniques include teaching pre-math skills, logical mathematical knowledge, formal math using developmentally appropriate materials.  
*Offered every year. 3 credits. Fieldwork: 10 hrs.*

**ED 313 Practicum in Early Childhood Education: Preschool/Kindergarten**  
*Prerequisites: Admitted into Stage II, Senior Status*  
150 hour practicum in an NAECY accredited preschool/kindergarten/licensed day care center. Student apply content, methods, and materials from college courses.  
*Offered every year. 3 credits.*

**ED 314 Early Literacy with Young Children**  
*Prerequisite: Admitted into Stage II*  
Early literacy skills, content and approaches include construction of meaning with written and spoken language, written language forms and functions, letter-sound relationship, phonemic awareness, vocabulary development and assessment. Methods of teaching second language are included.  
*Offered every year. 3 credits. Fieldwork: 10 hrs.*
ED 317 ECE: Early Literacy, Children’s Literature, and Language Arts  
Prerequisite: Admitted into Stage II  
Content, curriculum, materials, approaches to early literacy for all children. Includes whole language, comprehension, progress writing, beginning reading, and integrated literature.  
Offered every year. 6 credits. Fieldwork: 20 hrs.

ED 319 Advanced Field Experience in Early Childhood Education  
Prerequisite: ED 313 or equivalent  
Students who have already completed a preschool practicum complete an additional 100-150 hour field experience in Early Childhood Education.  
Offered every year. 3 credits.

ED 320 Elementary Science  
Prerequisite: Admitted into Stage II  
Thematically taught emphasizing engaging hands-on activities, constructivism, cooperative learning, authentic assessments, integrated curriculum, and relationships between Science, Math and Technology Curriculum Frameworks.  
Offered every year. 3 credits. Fieldwork: 10 hrs.

ED 325 Elementary Math  
Prerequisite: Admitted into Stage II  
Emphasizes best practices in mathematics education, the role of conceptual knowledge in understanding mathematics, material development and assessment.  
Offered every year. 3 credits. Fieldwork: 10 hrs.

ED 330 Elementary Social Studies and Multiculturalism  
Prerequisite: Admitted into Stage II  
Goals, curriculum, skills, issues, teaching strategies in educating culturally diverse population in a global context.  
Offered every year. 3 credits. Fieldwork: 10 hrs.

ED 339 Children’s Literature: Multicultural Literature for PK-9  
LASC— Human Behavior and Social Processes; Thought Language and Culture; Diversity Across the Curriculum  
Facets of literature for children and criteria for the selection of each; techniques and preparation and use.  
Offered every year. 3 credits

ED 340 Language Arts and Literacy for the Primary Grades  
Early literacy/language arts content, curriculum materials, and approaches including phonological awareness, phonics, vocabulary, fluency, comprehension, writing and assessment.  
Offered every year. 3 credits. Fieldwork: 10 hrs.

ED 343 Elementary Reading, Language Arts and Literature  
Prerequisite: Admitted into Stage II  
Stresses interrelationships of oral/written communication; investigates concepts, skills and procedures for teaching literacy and using children’s literature in grades 1-6.  
Offered every year. 6 credits. Fieldwork: 20 hrs.

ED 351 Principles of Curriculum and Evaluation in the Secondary School  
Prerequisite: Admitted into Stage II  
Basic considerations in curriculum planning and implementation are examined. The role of evaluation and the design and use of assessment instruments are emphasized.  
Offered every year. 3 credits. Fieldwork: 10 hrs.

ED 352 Principles of Curriculum and Evaluation in the Middle School  
Prerequisite: Admitted into Stage II  
Examines factors in curriculum planning and implementation at the middle school level. Evaluation models are presented and the design and use of assessment instruments are emphasized.  
Offered every year. 3 credits. Fieldwork: 10 hrs.

ED 353 Effective Teaching in the Secondary School  
Prerequisite: Admitted into Stage II  
Considers teaching techniques in various disciplines using a variety of instructional strategies and teaching aids. Analyzes effective classroom management.  
Offered every year. 3 credits. Fieldwork: 15 hrs.
ED 354 Effective Teaching in the Middle School
Prerequisite: Admitted into Stage II
Considers a variety of instructional designs including team teaching, horizontally integrated curriculum, and effective classroom management.
Offered every year. 3 credits. Fieldwork: 15 hrs.

ED 370 Contemporary Issues and Trends in Middle School Education
Prerequisite: Admitted into Stage II
This course is designed to give students opportunities to examine contemporary issues, trends, controversies, theories and practices in education. Students will engage in extensive reading, internet search and reflection on critical aspects of contemporary issues. The main focus of this course is on the implications of these initiatives for classroom teachers: efficient classroom practices, instructional planning and implementation, the use of modern technology, assessment procedures, classroom management, professional ethics, etc. The primary goal is to help students clarify how contemporary issues can lead to educational reforms and teaching excellence.
Offered every year. 3 credits.

ED 371 Contemporary Issues and Trends in Secondary School Education
Prerequisite: Admitted into Stage II
This course is designed to give students opportunities to examine contemporary issues, trends, controversies, theories and practices in education. Students will engage in extensive reading, internet search and reflection on critical aspects of contemporary issues. The main focus of this course is on the implications of these initiatives for classroom teachers: efficient classroom practices, instructional planning and implementation, the use of modern technology, assessment procedures, classroom management, professional ethics, etc. The primary goal is to help students clarify how contemporary issues can lead to educational reforms and teaching excellence.
Offered every year. 3 credits.

ED 400 Inclusive Early Childhood Education: Preschool through Grade 2
Prerequisite: Admitted into Stage II
Special education law and procedures, modification of programs for English language learners, working with parents, and developing and implementing an anti-bias curriculum.
Offered every year. 3 credits.

ED 405 Classroom Management and Child Guidance Techniques
Prerequisite: Admitted into Stage III
Guided analysis/application of principles for students completing a primary practicum. Analysis of behavior, group and individual management strategies.
Offered every year. 3 credits.

ED 410 Special Topics
Prerequisite: ED 155 or equivalent
A seminar course on current issues or topics in education.
Offered every 2 years. 3 credits.

ED 424 Seminar: Teaching Practicum
Prerequisite: Admitted into Stage III
Implications of the attempts to juxtapose theory and practice are analyzed from the viewpoint of becoming a professional teacher.
Offered every year. 3 credits.
ED 425 Seminar: Applying Educational Principles
Prerequisite: Admitted into Stage III
Guided analyses and applications of principles and procedures for students completing their practicum.
Offered every year. 3 credits.

ED 430 Practicum in Early Childhood Education: Grade 1 or Grade 2
Prerequisite: Admitted into Stage III
Semester-long 200-hour practicum in first or second grade. Planning, implementing, evaluating learning. Setting includes children with special needs.
Offered every year. 6 credits.

ED 435 Practicum Teaching: Elementary School
Prerequisite: Admitted into Stage III
Actual teaching in a local school: principles, techniques, and responsibility of planning, executing, and evaluating teaching and learning for a full semester.
Offered every year. 9 credits. 300 hr. Practicum.

ED 450 Independent Study in Education
Prerequisite: Consent of instructor
For the student who wishes to pursue independent study in education, faculty members from other disciplines may be called upon to counsel student.
Offered every year. 1-6 credits.

ED 475 Practicum in Teaching
Prerequisite: Admitted into Stage III
Actual teaching in a local school: principles, techniques, and responsibility of planning, executing, and evaluating teaching and learning for a full semester.
Offered every year. 9 credits.

ED 480 Practicum in Teaching Secondary School
Prerequisite: Admitted into Stage III
Full semester teaching experience in a secondary school. Includes planning, teaching and evaluating learning experiences.
Offered every year. 9 credits. 300 hr. Practicum.

ED 485 Practicum in Teaching Middle School
Prerequisite: Admitted into Stage III
Full semester teaching experience in a middle school. Includes planning, teaching and evaluating learning experiences.
Offered every year. 9 credits. 300 hr. Practicum.
Faculty

Patricia A. Benjamin, Associate Professor (2001), Department Chair
B.A., University of Oregon; M.L.S., University of Maryland; M.A., Ph.D., Clark University

Timothy L. Cook, Assistant Professor (2012)
B.S., Brown University; M.S., University of Delaware; Ph.D., University of Massachusetts

Allison Dunn, Associate Professor (2007)
B.A., Oberlin College; M.A., Ph.D., Harvard University

Frank R. Hall, Associate Professor (2012)
B.A., Kean University; M.S., LeHigh University; Ph.D., University of Rhode Island; Post Doctoral Research Fellow, University of Colorado

William J. Hansen, Associate Professor (2005)
B.A., State University of New York at Albany; M.A., Hunter College;
Ph.D., City University of New York Graduate Center

Stephen Healy, Associate Professor (2007)
B.A., Hampshire College; M.S., Ph.D., University of Massachusetts

Douglas E. Kowalewski, Assistant Professor (2012)
B.S., Virginia Polytechnic Institute; Ph.D., Boston University

Geography is a science that examines physical and social processes and their interrelationships through the integrative concept of space. Physical geography analyzes the systems and processes that shape the earth’s surface including weather, climate, landforms and hydrology. Human geography analyzes social processes such as globalization, demographics, urbanization and the construction of cultural identities. Environmental geography examines the interactions between social and physical systems. Geographers explore these processes using such tools as maps, geographic information systems and remote sensing techniques.

Membership in Gamma Theta Upsilon, the international geography honor society, is available to distinguished students. Prospective members must have completed a minimum of 3 geography or earth science courses, have a GPA of at least 3.3 overall in those courses, and shall have completed at least 3 semesters of college course work. A prospective member is not required to be a geography major or minor.
Geography Honors Program: The Geography Honors Program is intended for outstanding majors interested in research as well as those who plan to pursue an advanced degree. Honors students will complete an original research project, defend the project before an approved review committee and present the project in at least one venue external to WSU. Applicants shall have completed the geography core courses through GE 315 and 75 credits overall. Applicants should have a 3.5 GPA in the major although students with a 3.0 major GPA and a faculty sponsor may petition for admission. Application materials are available from the department chair.

Requirements for a Major: Minimum requirement for the major is completion of a six-course (20 credit) core curriculum and one of four concentrations. Students will declare a concentration in either General Geography, Environmental Studies, Geographic Information Systems or Earth System Science. Study Away/Study Abroad is strongly encouraged for geography majors.

Core Courses:

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS 101</td>
<td>Physical Geography</td>
<td>3</td>
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<td>or</td>
<td></td>
<td></td>
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<tr>
<td>GS 110</td>
<td>Meteorology</td>
<td>3</td>
</tr>
<tr>
<td>GE 102</td>
<td>Human Geography</td>
<td>3</td>
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<td>GS 140</td>
<td>Physical Geology</td>
<td>4</td>
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<td>GS 216</td>
<td>GIS</td>
<td>4</td>
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<td>GE 315</td>
<td>Research Methods</td>
<td>3</td>
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<td>GE/GS 400</td>
<td>Geography Seminar</td>
<td>3</td>
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<td>Core Total</td>
<td>20 credits</td>
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Requirements for the Concentration in General Geography

In addition to the six core courses, students will complete:

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<tr>
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<tr>
<td>At least 1 advanced course (200-400 level) in:</td>
<td></td>
</tr>
<tr>
<td>Physical Geography</td>
<td>3</td>
</tr>
<tr>
<td>Human Geography</td>
<td>3</td>
</tr>
<tr>
<td>2 advanced courses in any category</td>
<td>6</td>
</tr>
<tr>
<td><strong>Concentration Total</strong></td>
<td>12 credits</td>
</tr>
<tr>
<td><strong>Major Total</strong></td>
<td>32 credits</td>
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Department of Physical and Earth Science: General Geography Concentration*

Sample Timeline for Completion of Degree

**YEAR ONE**

<table>
<thead>
<tr>
<th>Semester One</th>
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<tbody>
<tr>
<td><strong>Course No.</strong></td>
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<td>LASC</td>
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<tr>
<td>LASC</td>
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<td>LASC</td>
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<tr>
<td>GE 102</td>
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### Semester Two

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>LASC</td>
<td>EN 102 English Composition II</td>
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<tr>
<td>LASC</td>
<td>Constitutions course</td>
<td>3</td>
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<td>LASC</td>
<td>Distribution Elective (TLC**)</td>
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<tr>
<td>LASC</td>
<td>Distribution Elective (GP**)</td>
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<tr>
<td>GS 140</td>
<td>Physical Geology</td>
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### YEAR TWO

#### Semester Three

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<tbody>
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#### Semester Four

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### YEAR THREE

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**Semester Subtotal**: 15

Comments

YEAR FOUR

Semester Seven

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**Semester Subtotal**: 15

Comments

Semester Eight

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**Semester Subtotal**: 15

Comments

**TOTAL CREDITS= 122-123**

Note: *Students in this concentration typically have a second major, often education. For those students, many of the “general electives” would represent the second major and timing of LASC requirements may change. The sequence of LASC courses marked with ** is a suggestion but serves as a reminder that LASC designated courses must be taken to satisfy the LASC requirements.

*Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices.*
Requirements for the Concentration in Earth System Science

In addition to the six core courses, students will complete:

**Ancillary requirements** (may apply to LASC requirements):

- MA 190 Precalculus 4
- One of the following 4
  - CH 110 Introduction to General, Organic, and Biochemistry I
  - CH 120 General Chemistry I
  - PY 221 General Physics I
  - PY 241 Physics I

**Required core courses**:

- GS 210 Geomorphology 4
- GS 224 Oceanography 3
- GS 230 Biogeography 3

**Core electives**: 12

4 upper level courses at the 200+ level, including one earth science course at the 300+ level. No more than one geography (GE) or geospatial course can be counted toward this requirement.

Concentration Total  22 credits
Major Total  42 credits

---

Department of Physical and Earth Science: Geography—Earth System Science (ESS) Concentration Sample Timeline for Completion of Degree

**YEAR ONE**

<table>
<thead>
<tr>
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## YEAR TWO

### Semester Three

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**Semester Subtotal**: 16-17

### Semester Four

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**Semester Subtotal**: 15-18

### Comments

## YEAR THREE

### Semester Five

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**Semester Subtotal**: 15

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**Semester Subtotal**: 15

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TOTAL CREDITS= 122-125

Note: The sequence of LASC courses marked with * is a suggestion but serves as a reminder that LASC designated courses must be taken to satisfy the LASC requirements.

Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices.

Requirements for the Concentration in Environmental Studies:
In addition to the six core courses, students will complete:

- **Required Courses:**
  - GE 258 Global Environmental Change 3
  - Two courses in Physical Geography or GIS (200-400 level) 6
  - Three of the following: 9
    - GE 240 Energy Conservation
    - GS 240 Coastal Environments
    - GS 285 Sustainable Communities
    - GE 307 American Public Lands: Environmental Issues
    - GE 308 Environment and Development
    - GE 312 Sustainable Food Systems
    - GE 341 Fundamentals of Renewable Energy or GE 342 Sustainable Housing
    - GE 359 Environmental Systems & Public Policy (UR 360 crosslist)
    - GE/GS 470 Selected Topics (with approval)
One of the following:
- GE/GS 460 Geography Internship
- GE/GS 410 Independent Study in Geography
- GE/GS 450 Readings and Directed Research

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<tr>
<th>Concentration Total</th>
<th>22 credits</th>
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<tr>
<td>Major Total</td>
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**Department of Physical and Earth Science: Geography Environmental Studies**

**Concentration Sample Timeline for Completion of Degree**

**YEAR ONE**

**Semester One**

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**Semester Subtotal** 15

**Semester Two**

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**Semester Subtotal** 16

**YEAR TWO**

**Semester Three**

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**Semester Subtotal** 16
### Semester Four

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**Semester Subtotal: 15-16**

### Comments

#### YEAR THREE

### Semester Five

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<td>Environmental Elective</td>
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**Semester Subtotal: 15**

### Semester Six

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**Semester Subtotal: 15**

### Comments

*Geography and Earth Sciences*
### YEAR FOUR

#### Semester Seven

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#### Semester Eight

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**TOTAL CREDITS= 123-124**

Note: The sequence of LASC courses marked with * is a suggestion but serves as a reminder that LASC designated courses must be taken to satisfy the LASC requirements.

Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices.

### Requirements for the Concentration in Geographic Information Systems (GIS)

In addition to the six core courses, students will complete:

**Prerequisites:**
To be taken by the time the student has accumulated 21 credits in the major:
- CS 135 Programming for Non-CS Majors
- MA 150 Statistics I

**Required Courses:**
- GS 218 Remote Sensing 3
- GS 318 GIS II 3

**Three Additional Courses**
- Three 200-400 level courses in either physical or human Geography. Students are encouraged to focus on one area. Regional courses are not appropriate.

**One of the following:**
- GS/GE 410 Independent Study 3
- GS/GE 450 Readings/Directed Research
- GS/GE 460 Internship

**Concentration Total**
- 18 credits

**Major Total**
- 38 credits
### Year One

#### Semester One

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<td>MA 150 Statistics</td>
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<tr>
<td>GE 102</td>
<td>Human Geography</td>
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<tr>
<td>GS 101</td>
<td>Physical Geography</td>
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**Semester Subtotal**: 15

#### Semester Two

<table>
<thead>
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<th>Course No.</th>
<th>Course Name</th>
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<tr>
<td>LASC</td>
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<td>GE 216</td>
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<td>GS 140</td>
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**Semester Subtotal**: 17

**Comments**

### Year Two

#### Semester Three

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<tr>
<td>GS 218</td>
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<td>CS 135 Programming for Non-CS Majors</td>
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**Semester Subtotal**: 15-16

#### Semester Four

<table>
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<tr>
<td>GS 318</td>
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<td>Elective</td>
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<td>LASC</td>
<td>Distribution Elective (GP*)</td>
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<td>LASC</td>
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**Semester Subtotal**: 15

**Comments**
### YEAR THREE

#### Semester Five

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<tr>
<td>GE 315</td>
<td>Research Methods</td>
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<td>GS/GE</td>
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**Semester Subtotal**: 15

#### Semester Six

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**Semester Subtotal**: 15

### YEAR FOUR

#### Semester Seven

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<tr>
<td>GE/GS</td>
<td>410, 450 or 460</td>
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<tr>
<td>SELECT</td>
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<tr>
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**Semester Subtotal**: 15

#### Semester Eight

<table>
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<tr>
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<tr>
<td>GE/GS 400</td>
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<td>General Elective</td>
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<td>SELECT</td>
<td>General Elective</td>
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<tr>
<td>SELECT</td>
<td>General Elective</td>
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</tbody>
</table>

**Semester Subtotal**: 15

**TOTAL CREDITS**: 122-123

Note: The sequence of LASC courses marked with * is a suggestion but serves as a reminder that LASC designated courses must be taken to satisfy the LASC requirements.
Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices.

Requirements for the Geography Minor
Students will complete 19 credits including:

- GS 101 Physical Geography 3
- GE 102 Human Geography 3
- GS 216 Geographic Information Systems I 4

Three electives, one each in physical and human geography and one in any category.

Geography Courses

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

**GE 102 Human Geography**
LASC—Global Perspectives; Human Behavior and Social Processes
Introduction to human geography, emphasizing globalization, human-environment relations and spatial patterns of population, development, economics, politics, urbanization and culture.
Offered every year. 3 credits.

**GE 110 World Regional Geography I**
LASC—Global Perspectives; Human Behavior and Social Processes
Analysis of the physical, cultural and economic regions of Eurasia.
Offered every year. 3 credits.

**GE 111 World Regional Geography II**
LASC—Global Perspectives; Human Behavior and Social Processes
Analysis of the physical, cultural and economic regions of Africa, Oceania and the Americas.
Offered every year. 3 credits.

**GE 130 Introduction to Energy Studies**
Foundation concepts in energy studies. Overview of environmental and societal implications of energy systems – past, present and future.
Offered every year. 3 credits.

**GE 193 Special Topics in Geography or Earth Science for First-Year Students**
All "193" courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval.
Introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar.
Offered every year. 3 credits.

**GE 195 Special Topics**
Introductory course to be offered on a trial basis. Topic to be announced in advance
1-6 credits.

**GE 210 Geography of North America**
Prerequisite: ONE of the following: GE/GL 102, GE/GL 111, HI 111, HI 112, SO 100, UR 101 or permission of instructor
Analysis of the physical and human geography of North America.
Offered every 3 years. 3 credits.

**GE 240 Energy Conservation**
Concepts, technologies and policies for energy conservation. Inefficiencies of current systems; technical and social changes for energy efficiency.
Offered every year. 3 credits.
GE 250 Urban Geography  
LASC—Human Behavior and Social Processes  
Prerequisite: GE/GL 102 or UR 101 or permission of instructor  
World urbanization; location and central place concepts; economy of cities; land use patterns; urban environmental problems.  
Offered every year. 3 credits.

GE 255 Geography of Africa  
Prerequisite: ONE of the following: GE/GL 102, GE/GL 111, GL 150, SO 100, SO 110, UR 101 or permission of instructor  
Analysis of the physical and human geography of Africa.  
Offered every year. 3 credits.

GE 258 Global Environmental Change  
Prerequisite: ONE of the following: GE/GL 102, GS 101, GL 150, NS 150, UR 101, CH 106 or permission of instructor  
Introduction to the science, political economy and ethics of global environmental change.  
Offered every year. 3 credits.

GE 285 Sustainable Communities  
LASC—Human Behavior and Social Processes; United States and Its Role in the World  
Prerequisite: ONE of the following: GE/GL 102, GL 150, EC 110, EC 120 or permission of instructor  
Exploration of changes in U.S. and global economic landscape, 1970 to present. Approaches to sustainable economic development.  
Offered every year. 3 credits.

GE 299 Special Topics  
Prerequisite: Permission of instructor  
Intermediate level course to be offered on a trial basis. Topic to be announced in advance.  
1-6 credits.

GE 307 American Public Lands: Environmental Issues  
Prerequisite: GE 258 or permission of instructor  
Exploration of environmental management issues on U.S. public lands such as national parks, national forests, BLM lands.  
Offered every 3 years. 3 credits.

GE 308 Environment and Development  
Prerequisite: GE 258 or permission of instructor  
The global ecology of rich and poor. Environmental implications of poverty, economic development, mass consumption, globalization and demographic change.  
Offered every 3 years. 3 credits.

GE 312 Sustainable Food Systems  
Prerequisite: GE 102 and any 200 level GE, GS, SO or UR course or permission of instructor  
Overview of the structure, evolution, costs and benefits of the global food system. Exploration of local and global alternatives.  
Offered every 3 years. 3 credits.
GE 315 Geographic Research Methods
Prerequisites: GE 102, GS 101, GS 140, GS 216
Overview of the research process; research design in human, physical and environmental geography; quantitative, qualitative and cartographic methods.
Offered every year. 3 credits.

GE 341 Fundamentals of Renewable Energy
Prerequisite: GE 130 (formerly NS 110) or GE 240 (formerly NS/GS 260) or permission of instructor
Analysis of renewable energy concepts, policy and politics. Technologies and methods for renewable energy capture, storage and distribution.
Offered every year. 3 credits

GE 342 Sustainable Housing
Prerequisite: GE 130 (formerly NS 110) or GE 240 (formerly NS/GS 260) or permission of instructor
Principles of green design with an emphasis on building construction. Material and energy flows, choice of materials, designing for sustainability.
Offered every year. 3 credits

GE 359/UR 360 Environmental Systems and Public Policy
Prerequisite: Environmental Studies concentration status
Examination of urban ecosystems, focusing on land uses designed to effectively utilize water, open space and other natural resources.
Offered every 2 years. 3 credits.

GE 400 Geography Seminar
Prerequisites: GE 102, GS 101, GS 140, GS 216, GE 315 and senior standing (or permission of department chair)
Capstone course for geography majors. Students conduct independent research projects and present their findings.
Offered every year. 3 credits.

GE 410 Independent Study in Geography
Opportunity for advanced students to pursue a topic of special interest involving extensive reading, experimentation, and research.
1-6 credits.

GE 450 Readings and Directed Research
Prerequisites: All department requirements for major fulfilled.
Directed study on selected topics; open to senior majors.
3 credits.

GE 460 Geography Internship
Prerequisites: All department requirements for major fulfilled.
Students assigned to various government and private agencies under joint supervision of agency and faculty.
1-6 credits.

GE 470 Selected Topics in Geography
Topic or subject to be announced in advance; topic to be relevant to student needs and interests and subject to availability of professor.
1-6 credits.
Earth Science Courses

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

GS 101 Physical Geography
LASC—Natural Systems and Processes
Introduction to earth systems and processes. Characteristics and distribution of landforms, climates, water, soils, plants and animals.  
Offered every year. 3 credits.

GS 110 Meteorology
LASC—Natural Systems and Processes; Quantitative Reasoning Across the Curriculum
Weather elements, frontal storms, air mass characteristics, winds, temperature, precipitation, and pressure patterns throughout the world; weather instruments, forecasting.  
Offered every year. 3 credits.

GS 140 Physical Geology
LASC—Natural Systems and Processes (Laboratory Course)
Introduction to geological science: rocks and minerals, internal and external geologic processes, topographic map and air photo analysis, local field study. Three lecture hours and two laboratory hours per week.  
Offered every year. 4 credits.

GS 150 Humans and the Cold Environment
Winter intersession. Examines earth's cold regions, including physical geography, cryosphere's role in earth systems, human adaptations. Includes outdoor activity.  
Offered every year. 3 credits.

GS 160 Maps and Map Interpretation
LASC—Natural Systems and Processes; Quantitative Reasoning across the Curriculum
Prerequisite: Accuplacer code 3 or above
Introduction to map reading and interpretation and the history and basic principles of cartography.  
Offered every other year. 3 credits.

GS 193 Special Topics in Earth Science for First-Year Students
All "193" courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval. Introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar.  
Offered every year. 3 credits.

GS 195 Special Topics
Introductory course to be offered on a trial basis. Topic to be announced in advance  
1-6 credits.

GS 210 Geomorphology
Prerequisite: GS 101 or GS 140
The study of landforms and the processes that form them. Labs focus on interpretation of maps and aerial photographs.  
Offered every year. 4 credits.

GS 216 Geographic Information Systems I
Introduction to the digital production of maps using ArcGIS software.  
Offered every year. 4 credits.

GS 218 Introduction to Remote Sensing
Prerequisite: ONE of the following: GS 101 or GS 140, NS 150, BI 101, BI 140 or permission of the instructor
Introduction to the use and analysis of remotely sensed images such as aerial photographs and satellite imagery.  
Offered every year. 3 credits.

GS 220 Earth History
Prerequisite: GS 140
Historical evolution of the earth, its surface features, and life forms through geologic time.  
Offered every 3 years. 3 credits.
Geography and Earth Sciences

GS 225 Oceanography
Prerequisite: ONE of the following: GS 101 or GS 140, GS 110, NS 150 or permission of the instructor
The principles of physical, chemical, biological, and geological oceanography.
Offered every year. 3 credits.

GS 230 Biogeography
Prerequisite: ONE of the following: GS 101, BI 101 or BI 140 or permission of the instructor
The distribution patterns of plants and animals, processes affecting this distribution, and how these patterns change in space and time.
Offered every year. 3 credits.

GS 235 Contemporary Climate Change
Prerequisite: ONE of the following: GS 101, GS 110, NS 150, CH 106 or permission of the instructor
The global climate system, factors influencing climate, recent climate change and the role of human activity.
Offered every year. 3 credits.

GS 240 Coastal Environments
Prerequisite: GS 101 or GS 140 or permission of the instructor
Summer session course examining the physical geography of coastal environments including human impacts. Includes field trips.
Offered every year. 3 credits.

GS 245 Planetary Geology
Prerequisites: GS 140 or PY 101 (formerly NS 105) or permission of instructor
Solar system formation and evolution with emphasis on planetary interiors and surface features.
Offered every 3 years. 3 credits.

GS 250 Hydrology
Prerequisite: ONE of the following: GS 101, GS 140, GS 110, NS 150 or permission of the instructor
Hydrologic processes, their estimation and measurement. Includes precipitation, evaporation, runoff, groundwater and water resources management.
Offered every other year. 3 credits.

GS 260 Introduction to Soil Science
Prerequisite: GS 101 or GS 140 or permission of instructor
The study of the formation, processes, classification and composition of soils with emphasis on environmental applications, including wetland delineation.
Offered every other year. 3 credits.

GS 299 Special Topics
Prerequisite: Permission of the instructor
Intermediate level course to be offered on a trial basis. Topic to be announced in advance.
1-6 credits.

GS 318 Geographic Information Systems II
Prerequisite: GS 216
Advanced production of digital maps using a GIS vector oriented software.
Offered every other year. 3 credits.

GS 335 Hydrogeology
Prerequisites: GS 140 or GS 250
Underground water and its movement. Aquifer identification and test; wells, contamination and remediation, groundwater as a geologic agent.
Offered every other year. 3 credits.

GS 365 Climate Change over Earth History
Prerequisite: GS 140 or GS 235 or permission of instructor
A record of change climate on Earth; methods used to reconstruct past climates; relevance of past changes to the current climate.
Offered every other year. 3 credits.
GS 370 Lakes and Environmental Change
Prerequisites: GS 140 and at least one earth science course 200 level or above, or permission of instructor
Modern physical, biogeochemical, and sedimentary processes in lakes. Lake sediment as archives of past climate and environmental change. Includes fieldwork. Two hour lecture and one two-hour lab. Offered every other year. 4 credits.

GS 400 Geography Seminar
Prerequisites: GE 102, GS 101, GS 216, GS 140, GE 315 and senior standing (or permission of department chair)
Capstone course for geography majors. Students conduct independent research projects and present their findings. Offered every year. 3 credits.

GS 410 Independent Study in Geography
Opportunity for advanced students to pursue a topic of special interest involving extensive reading, experimentation, and research. 1-6 credits.

GS 450 Readings and Directed Research
Prerequisites: All department requirements for major fulfilled.
Directed study on selected topics; open to senior majors. 3 credits.

GS 460 Geography Internship
Prerequisites: All department requirements for major fulfilled.
Students assigned to various government and private agencies under joint supervision of agency and faculty. 1-6 credits.

GS 470 Selected Topics in Geography
Topic or subject to be announced in advance; topic to be relevant to student needs and interests and subject to availability of professor. 1-6 credits.
School of Education, Health and Natural Sciences

Health Sciences
Department of Health Sciences

Faculty

Lynn Bloomberg, Associate Professor (1996), Department Chair
B.A., University of Hawaii; M.Ed., University of Texas; M.P.H., Dr.P.H., University of California at Berkeley

Mariana Cecilia Calle, Assistant Professor (2012)
B.S., University of Buenos Aires, Argentina; M.S., Ph.D., University of Connecticut

JoAnne Maynard, Associate Professor (2003)
B.S., Fitchburg State College; M.A., Emerson College; M.P.A., Harvard University; M.P.H., University of Massachusetts; Ph.D., Brandeis University

Helena Brown Semerjian, Associate Professor (1966)
B.S., M.Ed., Fitchburg State College; M.Ed., Boston University

Shelley White, Assistant Professor (2013)
B.S., M.P.H., Boston University; Ph.D., Boston College

The Department of Health Sciences offers the following programs in Health and Physical Education: Bachelor of Science in Public Health or a Bachelor of Science in Health Education which, when combined with an optional minor in Education, leads to initial licensure certification. Department courses provide basic knowledge and basic practice skills to prepare students interested in pursuing careers in a variety of health service settings, teaching, and as preparation for graduate programs in health and health-related professions. General distribution, or Liberal Arts and Sciences (LASC) requirements provide a broad cultural background in the humanities, in the behavioral and social sciences, and in the natural sciences. Membership in a national health honor society, Eta Sigma Gamma, is made available to students who maintain a minimum 3.0 average.

For all Health courses in the majors, minors, and the concentration, a minimum grade of 2.0 is required and courses may not be taken pass/fail. Courses may be repeated. Prerequisite courses must average a minimum of 2.0.

Next Step is a Community Health program for non-traditional students with health-related work experience. The program offers evening and weekend courses and an opportunity to gain elective credit in the major for writing a portfolio of prior learning.

Graduates are eligible to take the Certified Health Education Specialist exam (CHES) conferred by the National Commission for Health Education Credentialling (NCHEC).
Public Health Major

The goal of the public health program is to prepare health practitioners in the public health disciplines of wellness, health promotion and holistic disease prevention; as well as in community health services through cooperative, multi-disciplinary experiences. Coursework focuses on developing competency in assessing individual/community health needs, and planning, implementing, and evaluating community health programs through academic work and field work.

Major Requirements: 59-63 Credits

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<tr>
<th>Course</th>
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<tr>
<td>HC 201</td>
<td>Introduction to Public Health</td>
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<tr>
<td>HC 202</td>
<td>Introduction to Global Health</td>
<td>3</td>
</tr>
<tr>
<td>HC 203</td>
<td>Introduction to Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>HC 228</td>
<td>Health Ethics</td>
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<td>HC 235</td>
<td>Statistical Applications to Community Health</td>
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<td>HE 390</td>
<td>Environmental Health</td>
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<td>HC 415</td>
<td>Community Health Planning and Promotion</td>
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<td>HC 425</td>
<td>Research Seminar</td>
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<td>HC 450</td>
<td>Practicum</td>
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Electives (Total: 5 courses between Major and Interdisciplinary Options)

Major Electives: 3-6 Credits (1 or 2 courses)

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<td>HC 220</td>
<td>Health Policy</td>
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<td>HC 234</td>
<td>Multiculturalism and Health</td>
<td>3</td>
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<td>HC 350</td>
<td>Group Process</td>
<td>3</td>
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<td>HE 350</td>
<td>Community Health Education</td>
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<td>HC 403</td>
<td>Department Workshop in Community Health</td>
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<td>HE 450</td>
<td>Independent Study</td>
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</table>

Interdisciplinary Electives: 9-13 credits (3-4 courses)

See Health Sciences Department for list of approved courses.

Required Ancillary Courses (17-20 Credits):

<table>
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<th>Course</th>
<th>Title</th>
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<tbody>
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<td>BI 161</td>
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<tr>
<td>BI 162</td>
<td>Anatomy &amp; Physiology</td>
<td>4</td>
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<tr>
<td>BI 204</td>
<td>Microbiology</td>
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<tr>
<td>CH 112</td>
<td>Survey of Chemistry or CH 110 and CH 111</td>
<td>5-8</td>
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</table>
# Department of Health Sciences: Public Health Concentration Sample Timeline for Completion of Degree

## YEAR ONE

### Semester One

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<th>Course Name</th>
<th>Credits</th>
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<tr>
<td>EN 101</td>
<td>English Composition I</td>
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<tr>
<td>HC 201</td>
<td>Introduction to Public Health</td>
<td>3</td>
</tr>
<tr>
<td>BI 161</td>
<td>Anatomy/Physiology I</td>
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<tr>
<td>HE 100</td>
<td>Personal Health (ICW)</td>
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</table>

**Semester Subtotal** 16

**Comments** EN 101 and 102 satisfy LASC Writing. MA 150 should be taken in semester 2 following semester 1 Accuplacer.

### Semester Two

<table>
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<th>Course Name</th>
<th>Credits</th>
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<td>MA 150</td>
<td>Statistics (QR)</td>
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<tr>
<td>BI 162</td>
<td>Anatomy and Physiology II (NSP)</td>
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<td>HC 202</td>
<td>Introduction to Global Health</td>
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<tr>
<td>LASC</td>
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**Semester Subtotal** 16

## YEAR TWO

### Semester Three

<table>
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<th>Course Name</th>
<th>Credits</th>
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<td>Environmental Health Education</td>
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<td>CH110/112</td>
<td>Introduction to General, Organic and Biochemistry I (NSP) or Survey of Chemistry (NSP)</td>
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<td>SELECT</td>
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<td>LASC</td>
<td>Distribution Elective (CA)</td>
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**Semester Subtotal** 13-14

**Comments** Take either CH 112 (5 cr.) or both CH 110 and CH 111 (8 cr.)

### Semester Four

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CH 111 or</td>
<td>Introduction to General, Organic and Biochemistry II (NSP) or General Elective</td>
<td>4-3</td>
</tr>
<tr>
<td>SELECT</td>
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<tr>
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**Semester Subtotal** 15-16
### YEAR THREE

#### Semester Five

<table>
<thead>
<tr>
<th>Course No.</th>
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<tbody>
<tr>
<td>BI 204</td>
<td>Microbiology</td>
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Semester Subtotal: 16

#### Semester Six

<table>
<thead>
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<th>Course No.</th>
<th>Course Name</th>
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</thead>
<tbody>
<tr>
<td>HC 203</td>
<td>Introduction to Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>HC 415</td>
<td>CH Planning/Promotion</td>
<td>3</td>
</tr>
<tr>
<td>HC 425</td>
<td>Research Seminar</td>
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Semester Subtotal: 15

### YEAR FOUR

#### Semester Seven

<table>
<thead>
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<tbody>
<tr>
<td>HC 228</td>
<td>Health Ethics/PH131Med Ethics</td>
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<tr>
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<tr>
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<td>Distribution Elective (USW)</td>
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</tr>
<tr>
<td>SELECT</td>
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Semester Subtotal: 15

#### Semester Eight

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<th>Course No.</th>
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<tbody>
<tr>
<td>HC 450</td>
<td>Practicum in Health</td>
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<tr>
<td>SELECT</td>
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<tr>
<td>SELECT</td>
<td>General Elective</td>
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</table>

Semester Subtotal: 15

TOTAL CREDITS = 121-123
Health Sciences

Note: LASC Distribution Electives, Public Health and Health Education required and elective courses do not have to follow this order. However, it is recommended that students take Personal Health first, then two Health Education or Public Health courses each semester.

Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.

Health Education Major

The goal of the health education program is to prepare graduates to be critical and creative thinkers as well as lifelong learners in the dynamic field of health education. Coursework and fieldwork focus on developing the knowledge, understandings, competencies, and experiences required of professionals teaching health education in a variety of community settings. Worcester State University also offers Initial Licensure for health education programs in middle and secondary education (grades 5-12).

Major Requirements: 39 credits

HE 100 Personal Health
HE 120 Health and Nutrition
HE 200 Consumer Health
HE 220 Mental Health Education
HE 230 Human Sexuality and Sex Education
HE 275 Fitness for Life
HE 285 Drugs and Society
HE 390 Environmental Health
HC 415 Community Health Planning and Promotion
HE 440 Practicum in Health

First Aid/CPR: Red Cross or American Heart Association non-credit certification, or 1-3 credit course

Major Electives (6-9 credits) without Education minor
(n.b. Evening and summer courses may be necessary)

With Education minor (in lieu of Health electives and Health Practicum)

PS 215 Psychology of Adolescence
ED 149 Introduction to Teaching Profession
ED 250 Educational Psychology
ED 251 Foundations of Education
ED 270 Multicultural Education
ED 351/2 Principles and Evaluation
ED 353/4 Effective Teaching
ED 370/1 Contemporary Issues
ED 424 Seminar
ED 480/485 Practicum in Teaching (replaces HE 440: Practicum in Health)
Required Ancillary Courses for the Health Education major: 20 credits
The following courses combined must average C or better; they may be taken concurrently with major course requirements:

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI 161</td>
<td>Human Anatomy and Physiology I</td>
</tr>
<tr>
<td>BI 162</td>
<td>Human Anatomy and Physiology II</td>
</tr>
<tr>
<td>PS 101</td>
<td>General Psychology and PS Elective or PS 215 for Education Minor</td>
</tr>
<tr>
<td>SO 100</td>
<td>Introduction to Sociology</td>
</tr>
<tr>
<td>SO 275</td>
<td>Social and Behavioral Statistics or HC 235 Statistical Applications to Community Health or PS 275 Psychological Statistics</td>
</tr>
</tbody>
</table>

Department of Health Sciences: Health Education Concentration
Sample Timeline for Completion of Degree

YEAR ONE

<table>
<thead>
<tr>
<th>Semester One</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course No.</td>
</tr>
<tr>
<td>LASC</td>
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<tr>
<td>EN 101</td>
</tr>
<tr>
<td>HE 100</td>
</tr>
<tr>
<td>BI 161</td>
</tr>
<tr>
<td>PS 101</td>
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<tr>
<td><strong>Semester Subtotal</strong></td>
</tr>
</tbody>
</table>

| Course No.   | Course Name                  | Credits |
| EN 102       | English Composition II       | 3       |
| MA 150       | Statistics (QR)              | 3       |
| PS 275       | Psychology Elective or PS 275 Psychological Statistics (QRAC) | 3/4     |
| BI 162       | Anatomy/Physiology II (NSP)  | 4       |
| SO 100       | Introduction to Sociology (HBS) | 3       |
| **Semester Subtotal** | **16/17**                  |

Comments: EN 101 and 102 satisfy LASC Writing. MA 150 should be taken in semester 2 following semester 1 Accuplacer.

YEAR TWO

<table>
<thead>
<tr>
<th>Semester Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course No.</td>
</tr>
<tr>
<td>HE 200</td>
</tr>
<tr>
<td>HE 220</td>
</tr>
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<td>LASC</td>
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<td><strong>Semester Subtotal</strong></td>
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### Semester Four

<table>
<thead>
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<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>HE 120</td>
<td>Health and Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>HE 230</td>
<td>Human Sexuality/Sex Education</td>
<td>3</td>
</tr>
<tr>
<td>HI/PO</td>
<td>U.S. Constitutions</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
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<tr>
<td>LASC</td>
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**Semester Subtotal** 15

### Year Three

#### Semester Five

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<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tr>
<td>HE 275</td>
<td>Fitness for Life</td>
<td>3</td>
</tr>
<tr>
<td>HE 285</td>
<td>Drugs and Society</td>
<td>3</td>
</tr>
<tr>
<td>HE 390</td>
<td>Environmental Health</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (NSP)</td>
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</tr>
<tr>
<td>LASC</td>
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**Semester Subtotal** 15

#### Semester Six

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>HC/HE</td>
<td>Elective in Major #1</td>
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</tr>
<tr>
<td>HC 415</td>
<td>Community Health Planning and Promotion</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (ICW)</td>
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<td>Distribution Elective (WAC)</td>
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**Semester Subtotal** 15

### Year Four

#### Semester Seven

<table>
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<tr>
<th>Course No.</th>
<th>Course Name</th>
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<td>Elective in Major #2</td>
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<tr>
<td>HC/HE</td>
<td>Elective in Major #3</td>
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**Semester Subtotal** 15
<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HE 440</td>
<td>Practicum in Health</td>
<td>3-6</td>
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<td>General Elective</td>
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</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
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<tr>
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</tbody>
</table>

Semester Subtotal 15-18

TOTAL CREDITS= 122-125

Note: LASC Distribution Electives and Health Education required and elective courses do not have to follow this order. However, it is recommended that students take Personal Health first, then two Health Education or Public Health courses each semester.

Once LASC requirements are satisfied, students may select general electives. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.

Health Minors

Health Education Minor: 18 credits

Requirements:
- HC 415 Community Health Planning and Promotion 3 credits
- Electives: Health Education and/or Public Health courses 15 credits

Public Health Minor: 21 credits

The minor is designed to develop a more in-depth understanding of the core areas and competencies of the public health discipline by introducing students to various determinants affecting health from global, national, community, and local perspectives.

Requirements:
- HC 201 Introduction to Public Health 3 credits
- HC 202 Introduction to Global Health 3 credits
- HC 203 Introduction to Epidemiology 3 credits
- HC 415 Community Health Planning and Promotion 3 credits
- Electives: from Interdisciplinary and Health courses 9 credits

Health Fitness Minor: 18 credits plus 7 prerequisite credits for PE 210 Foundations of Strength and Conditioning (BI 161 Anatomy and Physiology, 4 credits, and either HE 170 Humans in Motion, 3 credits, or BI 271 Basic Kinesiology, 3 credits).

The minor encompasses both the knowledge and skills required in the growing field of Health Fitness. Applications focus on improving health and fitness at both the individual and population levels.

A minimum grade of 2.0 must be earned in required and elective courses. Prerequisites must average a minimum of 2.0

Requirements:
- HE 120 Health and Nutrition 3 credits
- PE 210 Foundations of Strength and Conditioning 3 credits
- PE 220 Survey of Athletic Training 3 credits
Electives  9 credits from:
PE/HE  150  Health and Physical Education for the Teacher   3 credits
PE  190  Sport and Society   3 credits
PE  240  Athletic Programs   3 credits
PE/HE  260 First Aid: Advanced Theory & Skills  3 credits
PE/HE  275  Fitness for Life   3 credits
PE/HE  280  Stress Management   3 credits
HE  285  Drugs and Society  3 credits
PE  420  Practicum in Health Fitness   3 credits

Health Concentration

Interdisciplinary Concentration in Public Health and Social Justice: 15 credits
The Concentration is designed to develop an educated citizenry who will examine the
determinants of health from global, national, community and local perspectives.
Requirements:
HC  201  Introduction to Public Health  3 credits
HC  202  Introduction to Global Health  3 credits
HC  203  Introduction to Epidemiology  3 credits
Electives: 6 credits from approved interdisciplinary list.

WSU/MCPHSU Articulation Agreement
Worcester State University and Massachusetts College of Pharmacy and Health Sciences
University (MCPHSU) have a formal affiliation agreement that admits a limited number
of students into an articulated program that begins with 83 credits at WSU in the Public
Health/Pre-Nursing program and ends with the accelerated Bachelor of Nursing program
on the MCPHSU Worcester or Manchester (NH) campus. At the end of the appropriate
forty credits at MCPHSU, the student transfers those credits back to Worcester State
University and earns a Bachelor of Science in Public Health. The student then completes
the additional appropriate number of credits at MCPHSU to earn the B.S. in Nursing at
MCPHSU. Students should see the advisor assigned to the program.

Health Education Courses
For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

HE 100 Personal Health
LASC—Individual and Community Well-Being
Physical, mental, emotional, social, psychological, environmental and spiritual aspects of well-being.
Offered every year. 3 credits.

HE 120 Health and Nutrition
LASC—Individual and Community Well-Being
Nutritional needs, weight control, healthy diets, myths, and nutritional aids to better health.
Offered every year. 3 credits.

HE/PE 140 Creative Arts and Health
An experiential and didactic introduction to making connections between the arts process, product and health.
Offered every year. 3 credits.

HE/PE 150 Health and Physical Education for the Teacher
The planning, development, implementation and evaluation of comprehensive health education programs
Offered every year. 3 credits.
HE 170 Humans in Motion
Concepts of the human neuro-musculoskeletal system which provide function and health across the life span under normal and stressful conditions.
Offered every 2 years. 3 credits

HE 193 Special Topics in Health Sciences for First-Year Students
All "193" courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval.
Introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar.
Offered every year. 3 credits.

HE 200 Consumer Health
Current information and guidelines to reliable sources necessary to develop critical and informed consumers of health products and services.
Offered every year. 3 credits.

HE 210 Women’s Health Issues
Interactive processes of politics, power and media’s influences on research, public health policy and current health issues.
Offered every year. 3 credits.

HE 220 Mental Health Education
Examination of mental health as a variable: its creation and the obstacles to sound mental health and positive self-concept.
Offered every year. 3 credits.

HE 230 Human Sexuality and Sex Education
Focus on the need for and understanding of sex education, along with the process of implementing sexuality education, with emphasis on teacher preparation.
Offered every year. 3 credits.

HE 240 Perspectives on Writing & Learning from Experience I
Prerequisites: EN 102, by permission only
Students will identify and analyze significant prior work and life experiences in the their fields of study and complete the first half of a portfolio of prior learning, which articulates what has been learned and relates it to college level courses and competencies.
Offered every year. 3 credits.

HE 242 Perspectives on Writing & Learning from Experience II
Prerequisites: HE 240, by permission only
This course is a continuation of HE 240. Students will continue the identification, analysis, and articulation of prior work and life experience and complete the second half of their prior learning portfolios.
Offered every year. 3 credits.

HE/PE 260 First Aid: Advanced Theory and Skill
Common emergencies, cardiopulmonary resuscitation, auto extrication, and emergency childbirth. Opportunity for instructor rating.
Offered every 3 years. 3 credits.

HE/PE 275 Fitness for Life
Knowledge of health-related fitness components and their effect on total wellness; emphasis on developing personalized fitness program.
Offered every year. 3 credits.

HE/PE 280 Individualized Stress Management and Relaxation
Strategies and techniques for increasing stress resistance based on psychophysiological research.
Offered every year. 3 credits.

HE 285 Drugs and Society
Prerequisites: BI 161 and BI 162
Drug use and abuse, and implications for the individual and society.
Offered every year. 3 credits.

HE 320 Aging and Death
Prerequisite: HE 100
Health implications revealed as psychological and social surrounding the phenomena of aging and death.
Offered every 2 years. 3 credits.
HE 340 Health Counseling
Prerequisite: PS 110 or 111
A study of the counseling implications involved in health. Awareness of the counseling process and referral. Offered every 3 years. 3 credits.

HE 350 Community Health Education
Prerequisite: HE 100
Application of core competencies of community health education with an introduction to theory and program planning. Examination of local health agencies. Offered every year. 3 credits.

HE 370 Critical Issues in Health
Prerequisite: HE 100
An examination of contemporary issues in health that have legal, ethical, moral and professional practice implications. Offered every 3 years. 3 credits.

HE 390 Environmental Health
Prerequisite: HE 100
Examination of the issues affecting the environment and their impact on individual and global health. Offered every year. 3 credits.

HE 400 Special Topics
Current issues in Health. Offered every year. 3 credits.

HE 440 Practicum in Health
A field experience for health majors. Offered every year. 3-6 credits.

HE 450 Independent Study in Health
Independent learning experiences designed and initiated by health majors. Offered every year. 1-6 credits.

Public Health Courses
For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

HC 201 Introduction to Public Health
This course is an overview and will focus on populations, prevention, and the evidence-based practice of public health. Offered every year. 3 credits

HC 202 Introduction to Global Health
LASC—Global Perspectives, Individual and Community Well-Being
This course is an overview and will focus on the developing world from a population and prevention perspective. Offered every year. 3 credits

HC 203 Introduction to Epidemiology
LASC - Natural Systems and Processes
Basic epidemiologic concepts are covered and application of concepts to everyday problems; e.g., hazards in food supplies and risks associated with lifestyle. Offered every year. 3 credits

HC 220 Health Policy
Examination of the process and factors that influence formulation, implementation and modification of health policy in the United States. Offered every 3 years. 3 credits

HC 228 Health Ethics
Ethical issues in health including genetic research, euthanasia, medical intervention and reproductive technologies as well as professional ethics. Offered every 3 years. 3 credits
HC 233 Health Care Systems
The health care system with emphasis on issues relating to unequal access to health services and current plans to make change.
Offered every 3 years. 3 credits

HC 234 Multiculturalism and Health
Examination of diverse ethnic/racial and cultural beliefs and practices affecting health and illness.
Offered every 2 years. 3 credits

HC 235 Statistical Applications to Community Health
LASC—Quantitative Reasoning
Prerequisite: Placement code of 4 or above.
Descriptive statistics, elements of probability theory, and basic ideas of statistical inference applied to health issues.
Offered every year. 3 credits

HC 240 Program Planning and Evaluation for the Non-major
This course is designed to introduce non-majors to the principles of health program development through examination of current community programs and direct learning experiences.
Offered every year. 3 credits

HC 338 Peer Education Training
Prerequisite: HE 100
Emphasis on student development of practical skills to implement programming centered on peer education programs and focused on preventative health.
Offered every 3 years. 3 credits

HC 350 Group Process
Prerequisite: HE 100
A didactic and experiential examination of various theories of group dynamics and their application to the facilitation of health-related groups. Research paper.
Offered every year. 3 credits

HC 403 Department Workshop in Community Health
The subject matter of this course will be reflective of the changing issues within the field of community health.
Offered every year. 3 credits

HC 415 Community Health Planning and Promotion
Prerequisite: HE 100
Emphasis on community analysis; defining and verifying community health problems and establishing goals and objectives. Research paper.
Offered every year. 3 credits

HC 425 Research Seminar
Prerequisites: 3 HE/HC courses
Students will be required to produce a proposal for a research study based on a community public health issue.
Offered every year. 3 credits

HC 450 Practicum in Community Health
Prerequisites: 8 HE/HC courses
Field experience in which students will select a community health specialty area and spend a semester pursuing their goal through participation. (See HE 440 Practicum in Health).
Offered every year. 3-6 credits
Faculty

Richard Bisk, Professor (2001)
B.A., Drew University; M.S., University of New Hampshire; A.S.A., Society of Actuaries; Ph.D., Clark University

Mary S. Fowler, Associate Professor (2004), Department Chair
B.A., New York University; M.S., Ph.D., Carnegie Mellon University

Maria G. Fung, Associate Professor (2008)
B.A., Clark University; M.S., Ph.D., Cornell University

Hy Ginsberg, Assistant Professor (2011)
B.S., SUNY Stony Brook; M.S., Ph.D., University of Vermont

Nargess Hakim, Instructor (2011)
B.S., Shahid Rajai University; M.S., Worcester Polytechnic Institute

Raynold Lewis, Professor (1998), Interim Associate Dean for Education
BTH, West Indies College; M.Ed., Worcester State College; Ph.D., Illinois State University

Karen A. McGrail, Instructor (2011)
B.S., M.S., Worcester State College

Eileen B. Perez, Assistant Professor (2013), Developmental Mathematics Program Director (2008)
B.S., M.S., Union College; Ed.D., Nova Southeastern University

Susan L. Schmoyer, Assistant Professor (2009)
B.S., Randolph-Macon Woman’s College; M.S., Virginia Tech, Ph.D., University of Maryland

Hansun T. To, Associate Professor (2004)
B.A., Rosemont College; M.A., Ph.D., Temple University

Michael Winders, Associate Professor (2004)
B.S., M.S., Ph.D., University of Iowa

The Department prepares its students for advanced study and research as well as for careers in business, industry, government and teaching. Students are encouraged to seek the advice of their faculty advisor in the selection of a concentration and elective courses that will best prepare them for their career choices.

Mathematics is the language of science and also plays a key role in many of the social sciences. An understanding of mathematics provides a powerful approach to solving problems through organization, simplification, and abstraction. In today’s job market, individuals with highly developed analytical and problem-solving skills are in great demand. Therefore there are numerous career options for students who choose to major in mathematics.
Computer software is used in many of our courses. These programs include Maple, Converge, Minitab, Matlab, Geometer's Sketchpad, and DPGraph.

**Admission Requirements for the Mathematics Major:** Rigorous high school coursework and strong SAT scores with above average grades in mathematics and computer science courses.

**Requirements for a Major in Mathematics:** Students must complete a core of six mathematics courses and one computer science class and in addition select one of three concentrations.

**Core Courses:** 24 credits

- MA 200  Calculus I
- MA 201  Calculus II
- MA 240  Theory of Proof
- MA 260  Linear Algebra
- MA 310  Calculus III
- CS 135  Programming for Non-CS Majors
- MA 470  Capstone Experience

MA 200, MA 201 and MA 240 must be completed with grades of at least C- by the end of the sophomore year. A student may only retake any of these courses at most once to increase a grade below C-; and may retake at most two of these courses to increase a grade below C-.

**Requirements for the Concentration in Traditional Mathematics:** 18 credits

- MA 320  Ordinary Differential Equations
- MA 405  Abstract Algebra
- MA 410  Real Analysis

Nine additional credits of mathematics at the MA 290-level or above, to be chosen in consultation with the academic advisor.

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### Department of Mathematics: Traditional Concentration Sample Timeline for Completion of Degree

#### YEAR ONE

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LASC</td>
<td>First-Year Seminar</td>
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<td>EN 101</td>
<td>English Composition I</td>
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<td>MA 200</td>
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<td>CS 135</td>
<td>Programming for Non-CS Majors (QR)</td>
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**Semester Subtotal** 16
### Semester Two

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<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
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<td>3</td>
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<td>LASC</td>
<td>U.S. Constitution</td>
<td>3</td>
</tr>
<tr>
<td>MA 201</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>MA 240</td>
<td>Theory of Proof ¹</td>
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</tr>
<tr>
<td>LASC</td>
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<td>3</td>
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**Semester Subtotal**: 16

**Comments**: ¹DualMath/CS majors may substitute Discrete Math I with permission of department.

### YEAR TWO

#### Semester Three

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<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
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<td>4</td>
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<td>Linear Algebra</td>
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<td>Distribution Elective (USW)</td>
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</tr>
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**Semester Subtotal**: 16-17

#### Semester Four

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<th>Course Name</th>
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<tr>
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<td>LASC</td>
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**Semester Subtotal**: 15

**Comments**: ²MA 320 is offered every other spring.

### YEAR THREE

#### Semester Five

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<td>SELECT</td>
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<tr>
<td>MA</td>
<td>300 Level Elective in Major</td>
<td>3</td>
</tr>
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<td>LASC</td>
<td>Distribution Elective (Constitutions)</td>
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**Semester Subtotal**: 15
### Semester Six

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<tbody>
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<td>MA 320</td>
<td>Differential Equations(^3)</td>
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<td>LASC</td>
<td>Distribution Elective (ICW)</td>
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**Semester Subtotal**: 15

**Comments**: \(^3\)If not taken in semester 4.

### Year Four

#### Semester Seven

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<tr>
<th>Course No.</th>
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<td>MA</td>
<td>300 Level Elective in Major</td>
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<tr>
<td>MA 470</td>
<td>Capstone in Mathematics(^4)</td>
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<td>SELECT</td>
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**Semester Subtotal**: 15

#### Semester Eight

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<th>Course Name</th>
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<tr>
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<td>LASC</td>
<td>Distribution Elective (DAC)</td>
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<tr>
<td>SELECT</td>
<td>General Elective</td>
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</table>

**Semester Subtotal**: 12

**Comments**: \(^4\)Student should discuss capstone project with advisor during preceding semester.

**TOTAL CREDITS**: 120-121

*Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.*
**Requirements for the Concentration in Secondary Education:** 18 credits

- MA 302  Probability and Statistics
- MA 340  Modern Geometry
- MA 405  Abstract Algebra or MA 410 Real Analysis
- MA 360  Number Theory
- MA 303  Mathematical Modeling

Three additional credits of mathematics at the MA 290-level or above, to be chosen in consultation with the academic advisor.

We recommend that students planning to take the Massachusetts Test for Educator Licensure (MTEL) for high school certification also complete a physics course.

---

**Department of Mathematics: Concentration in Secondary Education**

Sample Timeline for Completion of Degree

---

**YEAR ONE**

### Semester One

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>LASC</td>
<td>First-Year Seminar</td>
<td>3</td>
</tr>
<tr>
<td>EN 101</td>
<td>English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>MA 200</td>
<td>Calculus I</td>
<td>4</td>
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<td>CS 135</td>
<td>Programming for Non-CS Majors (QR)</td>
<td>3</td>
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<td>Distribution Elective(GP)</td>
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**Semester Subtotal** 16

### Semester Two

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>EN 102</td>
<td>English Composition II</td>
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<tr>
<td>LASC</td>
<td>U.S. Constitution</td>
<td>3</td>
</tr>
<tr>
<td>MA 201</td>
<td>Calculus II</td>
<td>4</td>
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<td>MA 240</td>
<td>Theory of Proof ¹</td>
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<td>LASC</td>
<td>Distribution Elective (Constitutions)</td>
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</table>

**Semester Subtotal** 16

**Comments**

*Dual Math/CS majors may substitute Discrete Math I with permission of department
*Students should consult with their advisors about minoring in secondary education
## YEAR TWO

### Semester Three

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MA 310</td>
<td>Calculus III</td>
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<tr>
<td>MA 260</td>
<td>Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Natural Systems and Processes</td>
<td>3-4</td>
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<tr>
<td>LASC</td>
<td>Distribution Elective (CA)</td>
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<td>LASC</td>
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**Semester Subtotal**: 16-17

### Semester Four

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<th>Course Name</th>
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<tr>
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<td>MA 303</td>
<td>Math Modeling or MA Elective</td>
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</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (NSP)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (USW)</td>
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</tbody>
</table>

**Semester Subtotal**: 15

**Comments**

2MA 303 is offered every other spring.
3Only one elective is required; it may be taken in either the spring or fall.

## YEAR THREE

### Semester Five

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
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<tr>
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<td>MA 340</td>
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**Semester Subtotal**: 15

### Semester Six

<table>
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<tr>
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<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MA 405</td>
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<td>MA 303</td>
<td>Math Modeling</td>
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<td>LASC</td>
<td>Distribution Elective (ICW)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (WAC)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (TLC)</td>
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</table>

**Semester Subtotal**: 15

**Comments**

4Only one of MA 405 and MA 410 is required.
5If not taken in semester 4.
### YEAR FOUR

#### Semester Seven

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
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<td>300 Level Elective in Major⁷</td>
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<tr>
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Semester Subtotal 15

#### Semester Eight

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tr>
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<td>LASC</td>
<td>Distribution Elective (QRAC)</td>
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</table>

Semester Subtotal 12

**Comments**

⁶Only one elective is required; it may be taken in either the spring or fall.

⁷Only one of MA 405 and MA 410 is required.

⁸Student should discuss capstone project with advisor during preceding semester.

**TOTAL CREDITS= 120-121**

Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.

**Requirements for the Concentration in Statistics and Modeling:** 18 credits

- MA 302 Probability and Statistics
- MA 303 Mathematical Modeling
- MA 304 Data Analysis
- MA 380 Probability Theory
- MA 410 Real Analysis

Three additional credits of mathematics at the MA 290-level or above, to be chosen in consultation with the academic advisor.
## Department of Mathematics: Concentration in Statistics and Modeling

### Sample Timeline for Completion of Degree

#### YEAR ONE

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
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<td>LASC</td>
<td>First-Year Seminar</td>
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<td>EN 101</td>
<td>English Composition I</td>
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<td></td>
<td>MA 200</td>
<td>Calculus I</td>
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<td></td>
<td>CS 135</td>
<td>Programming for Non-CS Majors (QR)</td>
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<td>MA 201</td>
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**Comments**

\(^1\)Dual Math/CS majors may substitute Discrete Math I with permission of department.

#### YEAR TWO

<table>
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<td>MA 260</td>
<td>Linear Algebra</td>
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<table>
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<td>MA 303</td>
<td>Math Modeling (^3) or MA 304(^4) Data Analysis</td>
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<td></td>
<td>LASC</td>
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<td>LASC</td>
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**Comments**

\(^3\)MA 304 is offered every other spring.
### YEAR THREE

#### Semester Five

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<td>Elective</td>
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</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (GP)</td>
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<td>LASC</td>
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**Semester Subtotal** 15

#### Semester Six

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<th>Course Name</th>
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<tr>
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<td>Math Modeling or MA 304 Data Analysis</td>
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**Semester Subtotal** 15

**Comments**

\(^4\)Only one elective is required; it may be taken in either the spring or fall; \(^5\) MA 380 is offered every other spring.

### YEAR FOUR

#### Semester Seven

<table>
<thead>
<tr>
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<th>Course Name</th>
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</thead>
<tbody>
<tr>
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<td>3</td>
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<tr>
<td>MA 380</td>
<td>Probability Theory</td>
<td>3</td>
</tr>
<tr>
<td>MA 470</td>
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<td>LASC</td>
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**Semester Subtotal** 15

#### Semester Eight

<table>
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<tr>
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<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LASC</td>
<td>Distribution Elective (DAC)</td>
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</tr>
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<tr>
<td>SELECT</td>
<td>General Elective</td>
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</tbody>
</table>

**Semester Subtotal** 12

**Comments**

\(^6\)Student should discuss capstone project with advisor during preceding semester.

TOTAL CREDITS = 120-121
Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.

### Requirements for a Traditional Minor in Mathematics: 18 credits

- MA 200  Calculus I
- MA 201  Calculus II
- MA 220  Discrete Mathematics I or MA 240 Theory of Proof
- **Electives:** minimum of 7 credits in mathematics 290 and above

### Requirements for a Financial Mathematics Minor: 18 credits

- MA 200  Calculus I
- MA 201  Calculus II
- MA 310  Calculus III
- MA 380  Probability Theory
- MA 381  Probability Theory II for Actuarial Science

### Requirements for a Middle School Mathematics Minor: 18 credits

- MA 130  Number and Operations for Teachers
- MA 131  Patterns, Functions, and Algebra for Teachers
- MA 132  Geometry, Measurement, Probability, and Statistics for Teachers
- MA 200  Calculus I
- MA 201  Calculus II
- MA 220  Discrete Mathematics or MA 240: Theory of Proof or MA 303 Math Modeling

### Mathematics Placement

All new students must take the Accuplacer Arithmetic test followed by the Accuplacer Elementary Algebra test. Those who score well on these two basic tests will take an Algebra II/Pre-Calculus test called the College Level Math test. In order to take a mathematics course at Worcester State University, a student must complete the placement test process prior to registration. Results will be used to determine appropriate course placement.

### Mathematics Courses

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

**MA 098 Arithmetic Developmental Math**

Whole numbers, fractions, decimals, percents, rates, ratios, proportions, word problems, graphs, tables, signed numbers, variables and expressions.

*Offered every semester. 3 remedial credits. Credits do not count towards graduation.*

**MA 099 Elementary Algebra Developmental Math**

Prerequisite: Placement code 2 or MA 098

Elementary algebra: including linear, quadratic, and rational equations, exponents, polynomials, graphing linear and simultaneous equations, factoring, and radicals.

*Offered every semester. 3 remedial credits. Credits do not count towards graduation*

**MA 105 Survey of Mathematics**

LASC—Quantitative Reasoning

Prerequisite: Placement code 3 or above

Financial management, probability theory, voting methods and other topics selected to improve the quantitative literacy of students.

*Offered every semester. 3 credits.*
Mathematics

MA 130 Number and Operations for Teachers
LASC—Quantitative Reasoning
Prerequisite: Placement code 5 or above
Develops understanding of the mathematical content of number and operations at the deep level required for successful elementary and middle school teaching.
Offered every semester. 3 credits.

MA 131 Patterns, Functions and Algebra for Teachers
LASC—Quantitative Reasoning
Prerequisite: MA 130 with a grade of at least C
Develops understanding of the mathematical content of patterns, functions and algebra at the deep level required for successful elementary and middle school teaching.
Offered every year. 3 credits. Credit will not be awarded for MA180 (formerly MA110) and MA131.

MA 132 Geometry, Measurement, Probability and Statistics for Teachers
LASC—Quantitative Reasoning
Prerequisite: MA 130 with a grade of at least C
Develops understanding of the mathematical content of geometry, measurement, probability and statistics at the deep level required for successful elementary and middle school teaching.
Offered every year. 3 credits

MA 150 Statistics I
LASC—Quantitative Reasoning
Prerequisite: Placement code 4 or above
Descriptive techniques, elementary probability, and introduction to statistical inference.
Offered every semester. 3 credits. Credit will not be awarded for both MA 150 and MA 302.

MA 180 Introduction to Functions (Formerly MA 110 College Algebra)
LASC—Quantitative Reasoning
Prerequisite: Placement code 5 or above
Properties and applications of linear, quadratic, polynomial, rational, exponential, and logarithmic functions; systems of equations and inequalities; complex numbers.
Offered every semester. 3 credits. Credit will not be awarded for both MA180 (formerly MA 110) and MA 131.

MA 190 Precalculus
LASC—Quantitative Reasoning
Prerequisite: MA180 (formerly MA110) with a grade of at least C- or placement code 6 or above
Analytic geometry; Review of exponential and logarithmic functions; trigonometric functions, identities and equations, systems of linear equations and inequalities, applications.
Offered every semester. 4 credits.

MA 193 Special Topics in Mathematics for First-Year Students
All "193" courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval.
Prerequisite: Placement code 5 or above or permission of instructor
Introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar.
Offered every 3 years. 3 credits.

MA 200 Calculus I
LASC—Quantitative Reasoning
Prerequisite: MA 190 with a grade of at least C- or Placement code 7
Limits, continuity, differentiation and integration of functions, the Fundamental Theorem of Calculus, L'Hôpital's Rule, applications including related rates, optimization, and area.
Offered every semester. 4 credits. Credit will not be awarded for both MA 200 & MA 202

MA 201 Calculus II
LASC—Quantitative Reasoning
Prerequisite: MA 200 with a grade of at least C-
Techniques of integration, infinite sequences and series, power series, applications including area, volume, and functional approximation.
Offered every semester. 4 credits.
MA 202 Business Calculus
Prerequisite: MA180 (formerly MA110) with a grade of at least C- or placement code 6 or above
Limits, derivatives of algebraic functions, integration, business applications.
Offered every year. 4 credits. Credit will not be awarded for both MA 200 & MA 202

MA 220 Discrete Mathematics
LASC—Quantitative Reasoning
Prerequisite: MA180 (formerly MA110) with a grade of at least C- or placement code 6 or above
Sets, algorithms, directed graphs, relations, matrices, equivalence relations, partial orders, functions, logic, mathematical induction.
Offered every year. 4 credits Credit will not be awarded for both MA 220 and MA 240

MA 240 Theory of Proof
Prerequisite: MA 200 with a grade of at least C- (may be taken concurrently with permission of the department)
Logic, set theory, mathematical induction, relations, functions, sequences and convergence, limits and continuity, congruence, introduction to groups.
Offered every year. 3 credits. Credit will not be awarded for both MA 220 and MA 240

MA 260 Linear Algebra
Prerequisite: MA 220 or MA 240 with a grade of at least C-
Solutions of simultaneous equations by means of matrices and determinants, vector spaces, linear transformations.
Optional topics: characteristic values, bilinear and quadratic forms.
Offered every year. 3 credits.

MA 290 Discrete Mathematics II
Prerequisite: MA 220 or MA 240 with a grade of at least C-
Counting techniques, permutations, combinations, factorization, modular arithmetic, binary numbers, Boolean algebra, recursion and recurrence relations, graphs and trees, elementary linear algebra.
Offered every year. 4 credits.

MA 302 Probability and Statistics
Prerequisite: MA 200 with a grade of at least C-
Descriptive statistics, probability theory including an introduction to calculus based probability theory, combinatorics, correlation, regression and inference techniques.
Offered every year. 3 credits. Credit will not be awarded for both MA 150 and MA 302.

MA 303 Mathematical Modeling
Prerequisite: MA 201 with a grade of at least C-
The development and application of deterministic and probabilistic mathematical models from the physical, social and life sciences.
Offered every year. 3 credits.

MA 304 Data Analysis
Prerequisites: MA 302 and CS 265 with grades of at least C-
Case studies combining applied statistics, mathematical statistics, mathematics, computing, and communications to simulate work experience of a practicing statistician.
Offered every 2 years. 3 credits.

MA 310 Calculus III
Prerequisite: MA 201 with a grade of at least C-
Vectors, parametric equations, polar, cylindrical and spherical coordinates, multivariable functions, properties and applications, partial derivatives, multiple integrals.
Offered every year. 4 credits.

MA 320 Ordinary Differential Equations
Prerequisite: MA 310 (may be taken concurrently) with a grade of at least C-
Techniques for solving first and higher order differential equations, Laplace transforms, Fourier series and power series solutions.
Offered every 2 years. 3 credits.
MA 340 Modern Geometry
Prerequisite: MA 220 or MA 240 with a grade of at least C-
Topics from Euclidean and non-Euclidean geometry.
Offered every year. 3 credits.

MA 360 Number Theory
Prerequisite: MA 220 or MA 240 with a grade of at least C-
Divisibility properties of integers, prime numbers, the Euclidean algorithm, the unique factorization theorem, congruence, Diophantine equations, number theoretic functions.
Offered every year. 3 credits.

MA 380 Probability
Prerequisite: MA 310 with grade of at least C-
Continuous and discrete probability concepts including: conditional probability, independence, moments of univariate and multivariate random variables. This is the first course in a two course sequence that prepares students for the first Actuarial exam.
Offered every 2 years. 3 credits.

MA 381 Probability Theory for Actuarial Science
Prerequisite: MA 380 with grade of at least C-
Probabilities, conditional probabilities, moment-generating functions, moments and expectations of specific parametric distributions including Poisson, geometric, hypergeometric, exponential, and normal.
Offered every 2 years. 3 credits.

MA 405 Abstract Algebra
Prerequisite: MA 260 with a grade of at least C-
Sets, mathematical systems, groups, rings, fields.
Offered every year. 3 credits.

MA 410 Real Analysis
Prerequisites: MA 240 and MA 310 with grades of at least C-
Rigorous treatment of sequences, topology of the real numbers, limits and continuity.
Offered every year. 3 credits.

MA 470 Capstone Experience
Prerequisite: Senior standing in the mathematics major.
Students complete an independent mathematics research/problem-solving project, including oral presentations and a final written paper.
Offered every year. 3 credits.
Natural Science
Department of Physical and Earth Sciences

Faculty

William A. Belanger, Associate Professor (1967)
B.S., Ed.M., Worcester State College; M.N.S., Worcester Polytechnic Institute

Patricia A. Benjamin, Associate Professor (2001), Department Chair
B.A., University of Oregon; M.L.S., University of Maryland; M.A., Ph.D., Clark University

Timothy L. Cook, Assistant Professor (2012)
B.S., Brown University; M.S., University of Delaware; Ph.D., University of Massachusetts

Douglas R. Dawson, Assistant Professor (2009)
B.A., Princeton University; Ph.D., University of California at Irvine

Allison Dunn, Associate Professor (2007)
B.A., Oberlin College; M.A., Ph.D., Harvard University

William J. Hansen, Associate Professor (2005)
B.A., State University of New York at Albany; M.A., Hunter College;
Ph.D., City University of New York Graduate Center

Stephen Healy, Associate Professor (2007)
B.A., Hampshire College; M.S., Ph.D., University of Massachusetts

Douglas E. Kowalewski, Assistant Professor (2012)
B.S., Virginia Polytechnic Institute; Ph.D., Boston University

Francisco J. Lamelas, Associate Professor (2005)
B.S., University of Wisconsin, Milwaukee; M.S., University of Wisconsin;
M.S., Ph.D., University of Michigan

Sudha R. Swaminathan, Associate Professor (2005)
A.B., (Physics), A.B., (Mathematics) Mount Holyoke College;
M.S., Ph.D., University of Michigan

Natural Science is an interdisciplinary science major for students interested in environmental science, allied health professions, science teaching, or other areas that can benefit from a broad scientific background. The major affords students an opportunity to discover scientific fundamentals as part of a general education while preparing for graduate study or employment in a scientific field.

The Environmental Science concentration within the Natural Science major is for students interested in pursuing environmentally-related technical careers or further study in the technical aspects of environmental issues. The concentration provides students with a foundation in the scientific techniques, analyses and tools for assessing human impacts on environmental systems and mitigating or remediating environmental harm.
Completion of the Natural Science degree requirements may prepare students for advanced study in a health profession. Students work closely with an advisor to choose major core and elective courses that will fulfill the prerequisites for admission to such a program. Some students in the Natural Science major may choose to apply for admission to the Nuclear Medicine Technology concentration or the Accelerated Pharmacy Program (see below).

Many students in the Natural Science major are interested in science education. Students in the Elementary Education major may choose Natural Science as a second major. Students interested in teaching science at the middle or secondary school level may choose the concentration in General Science Education or the concentration in Earth Science Education within the Natural Science major.

The major in Natural Science, pre-MBA concentration is for students planning a business career in a scientific or technical field. Foundation science courses help students understand the principles underlying technologies in fields such as biotech, electronics, or instrumentation. The business and economics courses are designed to prepare students for application to an MBA program and may result in graduate course waivers, shortening the period of graduate study.

NOTE: Students completing the Natural Science major fulfill the 12 credit general education (LASC) requirements in Natural Systems and Processes and Quantitative Reasoning (Mathematics and Natural Science distribution under the pre-LASC system).

**Requirements for a Major in Natural Science**: 41 credits

Two courses in mathematics, chosen from the following: 6 credits
MA 110 or MA 150 (only one of these may be applied to the major)
MA 190 or any MA course at 200 level or above
(Note: Education students may substitute the MA 130-132 sequence for MA 110 above)

Nine science courses, including six core courses and three electives:

Core science courses: 23 credits
Three one-year sequences chosen from **three** of the following four disciplines: Biology, Chemistry, Earth Science, Physics. *The three disciplines are chosen according to a student's career plans, in consultation with an advisor.*

The one-year sequences are:
BI 140 Intro. to Organismal Biology **AND**
BI 141 Intro. to Cellular and Molecular Biology 8 credits
CH 120 and CH 121 General Chemistry I and II 8 credits
GS 101 and GS 140 Physical Geography and Physical Geology 7 credits
PY 221 and PY 222 General Physics I and II **OR**
PY 241 and PY 242 Physics I and II 8 credits
3 additional science electives at the 200 level or above: 9 credits
NS 400 Natural Science Seminar 3 credits
# Natural Science

## Department of Physical and Earth Sciences Natural Science Major

### Sample Timeline for Completion of Degree

#### YEAR ONE

**Semester One**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>LASC</td>
<td>First-Year Seminar</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>EN 101 English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>MA 110</td>
<td>College Algebra</td>
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**Semester Two**

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<th>Course Name</th>
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<tbody>
<tr>
<td>LASC</td>
<td>EN 102 English Composition II</td>
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</tr>
<tr>
<td>LASC</td>
<td>Constitutions course</td>
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**Semester Subtotal** 16

**Comments**

#### YEAR TWO

**Semester Three**

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**Semester Subtotal** 17

**Comments**

**Semester Four**

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**Semester Subtotal** 16

**Comments**
## YEAR THREE

### Semester Five

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<th>Course No.</th>
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**Semester Subtotal** 16

### Semester Six

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**Semester Subtotal** 16

### YEAR FOUR

### Semester Seven

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>XX 2xx</td>
<td>Science Elective</td>
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<td>SELECT</td>
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**Semester Subtotal** 15

### Semester Eight

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<td>Natural Science Seminar</td>
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<tr>
<td>SELECT</td>
<td>General Elective</td>
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</tbody>
</table>

**Semester Subtotal** 15

**Comments**

**TOTAL CREDITS= 127**
Note: The sequence of LASC courses marked with * is a suggestion but serves as a reminder that LASC designated courses must be taken to satisfy the LASC requirements. Students planning to take the first-year physics sequence should take Precalculus or Calculus concurrently.

Students in the NS major are not required to take LASC NSP or QR courses outside of the major. Students are required to meet with their department advisor to review their upcoming semester academic choices.

Requirements for a Major in Natural Science, Concentration in Environmental Science: 58-62 credits

Mathematics and Computer Science (10 credits)

- MA 150 Statistics or MA 302 Probability and Statistics 3
- MA 190 or any MA course at 200 level or above 4
- CS 135 Programming for non-CS Majors 3

One Environmental Policy course (3 credits): 3

- GE 240 Energy Conservation
- GE 258 Global Environmental Change
- GE 359/UR 360 Environmental Systems and Public Policy

Required Natural Science courses (6 credits):

- NS 150 Environmental Science 3
- NS 400 Natural Science Seminar 3

Required Biology courses (12 credits):

- BI 140 Introduction to Organismal Biology 4
- BI 141 Introduction to Cellular and Molecular Biology 4
- BI 202 Ecology 4

Required Chemistry courses (11 credits):

- CH 120 General Chemistry I 4
- CH 121 General Chemistry II 4
- CH 320 Environmental Chemistry 3

Required Geoscience courses (11 credits)

- GS 101 Physical Geography 3
- GS 140 Physical Geology 4
- GS 216 Geographic Information Systems 4

One course from:

- CH 335 Green Chemistry 3
- BI 334 Wildlife Investigative Techniques 4
- GS 370 Lakes and Environmental Change 4

One elective course from the following:

- BI 331 Marine Biology 4
- BI 340 Plant Sciences 4
- BI 344 Soil Biology 4
- BI 380 Biodiversity and Conservation Biology 4
- CH 330 Environmental Toxicology 3
- GE 341 Fundamentals of Renewable Energy 3
- GS 218 Introduction to Remote Sensing 3
- GS 225 Oceanography 3
- GS 230 Biogeography 3
Natural Science

GS 235 Contemporary Climate Change 3
GS 250 Hydrology 3
GS 260 Introduction to Soil Science 3
GS 318 Geographic Information Systems II 3
GS 335 Hydrogeology 3
GS 470, BI 401, CH 455, or NS 412 Special Topics (with permission of advisor)

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Department of Physical and Earth Sciences: Major in
Natural Science, Concentration in Environmental Science
Sample Timeline for Completion of Degree

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### YEAR ONE

#### Semester One

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<td>First-Year Seminar</td>
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<tr>
<td>LASC</td>
<td>EN 101 English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>MA 190</td>
<td>Precalculus (or MA 200+)</td>
<td>4</td>
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<tr>
<td>NS 150</td>
<td>Introduction to Environmental Science</td>
<td>3</td>
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<tr>
<td>GS 101</td>
<td>Physical Geography</td>
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**Semester Subtotal** 16

#### Semester Two

<table>
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<tr>
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<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
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<td>EN 102 English Composition II</td>
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<td>LASC</td>
<td>Distribution Elective (ICW*)</td>
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</tr>
<tr>
<td>MA 150</td>
<td>Statistics (or MA 302)</td>
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<tr>
<td>GS 140</td>
<td>Physical Geology</td>
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**Semester Subtotal** 16

#### Comments

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### YEAR TWO

#### Semester Three

<table>
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<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BI 140</td>
<td>Introduction to Organismal Biology</td>
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<tr>
<td>GS 216</td>
<td>Geographic Information Systems</td>
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**Semester Subtotal** 17
### Semester Four

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<th>Course No.</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>BI 141</td>
<td>Introduction to Cellular/Molecular Biology</td>
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<tr>
<td>Policy</td>
<td>GE 240, 258 or 359</td>
<td>3</td>
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<td>CS 135</td>
<td>Programming for non-CS Majors</td>
<td>3</td>
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<tr>
<td>LASC</td>
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#### Comments

### Year Three

#### Semester Five

<table>
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<tbody>
<tr>
<td>CH 120</td>
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<td>LASC</td>
<td>Distribution Elective (DAC*)</td>
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### Semester Six

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<th>Course Name</th>
<th>Credits</th>
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<tr>
<td>CH 121</td>
<td>General Chemistry II</td>
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<td>BI 202</td>
<td>Ecology</td>
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#### Comments
### YEAR FOUR

#### Semester Seven

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<tr>
<td>CH 320</td>
<td>Environmental Chemistry</td>
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</tr>
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<td>SELECT</td>
<td>[Major Elective]</td>
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</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
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<td>General Elective</td>
<td>3</td>
</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
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</tr>
</tbody>
</table>

**Semester Subtotal** 15-16

#### Semester Eight

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NS 400</td>
<td>Natural Science Seminar</td>
<td>3</td>
</tr>
<tr>
<td>SELECT</td>
<td>CH 335 or BI 334 or GS 370</td>
<td>3-4</td>
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<td>General Elective</td>
<td>3</td>
</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Subtotal** 15-16

**TOTAL CREDITS= 128-130**

Note: The sequence of LASC courses marked with * is a suggestion but serves as a reminder that LASC designated courses must be taken to satisfy the LASC requirements. 

*Students in the NS major are not required to take LASC NSP or QR courses outside of the major. Students are required to meet with their department advisor to review their upcoming semester academic choices.*

### Requirements for a Major in Natural Science, pre-MBA Concentration: 60 credits

(For **Track I students** the 6 credit Quantitative Reasoning and 6 credit Natural Systems and Processes General Education (LASC) requirements are fulfilled, so the effective number of required credits is 45.

For **Track II students** the 12 credit Natural Science and Mathematics Distribution Requirement is fulfilled so the number of required credits is 45.)

(See Academic Policies and Procedures– General Education Requirements for more information).

**Economics and Business Administration (18 credits):**

- EC 110  Introduction to Microeconomics 3
- EC 120  Introduction to Macroeconomics 3
- BA 200  Principles of Management and Organizational Behavior 3
- BA 210  Fundamentals of Accounting I 3
- BA 220  Fundamentals of Accounting II 3
- BA 316  Financial Management or BA 318: Principles of Marketing 3

**Mathematics (7 credits):**

- MA 150  Statistics I or MA 302  Probability and Statistics 3
- MA 200  Calculus I or MA 202  Business Calculus 4
Core science courses (see major requirements) (23-24 credits):
Three one-year sequences chosen from three of the following four disciplines:

- BI 140 and BI 141 8
- CH 120 and CH 121 8
- GS 101 and GS 140 7
- PY 221 and PY 222 or PY 241 and PY 242 8

3 additional science electives at the 200 level or above 9

NS 400: Natural Science Seminar 3

**Requirements for a Major in Natural Science, Concentration in Earth Science Education (Middle/Secondary):** 54 credits

- **Mathematics** (12 credits)
  - MA 130 Number and Operations for Teachers
  - MA-131 Patterns, Functions and Algebra for Teachers
  - MA-132 Geometry, Measurement, Probability and Statistics for Teachers
  - MA 190 Precalculus or any MA course at 200 level or above

- **Earth Science** (17 credits)
  - GS 101 Physical Geography
  - GS 110 Meteorology
  - GS 140 Physical Geology
  - GS 216 Geographic Information Systems I
  - GS 225 Oceanography

- **Physics** (11 credits)
  - PY 101 Introduction to Astronomy
  - PY 221 & 222 General Physics I and II
  - or PY 241 & 242 Physics I and II

- **Biology** (4 credits)
  - BI 140 Introduction to Organismal Biology

- **Chemistry** (4 credits)
  - CH 110 Introduction to General, Organic, and Biochemistry I
  - (May substitute CH 120 & 121 General Chemistry I and II)

- **Additional Required Course** (3 credits)
  - NS 201 Science and Society

- **Required for All Natural Science Majors** (3 credits)
  - NS 400 Natural Science Seminar

- **Optional Recommended Courses** (17 credits)
  - BI 202 Principles of Ecology
  - GS 220 Earth History
  - GS 235 Contemporary Climate Change
  - GS 245 Planetary Geology
  - GS 250 Hydrology

- **Additional Optional Courses** (8 credits)
  - BI 141 Introduction to Cellular and Molecular Biology
  - CH 111 Introduction to General, Organic, and Biochemistry II
## Department of Physical and Earth Sciences: Major in Natural Science, Concentration in Earth Science Education

### Sample Timeline for Completion of Degree

#### YEAR ONE

<table>
<thead>
<tr>
<th>Semester One</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Course No.</strong></td>
<td><strong>Course Name</strong></td>
</tr>
<tr>
<td>LASC</td>
<td>First-Year Seminar</td>
</tr>
<tr>
<td>LASC</td>
<td>EN 101 English Composition I</td>
</tr>
<tr>
<td>MA 130</td>
<td>Number and Operations for Teachers</td>
</tr>
<tr>
<td>GS 101</td>
<td>Physical Geography</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (ICW*)</td>
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<td><strong>Semester Subtotal</strong></td>
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<table>
<thead>
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<tbody>
<tr>
<td><strong>Course No.</strong></td>
<td><strong>Course Name</strong></td>
</tr>
<tr>
<td>LASC</td>
<td>EN 102 English Composition II</td>
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<td>LASC</td>
<td>Constitutions course</td>
</tr>
<tr>
<td>MA 131</td>
<td>Patterns, Functions, Algebra</td>
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<tr>
<td>GS 140</td>
<td>Physical Geology</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (HBS*)</td>
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#### YEAR TWO

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<tr>
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<tbody>
<tr>
<td><strong>Course No.</strong></td>
<td><strong>Course Name</strong></td>
</tr>
<tr>
<td>BI 140</td>
<td>Introduction to Organismal Biology</td>
</tr>
<tr>
<td>GS 110</td>
<td>Meteorology</td>
</tr>
<tr>
<td>MA 132</td>
<td>Geometry, Measurement, Probability and Statistics for Teachers</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (USW*)</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (TLC*)</td>
</tr>
<tr>
<td><strong>Semester Subtotal</strong></td>
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<table>
<thead>
<tr>
<th>Semester Four</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Course No.</strong></td>
<td><strong>Course Name</strong></td>
</tr>
<tr>
<td>CH 110</td>
<td>Introduction to Chemistry I (or CH 120 &amp; 121)</td>
</tr>
<tr>
<td>GS 216</td>
<td>Geographic Information Systems</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (GP*)</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (CA*)</td>
</tr>
<tr>
<td>SELECT</td>
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</table>
### YEAR THREE

#### Semester Five

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PY 221</td>
<td>General Physics I (or PY 241)</td>
<td>4</td>
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<tr>
<td>MA 190</td>
<td>Precalculus</td>
<td>4</td>
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<tr>
<td>GS 225</td>
<td>Oceanography</td>
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<tr>
<td>LASC</td>
<td>Distribution Elective (WAC*)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (DAC*)</td>
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</table>

**Semester Subtotal**: 17

#### Semester Six

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PY 222</td>
<td>General Physics II (or PY 242)</td>
<td>4</td>
</tr>
<tr>
<td>NS 201</td>
<td>Science and Society</td>
<td>3</td>
</tr>
<tr>
<td>PY 101</td>
<td>Astronomy</td>
<td>3</td>
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<tr>
<td>LASC</td>
<td>Distribution Elective (QRAC*)</td>
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<tr>
<td>SELECT</td>
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**Semester Subtotal**: 16

### YEAR FOUR

#### Semester Seven

<table>
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<tr>
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<th>Course Name</th>
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<tr>
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<tr>
<td>SELECT</td>
<td>Optional Recommended Course</td>
<td>3</td>
</tr>
<tr>
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<tr>
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</table>

**Semester Subtotal**: 15-17

#### Semester Eight

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NS 400</td>
<td>Natural Science Seminar</td>
<td>3</td>
</tr>
<tr>
<td>SELECT</td>
<td>Optional Recommended Course</td>
<td>3</td>
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<tr>
<td>SELECT</td>
<td>Optional Recommended Course</td>
<td>3</td>
</tr>
<tr>
<td>SELECT</td>
<td>General Elective (or CH 111)</td>
<td>3-4</td>
</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
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</tbody>
</table>

**Semester Subtotal**: 15-16

**TOTAL CREDITS**: 127-129
Note: The sequence of LASC courses marked with * is a suggestion but serves as a reminder that LASC designated courses must be taken to satisfy the LASC requirements. *Students in the NS major are not required to take LASC NSP or QR courses outside of the major. Students are required to meet with their department advisor to review their upcoming semester academic choices.*

**Requirements for a Major in Natural Science Concentration in General Science Education (Middle):** 58 credits

**Mathematics (12 credits)**
- MA 130  Number and Operations for Teachers
- MA-131  Patterns, Functions and Algebra for Teachers
- MA-132  Geometry, Measurement, Probability and Statistics for Teachers
- MA 190  Precalculus or any MA course at 200 level or above

**Physics (11 credits)**
- PY 101  Astronomy
- PY 221 & 222 General Physics I and II
  or PY 241 & 242 Physics I and II

**Biology (8 credits)**
- BI 140  Introduction to Organismal Biology
- BI 141  Introduction to Cellular and Molecular Biology

**Chemistry (8 credits)**
- CH 110 & 111  Introduction to General, Organic, and Biochemistry I and II
  or CH 120 & 121 General Chemistry I and II

**Earth Science (7 Credits)**
- GS 101  Physical Geography
- GS 140  Physical Geology

**Additional Required Courses (9 credits)**
- NS 201  Science and Society
- GS 110  Meteorology
  One elective (BI, CH, GS, or PY) at 200 level or above

**Required for All Natural Science Majors (3 credits)**
- NS 400  Natural Science Seminar

**Optional Recommended Course (4 credits)**
- NS 120  Integrated Science I
**Department of Physical and Earth Sciences: Major in Natural Science, Concentration in General Science Education**

**Sample Timeline for Completion of Degree**

### YEAR ONE

#### Semester One

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LASC</td>
<td>First-Year Seminar</td>
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<tr>
<td>LASC</td>
<td>EN 101 English Composition I</td>
<td>3</td>
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<tr>
<td>MA 130</td>
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**Semester Subtotal** 15

#### Semester Two

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<tr>
<td>LASC</td>
<td>Constitutions course</td>
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</tr>
<tr>
<td>MA 131</td>
<td>Patterns, Functions, Algebra</td>
<td>3</td>
</tr>
<tr>
<td>GS 140</td>
<td>Physical Geology</td>
<td>4</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (HBS*)</td>
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**Semester Subtotal** 16

### YEAR TWO

#### Semester Three

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BI 140</td>
<td>Introduction to Organismal Biology</td>
<td>4</td>
</tr>
<tr>
<td>CH 110</td>
<td>Introduction to Chemistry I (or CH 120)</td>
<td>4</td>
</tr>
<tr>
<td>MA 132</td>
<td>Geometry, Measurement, Probability and Statistics for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (USW*)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (TLC*)</td>
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</table>

**Semester Subtotal** 17

#### Semester Four

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI 141</td>
<td>Introduction to Cellular and Molecular Biology</td>
<td>4</td>
</tr>
<tr>
<td>CH 111</td>
<td>Introduction to Chemistry II (or CH 121)</td>
<td>4</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (GP*)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (CA*)</td>
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**Semester Subtotal** 17
### YEAR THREE

#### Semester Five

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PY 221</td>
<td>General Physics I (or PY 241)</td>
<td>4</td>
</tr>
<tr>
<td>MA 190</td>
<td>Precalculus</td>
<td>4</td>
</tr>
<tr>
<td>GS 110</td>
<td>Meteorology</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (WAC*)</td>
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</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (DAC*)</td>
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**Semester Subtotal** 17

### Semester Six

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PY 222</td>
<td>General Physics II (or PY 242)</td>
<td>4</td>
</tr>
<tr>
<td>NS 201</td>
<td>Science and Society</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (QRAC*)</td>
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<tr>
<td>SELECT</td>
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<tr>
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</table>

**Semester Subtotal** 16

### YEAR FOUR

#### Semester Seven

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tr>
<td>NS 120</td>
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<td>PY 101</td>
<td>Astronomy</td>
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<tr>
<td>SELECT</td>
<td>General Elective</td>
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<tr>
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**Semester Subtotal** 13

#### Semester Eight

<table>
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<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>NS 400</td>
<td>Natural Science Seminar</td>
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<tr>
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<td>General Elective</td>
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**Semester Subtotal** 12

**TOTAL CREDITS= 123**

Note: The sequence of LASC courses marked with * is a suggestion but serves as a reminder that LASC designated courses must be taken to satisfy the LASC requirements.
Students in the NS major are not required to take LASC NSP or QR courses outside of the major. Students are required to meet with their department advisor to review their upcoming semester academic choices.

Requirements for a Major in Natural Science, Concentration in Nuclear Medicine Technology: (See program description under Biology.) Students must meet with the Worcester State University NMT coordinator in order to apply for admission to this program.

Requirements for a Major in Natural Science and to meet the prerequisites for the Accelerated Pharmacy Program with Massachusetts College of Pharmacy and Health Science (MCPHS) (Please see program description on page 55.) MCPHS prerequisites require completing the Natural Science degree with the following courses:

- MA 150    Statistics
- MA 200    Calculus
- MA 201    Calculus II
- BI 140    Introduction to Organismal Biology
- BI 141    Introduction to Cellular and Molecular Biology
- CH 120    General Chemistry I
- CH 121    General Chemistry II
- CH 201/203  Organic Chemistry I with Laboratory
- CH 202/204  Organic Chemistry II with Laboratory
- PY 221    General Physics I
- PY 222    General Physics II
- BI 204    Microbiology
- NS 400    Natural Science Seminar
Natural Science Courses

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

NS 120 Integrated Natural Science I
LASC – Natural Systems and Processes (Laboratory Course)
Introduction to the scientific method, physical, biological and earth science related to evolution/genetics and energy.
Three lecture hours and three laboratory hours per week.
Offered every year. 4 credits.

NS 150 Environmental Science
LASC – Natural Systems and Processes
Interdisciplinary scientific study of human impacts on natural systems. Introduction to fundamental concepts and tools of environmental impact analysis.
Offered every year. 3 credits.

NS 193 Special Topics in Natural Science for First-Year Students
All "193" courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval. Introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar.
Offered every year. 3 credits.

NS 199 Special Topics in Natural Science
Prerequisite: Consent of the instructor
Lecture or laboratory course in selected areas of natural science presented by departmental instructor. Topics will be announced in advance.
1-6 credits.

NS 201 Science and Society
Science examined in an historical and social context; the impact of science on man's interpretation of the natural world. For non-science majors.
Offered every year. 3 credits.

NS 400 Natural Science Seminar
Prerequisite: Senior Natural Science major and permission of the instructor.
A capstone course. Independent projects include studying scientific literature, summarizing peer-reviewed articles, preparing science lessons with experiments, preparing resumes.
Offered every year. 3 credits.

NS 410 Independent Study in Natural Science
Prerequisite: Consent of department
Opportunity for advanced students to pursue a topic of special interest involving extensive reading, experimentation, and research.
Offered every year. 1-6 credits.

NS 412 Special Topics in Natural Science
Prerequisite: Consent of department
Intended for the undergraduate who wishes to undertake study of selected topics in Natural Science of mutual interest to student and faculty.
1-6 credits.
Nursing
Dr. Lillian R. Goodman
Department of Nursing

Faculty

Susan Alix, Assistant Professor (2006)
R.N., St. Vincent Hospital School of Nursing; B.S., Worcester State College;
M.S., University of Massachusetts, Worcester; D.N.P., Samford University

Amy Aviles, Instructor (2012)
B.S., University of Massachusetts, Lowell; M.S., Rivier College

Roseann Barrett, Assistant Professor (2012)
R.N., Beth Israel Hospital School of Nursing; B.S., Gwynedd-Mercy College;
M.S., Villanova University; Ph.D., Boston College

Stephanie Chalupka, Professor (2008), Associate Dean
A.S., Quinsigamond Community College; B.S., Worcester State College;
M.S., Boston College; Ed.D., University of Massachusetts, Amherst

Jodi Fortunato, Instructor (2013)
B.A., Assumption College; M.S.N., MGH Institute of Health Professions

Barbara Ann Giguer, Professor (1980)
R.N., Worcester City Hospital School of Nursing; B.S., Worcester State College;
M.S., University of Connecticut; Ed.D., University of Massachusetts, Amherst

Suzanne Kiniry, Instructor (2009)
B.S., Georgetown University; M.S., State University of New York

Karen Kycia, Instructor (2012)
B.S. Lowell State College; M.S., University of Lowell

Robyn Leo, Associate Professor (1995)
R.N., Framingham Union Hospital; B.S., Worcester State College;
M.S., University of Connecticut

Judy Maruca, Instructor (2012)
B.S., Fitchburg State College; M.S., University of Massachusetts, Amherst

Patricia Moran, Instructor (2013)
A.S., Mass Bay Community College; B.S., M.S., Worcester State University

Maryann Sabetti-Gramajo, Instructor (2013)
A.S., Bunker Hill Community College; B.A. Lesley College; M.A., University of
Massachusetts, Amherst; M.S., Worcester State College

Annmarie D. Samar, Professor (1997), Department Chair
R.N., Quincy City Hospital; B.S., Worcester State College;
M.S., University of Rhode Island; Ph.D., University of Massachusetts, Worcester-
Amherst; CAGS, University of Massachusetts, Dartmouth

Judy Tuori, Instructor (2012)
B.S., D'Youville College; M.S., Anna Maria College; M.S.N. University of Massachusetts,
Lowell
Nursing

Accreditation

• Full approval status from the Commonwealth of Massachusetts Board of Registration in Nursing located at 239 Causeway St. Boston, MA 02114
• Accredited by the Commission on Collegiate Nursing Education (CCNE). One Dupont Circle, NW, Suite 530, Washington, DC 20036
• Member of the Massachusetts Association of Colleges of Nursing (MACN).

General Information

Admissions

The nursing program leads to a Bachelor of Science degree.

The program offers two tracks in the undergraduate major in nursing: **Track One** is for the student who is seeking initial baccalaureate education in the nursing profession and **Track Two** is for the student who has obtained licensure as a registered nurse graduated from an Associate Degree or Diploma accredited program and is pursuing a baccalaureate degree. **Track Three** is for the student who has obtained licensure as a licensed practical nurse and graduated from an accredited program and is pursuing a baccalaureate degree.

Mission Statement

The mission of the Dr. Lillian R. Goodman Department of Nursing is in keeping with the Worcester State University mission with the emphasis on developing the professional nurse who values lifelong intellectual growth and global awareness. The Department of Nursing fosters the professional growth of faculty and students through excellence in teaching and learning, rooted in scholarship and community service related to the discipline of nursing.

Undergraduate Program Outcomes

The Department of Nursing prepares individuals for the roles and responsibilities of professional nursing through an undergraduate program leading to the Bachelor of Science degree.

The program outcomes of the undergraduate program are as follows:

1. Provide comprehensive, holistic care that is grounded in the biological sciences, the arts and humanities.
2. Demonstrate an understanding of a variety of organizational structures, missions, visions, philosophies and values.
3. Utilize current theoretical, scientific and research knowledge toward evidence based professional practice.
4. Demonstrate competence in utilizing information technology resources to advance professional practice.
5. Comply with the Standards of Professional Nursing Practice.
6. Implement effective inter-professional communication when working with the health care team.
7. Implement evidence based practice to guide the nursing process toward culturally sensitive, individual and population focused care.
8. Apply the professional standards of moral, ethical and legal conduct to practice.
9. Demonstrate clinical competency, accountability and ethical decision making as an entry level, novice professional nurse.

The nursing department has department-specific policies which are found in the Department of Nursing Undergraduate Student Policy Handbooks. These policies include, but are not limited to, the following: progression and retention, classroom and clinical behavior, academic honesty, professional behavior, and CORI/drug screening/health requirements. The department reserves the right to modify policies and the curriculum during the students' enrollment. Sufficient notice of any change will be provided to students.

Progression in the program requires successful completion of all pre and corequisite courses, sequential nursing courses and all clinical placements offered in each course.

Good Moral Character Required for Licensure

In compliance with policy of the Massachusetts State Board of Nursing, all applicants/students are informed that completion of the BS degree does not guarantee admittance to the registered nurse licensure examination. According to Board Licensure Policy 00-01, any individual convicted of a felony or misdemeanor conviction, and/or who has been disciplined by a licensure/certification body must be evaluated by the Board to determine a licensure applicant's compliance with the "good moral character" licensure requirement established at Massachusetts General Laws, Chapter 112, section 74 and 74A. Any individual who has been convicted of a felony or misdemeanor conviction, and/or who has been disciplined by a licensure/certification body, or whose ability to practice professional nursing is adversely affected by a physical or mental disability/illness that may endanger the health and/or safety of a person, should seek special advising prior to enrolling in any professional nursing program in Massachusetts. Individuals convicted of certain criminal convictions are permanently excluded from nurse licensure in Massachusetts.

All students in the nursing program will be required to have periodic CORI (Criminal Offender Record Information) checks requested by the department and/or clinical agencies. This background check is a computerized search to determine if an individual has any convictions, outstanding warrants or pending complaints. The information from these records is confidential and is destroyed when a student graduates. Progression and mandatory clinical placements in the nursing program are contingent on a "no report" CORI check result. Clinical agencies may independently perform CORI checks on students and do not have to accept a student with a CORI report indicating that an offense exists. The department is not responsible for alternate clinical placements for students who cannot be placed in an agency related to a CORI offense report. Students have an obligation to inform the department chair if any legal issues arise, while in the program, that are reportable on a CORI.

Health Care Agency Requirements: Health, Drug Screening and Other

Nursing students will be placed in a variety of health care settings. Each agency has requirements which the student must fulfill before they are allowed placement. This list may include, but is not limited to, the following; physical exam, immunizations, agency specific orientation, CORI, SORI and drug screening. Progression and mandatory clinical placements in the nursing program are contingent on meeting all agency requirements. If a student is denied placement by the agency for any reason, including a positive drug or CORI report, the nursing department is not responsible for providing alternate clinical placements.
Track One (Undergraduate)

Track One Courses

Prerequisite courses to be successfully completed by the end of spring semester first year:

* BI 161 & BI 162 Human Anatomy and Physiology I and II
* CH 112 Survey of Chemistry
* EN 101 & EN 102 English Composition I and II

Corequisite courses to be successfully completed by the end of spring semester sophomore year:

* BI 206 Medical Microbiology
* HE 120 Health and Nutrition
* MA 150 Statistics
* CS 124 Health Informatics

Corequisite courses to be successfully completed by the end of fall semester sophomore year:

* BI 206 Medical Microbiology
* PS 101 General Psychology
* SO 100 Introduction to Sociology

* Students must achieve a grade of 2.0 in each of these courses. Each course may be repeated only ONCE to obtain minimum required grade. A student not meeting the minimum grade requirement will not be considered for transfer acceptance into or allowed continued progression in the nursing program.

A student who fails to complete any prerequisite and/or corequisite course on time will remain as a nursing major; however, progression in the nursing program will depend on satisfactory completion of these courses and space availability.

Required Nursing Courses: 60 credits – All Nursing courses must be taken in sequence.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NU 200</td>
<td>Introduction to Professional Nursing I</td>
<td>5 credits</td>
</tr>
<tr>
<td>NU 205</td>
<td>Pathophysiology</td>
<td>3 credits</td>
</tr>
<tr>
<td>NU 210</td>
<td>Introduction to Professional Nursing II</td>
<td>5 credits</td>
</tr>
<tr>
<td>NU 215</td>
<td>Pharmacology</td>
<td>3 credits</td>
</tr>
<tr>
<td>NU 310</td>
<td>Nursing Science I</td>
<td>9 credits</td>
</tr>
<tr>
<td>NU 315</td>
<td>Group Communication Seminar I</td>
<td>1 credit</td>
</tr>
<tr>
<td>NU 340</td>
<td>Nursing Science II</td>
<td>9 credits</td>
</tr>
<tr>
<td>NU 415</td>
<td>Group Communication Seminar II</td>
<td>1 credit</td>
</tr>
<tr>
<td>NU 430</td>
<td>Research Seminar</td>
<td>3 credits</td>
</tr>
<tr>
<td>NU 440</td>
<td>Nursing Science III</td>
<td>8 credits</td>
</tr>
<tr>
<td>NU 450</td>
<td>Leadership in Nursing</td>
<td>3 credits</td>
</tr>
<tr>
<td>NU 460</td>
<td>Nursing Science IV</td>
<td>8 credits</td>
</tr>
<tr>
<td>NU 470</td>
<td>Capstone</td>
<td>2 credits</td>
</tr>
</tbody>
</table>

Students must achieve a minimum grade of 80 in each nursing course and each section of the course when a course has two distinct class/clinical components (NU 310, NU 340, NU 440). A nursing course may be repeated only once to obtain a passing grade. This option can be used only one time in the nursing program. Readmission into the nursing course after a withdrawal/failure is assessed on an individual basis. The Department of Nursing has additional policies and procedures which are binding for nursing majors. Included in these policies are standards for progression in the nursing major. They are found in the Nursing Department’s Student Handbook.

Foundation courses, nursing courses, prerequisite and corequisite courses may not be taken pass/fail.
Transfer Students: Students taking general education courses in another college or university are required to contact the Worcester State University Admissions Office regarding matriculation and transfer of credits. Transfer students are only admitted into the freshmen or sophomore class.

All transfer student applicants for Track One who have previously been enrolled in a nursing program in another college/university must submit, as part of their application, a letter from the dean or director of the nursing program indicating that they left in good standing and were eligible for readmission to that program.

Worcester State University students can apply for transfer into sophomore year courses. Selection of students will be by space availability, availability of faculty/clinical agencies, and on evaluation of the applicant's grades and resume. All transfer students will be held to the same requirements and standards as those students admitted directly into Worcester State University as a first-year Nursing major. In addition, transfer students may be required to interview with a nursing faculty member, provide a writing sample, and take a math quiz as part of the admission process.

Transfer students may only apply two (2) times for admission into the nursing major.

Track Two (RN-to-BS Program)

Admission Process

The RN-to-BS student applying to Worcester State University as a transfer student can receive up to 65 credits transferable from an accredited associate degree college and a maximum of 90 credits from four year colleges or universities. Worcester State University has articulation agreements with many area colleges for transfer credits (up to 29 credits may be approved toward nursing transfer credits).

The RN student, who graduated from a nursing diploma program, must take the NLN NACE II Exams as a prerequisite, which allows students to obtain up to 29 nursing transfer credits. All RN students must hold a current license to practice nursing in the Commonwealth of Massachusetts.

The three semester nursing sequence starts in the fall semester. All applicants must complete the required components of the admission process prior to April 1 for consideration of admittance for September. Students who wish to matriculate into the program and begin taking prerequisites or corequisites early may be admitted as an early admission by completing the application process.

Track Two Prerequisite Courses

These courses may be transferred if the student has previously taken the course (per college transfer policy) or may be taken at Worcester State University. Foundation courses, nursing courses, prerequisite and corequisite courses may not be taken pass/fail.

- EN 101 & EN 102 English Composition 1 & II (*EN 101 may be waived)
- MA 150 Introduction to Statistics (*pre requisite for NU 430-A: Research Seminar OR NU 925: Research for Evidence-Based Practice)
  (An Accuplacer math test may be required by Worcester State University prior to registering for courses)
- SO 100 Introduction to Sociology
- PS 101 General Psychology
- PS 210 Developmental Psychology
- BI 161 & 162 Anatomy & Physiology I & II
- BI 204 or 206 Microbiology or BI 206 Medical Microbiology
Track Two Nursing Courses: (31 Worcester State University Nursing Credits)

All nursing courses must be taken in sequence. Students must achieve a minimum grade of 80 in each nursing course. Only one nursing course may be repeated to obtain the minimum grade or required GPA and must be repeated within the 2 years.

Semester One
• NU 332 Transition to Professional Nursing (3 credits)
• NU 342 Health Assessment (4 credits)

Semester Two
• NU 430-A Research Seminar (3 credits)
  \ OR
• NU 525 Research for Evidence-Based Practice (3 credits)
• NU 432 Advancing Nursing Perspectives in Chronic Illness (9 credits)

Semester Three
• NU 452 Professional Nursing Leadership in Organizations (3 credits)
  \ OR
• NU 551 Nursing Leadership and Administration (3 credits)
• NU 472 Community Nursing Capstone Course (9 credits)

RN-to-MS Fast Track Program*

The RN-to-MS Fast Track Program allows 6 graduate credits (500 Level) taken while completing the senior year to count toward both the Bachelor of Science and the Master of Science in Nursing degrees. This may be done when the RN meets the criteria for the Fast-Track program, and completes an application for admission to the RN-to-MS Fast-Track Program to the Graduate Nursing Program through the Graduate School. The RN-to-MS Fast-Track application process must be completed in the first semester of the RN-to-BS Program.

The GRE is waived for students who enter the Master of Science in Nursing program through the RN-to-MS Fast-Track Program. Only course grades of B- or above can be counted toward the Master of Science in Nursing degree.

Fast-track students must take courses in the M.S. program the semester after completing the B.S. degree. Otherwise 500 Level courses taken in the senior year will count only towards the RN-to-BS degree unless they are in excess of the credits required for the B.S. degree.

Clinical Course Requirements for both Track One, Track Two and Track Three:
Prior to registering for a clinical practicum course, students must submit written verification of:

1. Complete physical examination — updated annually — form available from Nursing Department Secretary (508-929-8129), for tracks two and three. Track One students should access forms from www.certifiedbackground.com,
2. Documentation of an initial 2-step tuberculin skin test (TST) is required first year, then an annual TST. A TST may be available through the Worcester State University Student Health Service — follow up x-rays may be required,
3. Positive varicella titre level or 2 doses of Varicella vaccine,
4. Two (2) MMR (measles [rubeola], mumps and rubella) vaccines, or titre levels for each (measles, mumps, and rubella) which indicate immunity,
5. One dose of tetanus-diptheria-pertussis (Tdap) vaccine if it has been 5 or more years since the last does of the tetanus-diptheria (T-D) vaccine administered. Evidence of Tdap and/or T-D must be submitted,

6. Series of three vaccinations for Hepatitis B and positive titre level,

7. Basic Cardiac Life Support (BCLS) (Adult and Child) for the healthcare provider/professional rescuer certification must be maintained throughout the program. No online courses are allowed,

8. CORI is required for all students,

9. SORI and/or drug screening may be required by health care agencies,

10. Seasonal flu immunizations is required,

11. In addition to the above requirements, RN students must submit a photocopy of an unencumbered MA Nursing license,

12. Professional liability insurance is renewed annually provided by Worcester State University.

**Student Organizations:** Membership in the National Student Nurses’ Association is mandatory for all currently matriculated nursing students: a student led organization that is actively involved in community outreach. Meetings are held in the department and are open to all nursing students.

Iota Phi Chapter-at-Large, Sigma Theta Tau International: the International Honor Society for Nurses provides leadership and scholarship in practice, education and research to enhance the health of all people. Students are selected for membership into the local chapter of the Iota Phi Chapter-at-Large based on academic and personal criteria.

**Requirements for Graduation:** For the Bachelor of Science Degree with a major in Nursing students must have:

- Completed a minimum of 120 credits
- Completed each nursing course (and each component) with a minimum grade of 80
- Completed all Nursing Department and Worcester State University requirements

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**Dr. Lillian R. Goodman Department of Nursing Sample Timeline for Completion of Degree for Class Entering Fall 2012**

**TRACK A: YEAR ONE**

<table>
<thead>
<tr>
<th>Semester One A</th>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN101</td>
<td>English Composition I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>BI 161</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>CH 112</td>
<td>Survey of Chemistry (NSP)</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>FYS</td>
<td>First-Year Seminar</td>
<td>3</td>
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<tr>
<td><strong>Semester Subtotal</strong></td>
<td></td>
<td><strong>15/15</strong></td>
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</table>
### TRACK A: YEAR TWO

#### Semester Three A

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NU 200</td>
<td>Introduction to Professional Nursing I</td>
<td>5</td>
</tr>
<tr>
<td>NU 205</td>
<td>Pathophysiology</td>
<td>3</td>
</tr>
<tr>
<td>SO 100 or PS 101</td>
<td>Introduction to Sociology/ General Psychology I (HBS)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (Constitutions)</td>
<td>3</td>
</tr>
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</table>

**Semester Subtotal** 14/43

#### Semester Four A

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>NU 210</td>
<td>Introduction to Prof. Nursing II</td>
<td>5</td>
</tr>
<tr>
<td>NU 215</td>
<td>Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>MA 150</td>
<td>Statistics (QR)</td>
<td>3</td>
</tr>
<tr>
<td>HE 120</td>
<td>Health and Nutrition (ICW)</td>
<td>3</td>
</tr>
<tr>
<td>CS 124</td>
<td>Health Informatics (QR)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Subtotal** 17/60

**Comments** MA 150 requires Accuplacer score of 4 or higher.

### TRACK B: YEAR ONE

#### Semester One B

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>EN101</td>
<td>English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>BI 161</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>SO 100</td>
<td>Introduction to Sociology (HBS)</td>
<td>3</td>
</tr>
<tr>
<td>PS 101</td>
<td>General Psychology (HBS)</td>
<td>3</td>
</tr>
<tr>
<td>FYS</td>
<td>First-Year Seminar</td>
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</tr>
</tbody>
</table>

**Semester Subtotal** 16/16

**Comments** EN 101 & 102 satisfies LASC writing.
### Semester Two B

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN 102</td>
<td>English Composition II</td>
<td>3</td>
</tr>
<tr>
<td>BI 162</td>
<td>Human Anatomy and Physiology II (NSP)</td>
<td>4</td>
</tr>
<tr>
<td>CH 112</td>
<td>Survey of Chemistry (NSP)</td>
<td>5</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (Constitutions)</td>
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</tr>
</tbody>
</table>

**Semester Subtotal** 15/31

**Comments** EN 101 & 102 satisfies LASC writing.

### TRACK B: YEAR TWO

#### Semester Three B

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NU 200</td>
<td>Introduction to Professional Nursing I</td>
<td>5</td>
</tr>
<tr>
<td>NU 205</td>
<td>Pathophysiology</td>
<td>3</td>
</tr>
<tr>
<td>BI 206</td>
<td>Medical Microbiology (NSP)</td>
<td>4</td>
</tr>
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</table>

**Semester Subtotal** 12/43

#### Semester Four B

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NU 210</td>
<td>Introduction to Prof. Nursing II</td>
<td>5</td>
</tr>
<tr>
<td>NU 215</td>
<td>Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>MA 150</td>
<td>Statistics (QR)</td>
<td>3</td>
</tr>
<tr>
<td>HE 120</td>
<td>Health and Nutrition (ICW)</td>
<td>3</td>
</tr>
<tr>
<td>CS 124</td>
<td>Health Informatics (QR)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Subtotal** 17/60

**Comments** MA 150 requires Accuplacer score of 4 or higher.

### YEAR THREE (TRACK A and B)

#### Semester Five

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NU 310</td>
<td>Nursing Science I (WAC)</td>
<td>9</td>
</tr>
<tr>
<td>NU 430</td>
<td>Research Seminar</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (USW)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Subtotal** 15/75
### Semester Six

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NU 340</td>
<td>Nursing Science II (DAC)</td>
<td>9</td>
</tr>
<tr>
<td>NU 315</td>
<td>Group Communication Seminar I</td>
<td>1</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (TLC)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (QRAC)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Subtotal** 16/91

### YEAR FOUR (TRACK A and B)

#### Semester Seven

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NU 440</td>
<td>Nursing Science III</td>
<td>8</td>
</tr>
<tr>
<td>NU 415</td>
<td>Group Communication Seminar II</td>
<td>1</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (GP)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (CA)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Subtotal** 15/106

#### Semester Eight

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NU 460</td>
<td>Nursing Science IV</td>
<td>8</td>
</tr>
<tr>
<td>NU 450</td>
<td>Nursing Leadership</td>
<td>3</td>
</tr>
<tr>
<td>NU 470</td>
<td>Nursing Capstone</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Select General Elective</td>
<td>1-3</td>
</tr>
</tbody>
</table>

**Semester Subtotal** 14-16/120-122

### Comments

Approved by The DON Undergraduate Curriculum Committee and Faculty Organization via vote 3/2012.

Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.
Nursing Courses: Track I, II and III

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

(Open only to students who have been accepted into the undergraduate nursing major)

TRACK I (Undergraduate)

**NU 200 Introduction to Professional Nursing I**
Prerequisites: BI 161, BI 162; CH 112; EN 101, EN 102
Corequisites: BI 204, NU 205
Philosophy and conceptual framework of the program is introduced. Nursing theory, history and professional practice roles are presented. Medical terminology is introduced as well as introduction to medication calculations. 
Offered Fall semester every year. 5 credits.

**NU 205 Pathophysiology**
Prerequisites: BI 161, BI 162; CH 112; EN 101, EN 102
Corequisites: BI 206, PS 210, NU 200
Students will develop beginning principles in providing nursing care for individuals with altered pathophysiological responses
Offered Fall semester every year. 3 credits.

**NU 210 Introduction to Professional Nursing II**
Prerequisite: NU 200, NU 205, PS 101, SO 100
Corequisites: HE 120, NU 215, CS 124
Health of individuals and families is assessed. Communication, physical assessment, nursing process and other skills for professional practice are introduced. Medication calculations continue and the administration of medication is introduced. Lecture, an on-campus laboratory on physical assessment and off-campus clinical experiences in sub-acute care agencies are included in this course. 
Offered Spring semester every year. 5 credits.

**NU 215 Pharmacology**
Prerequisite: NU 200, NU 205, PS 101, SO 100
Corequisites: HE 120, NU 210, CS 124
Students will learn underlying principles of safe and competent medication administration. 
Offered Spring semester every year. 3 credits.

**NU 310 Nursing Science I**
LASC—Writing Across the Curriculum
Prerequisites: NU 210, NU 215; HE 120, CS 124, MA 150, BI 206
Corequisite: NU 430
Students will apply the nursing process when caring for the childbearing family and adult medical-surgical patients. Concepts of wellness, disease and health behaviors will be examined as the nursing process is operationalized in the care of adult medical-surgical patients and the childbearing family. Lecture and off-campus clinical experiences in maternal-child health nursing and medical-surgical nursing are included in this course. 
Offered Fall semester every year. 9 credits.

**NU 315 Group Communication Seminar I**
Prerequisite: NU 310, NU 430
Corequisite: NU 340
The focus of this course is on effectively assessing, analyzing and problem solving the processes of group interactions with peers in the classroom in order to integrate this information into various health care settings. 
Offered Spring semester every year. 1 credit.

**NU 340 Nursing Science II**
LASC—Writing Across the Curriculum; Diversity Across the Curriculum
Prerequisites: NU 310, NU 430
Corequisite: NU 315
Concepts of wellness, disease, and health behaviors are examined as the nursing process is operationalized in the care of pediatric patients and acutely ill medical-surgical patients. Lecture and an off-campus clinical experience are included in this course. 
Offered Spring semester every year. 9 credits.
Nursing

**NU 415 Group Communication Seminar II**
*Prerequisites: NU 315 and NU 340*
*Corequisite: NU 440*
The independent and interdependent role of the professional nurse as an agent of change is examined.
*Offered Fall semester every year. 1 credit.*

**NU 430 Research Seminar in Nursing**
*Prerequisite: MA 150*
*Corequisites: NU 310*
The focus is on the development of the student as a consumer of nursing research and the utilization of research findings in practice.
*Offered Fall semester every year. 3 credits.*

**NU 440 Nursing Science III**
*Prerequisites: NU 315 and NU 340*
*Corequisite: NU 415*
Students practice professional nursing with acutely ill adults in mental health care settings and identify multiple aspects of community and public health issues. Critical thinking and decision making skills are developed and applied. Lecture and off-campus clinical experiences are included in this course.
*Offered Fall semester every year. 8 credits.*

**NU 450 Leadership in Nursing**
*Prerequisites: NU 415, NU 440*
*Corequisites: NU 460, NU 470*
This course focuses on theories of leadership, management, delegation and supervision, which supports the knowledge, skill and values integrated by the nurse into professional leadership behavior. Current trends in nursing and in research relating to nursing leadership and management are explored.
*Offered Spring semester every year. 3 credits.*

**NU 460 Nursing Science IV**
*Prerequisite: NU 415, NU 440*
*Corequisites: NU 450, NU 470*
The focus is on the study and practice of nursing directed at health promotion/restoration of clients with chronic person/environment disunity. Complex health problems are studied in classrooms and clinical settings. Preceptorship opportunities are available to eligible students.
*Offered Spring semester every year. 8 credits.*

**NU 470 Nursing: Capstone**
*Prerequisites: NU 415, NU 440*
*Corequisites: NU 450, NU 460*
This two (2) credit course focuses on Evidence Based Practice in which students will demonstrate the integration and synthesis of all previous learning in the nursing major.
*Offered Spring semester every year. 2 credits.*

**NU 480 Independent Study**
*Prerequisite: Consent of Department*
Opportunities for students to engage in special studies in nursing according to individual interests and faculty availability.
*Offered every year. 1-6 credits.*
TRACK II (RN-TO-BS)

NU 332 Transition to Professional Nursing
This course focuses on nursing knowledge and theory as foundations of professional nursing. The elements of the Department of Nursing's conceptual nursing practice model are analyzed and examined in terms of nursing, diagnostic, and teaching-learning processes. Legal, ethical and environmental factors are studied in relation to their impact on person/environment unity.
(3 credits)

NU 342 Health Assessment
The nursing process is used as the organizing framework to identify person/environment unity of individuals. A variety of skills and theories relevant to professional nursing practice are utilized. The student will develop an increased knowledge base and skills related to performing a complete physical examination of the adult and pediatric client.
(4 credits)

NU 430 Nursing Research
The focus of this course is on the student learning the research process and the utilization of research in practice.
(3 credits)

NU 432 Advancing Nursing Perspectives in Chronic Illness
The focus of this course is on the study and practice of nursing directed at health promotion/prevention/restoration of clients with chronic person/environment disunity. Theories and environmental factors that influence health promotion, prevention and restoration of particular client populations are examined. The nursing practice model is further applied to maximize person/environmental unity of clients with chronic alterations in functional patterns.
(9 credits)

NU 452 Professional Nursing Leadership in Organizations
The course focuses on leadership management, delegation and supervision, which supports the knowledge, skills and values integrated by the professional RN leadership role in organizations.
(3 credits)

NU 472 Community Nursing Capstone Course
The focus of this course is on the study and practice of community-oriented nursing. Theories and environmental factors which influence the health of communities are analyzed. The application of the nursing process and diagnostic reasoning in promoting the health of individuals, families and communities is emphasized. Clinically students collaborate with preceptor and faculty to integrate community/public health nursing theory into practice.
(9 credits)
Faculty

Andrea R. Bilics, Professor (1998)
B.S., University of Pennsylvania; M.Ed., Boston College; Ph.D., Boston College

Jacqueline R. Brennan, Assistant Professor (1987)
B.S., University of Connecticut; M.A. Assumption College; M.S., Boston University

Patricia A. Donovan, Assistant Professor (2000)
B.S., Framingham State College; M.S., Boston University; Ed.D., Argosy University

Joanne Gallagher, Professor (1996)
B.S., Quinnipiac College; M.S., Florida International University; Ed.D., Johnson & Wales University

Patricia C. George, Academic Fieldwork Coordinator (1998)
B.S., M.S., Worcester State College

Margaret D. Hart, Professor (1997), Department Chair
B.A., Ithaca College; M.S., Boston University; Ph.D., University of Massachusetts, Boston

Bachelor of Science Occupational Studies Program

The Bachelor of Science in Occupational Studies program offers a stimulating and challenging curriculum that blends professional coursework with a traditional liberal arts education. Students begin by learning the philosophy and founding principles of occupational therapy along with acquiring a thorough understanding of biological, psychological, and social aspects of human beings. In upper division coursework, students learn to apply this knowledge and to develop occupational therapy clinical reasoning skills for evaluation of and intervention with persons across the lifespan. Between the junior and senior years, students with good academic standing are eligible to apply for admittance to the Master of Occupational Therapy Program. Acceptance and completion of the undergraduate program
in occupational studies does not guarantee admission into the Master of Occupational Therapy Program. All students applying for conditional graduate standing in the MOT Program need to have a minimum of a 3.0 GPA in OT prerequisite and major courses. Only graduates of the Master of Occupational Therapy Program are eligible to sit for the national examination administered by National Board for Certification in Occupational Therapy. A passing score on this examination allows the graduate to apply for a license to practice that is required by most states within the United States, including Massachusetts. For further information regarding certification contact: NBCOT; 800 Frederick Avenue, Suite 200, Gaithersburg, Maryland, 20877-4150; (301) 990-7979; www.nbcot.org.

The combined Bachelor of Science in Occupational Studies and Master of Occupational Therapy Program is accredited by the Accreditation Council for Occupational Therapy Education. For further information regarding accreditation contact: ACOTE; 4720 Montgomery Lane, Suite 200, Bethesda, Maryland, 20814-3449; (301) 652-2682; www.acoteonline.org.

Program Application Process

Application to enter the BSOS Program as a first-year student or external transfer student is made through the Admissions Office at the time of application to Worcester State University. Students are encouraged to apply early due to limited enrollment. Current Worcester State University students (internal transfers) who wish to apply for internal transfer into the BSOS Program must submit an application directly to the Occupational Therapy Department by February 1, 2014.

First-year students are admitted on the basis of SAT scores, high school rank, and coursework relevant to the major. External and internal transfer students are considered for admission based on minimum qualifications (overall grade-point-average of a 2.75 and grades of C or better in all prerequisite courses, Anatomy and Physiology I & II, General Psychology) and space availability.

All accepted transfer students are required to complete OT 101 and OT 102 during the summer before progressing onto sophomore level courses in the fall semester.

Any individual who has been convicted of a felony or misdemeanor involving an act likely to affect professional practice should meet with the Department Chair prior to applying to the program. Prior incidents may affect eligibility for fieldwork, certification, and employment. A CORI check and/or drug test is typically required prior to Fieldwork Level I and Level II placement.

Policies

• All undergraduate occupational therapy prerequisite and major courses must be completed with a grade of C or better.
• Courses must be taken in the prescribed sequence unless an exception is granted by the Department Chair.
• All undergraduate and graduate level coursework must be successfully completed before beginning Level II Fieldwork.
• The second Level II Fieldwork experience must be completed within 12 months of academic coursework.
• Eligibility to sit for the national certification examination requires successful completion of six-months of Level II Fieldwork.
Occupational Therapy

Requirements for the Major

The following courses are required:

**OT Prerequisite Courses for the BSOS (27-28 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>BI 161</td>
<td>Anatomy &amp; Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>BI 162</td>
<td>Anatomy &amp; Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>BI 271</td>
<td>Kinesiology</td>
<td>3</td>
</tr>
<tr>
<td>BI 315</td>
<td>Neuroscience</td>
<td>4</td>
</tr>
<tr>
<td>PS 101</td>
<td>General Psychology I</td>
<td>3</td>
</tr>
<tr>
<td>PS 210</td>
<td>Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PS 322</td>
<td>Psych of Aging</td>
<td>3</td>
</tr>
<tr>
<td>MA 150</td>
<td>Statistics I</td>
<td>3 or PS 275 Psychological Statistics</td>
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**OT Major Courses for the BSOS (53 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>OT 101</td>
<td>Introduction to Occupational Studies of Wellness/Disability</td>
<td>3</td>
</tr>
<tr>
<td>OT 102</td>
<td>Occupational Studies of Wellness/Disability Groups</td>
<td>3</td>
</tr>
<tr>
<td>OT 203</td>
<td>Occupational Therapy Theories</td>
<td>3</td>
</tr>
<tr>
<td>OT 211</td>
<td>Kinesiology Lab</td>
<td>1</td>
</tr>
<tr>
<td>OT 301</td>
<td>Psychosocial Wellness/Disability</td>
<td>2</td>
</tr>
<tr>
<td>OT 302</td>
<td>Psychosocial Therapeutic Approaches</td>
<td>3</td>
</tr>
<tr>
<td>OT 304</td>
<td>Psychosocial Therapeutic Approaches Lab</td>
<td>2</td>
</tr>
<tr>
<td>OT 312</td>
<td>Physiological Wellness/Disability</td>
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</tr>
<tr>
<td>OT 313</td>
<td>Physiological Therapeutic Approaches</td>
<td>3</td>
</tr>
<tr>
<td>OT 317</td>
<td>Research I</td>
<td>3</td>
</tr>
<tr>
<td>OT 318</td>
<td>Physiological Therapeutic Approaches Lab</td>
<td>2</td>
</tr>
<tr>
<td>OT 401</td>
<td>Occupational Performance &amp; Context for Elders</td>
<td>2</td>
</tr>
<tr>
<td>OT 402</td>
<td>Therapeutic Approaches for Elders</td>
<td>3</td>
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<td>OT 403</td>
<td>Therapeutic Approaches Lab for Elders</td>
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<tr>
<td>OT 404</td>
<td>Assistive Technology I</td>
<td>3</td>
</tr>
<tr>
<td>OT 407</td>
<td>Research II</td>
<td>3</td>
</tr>
<tr>
<td>OT 421</td>
<td>Occupational Performance &amp; Context for Children/Adolescents</td>
<td>2</td>
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<td>OT 423</td>
<td>Therapeutic Approaches Lab for Children/Adolescents</td>
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<tr>
<td>OT 424</td>
<td>Assistive Technology II</td>
<td>3</td>
</tr>
<tr>
<td>OT 426</td>
<td>Organizational and Professional Issues I</td>
<td>3</td>
</tr>
<tr>
<td>OT 427</td>
<td>Therapeutic Approaches for Children/Adolescents</td>
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**OT Major Courses for the MOT (33 credits)**

<table>
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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>OT 903</td>
<td>Clinical Reasoning I</td>
<td>3</td>
</tr>
<tr>
<td>OT 905</td>
<td>Clinical Reasoning II</td>
<td>3</td>
</tr>
<tr>
<td>OT 906</td>
<td>Global Health Issues</td>
<td>3</td>
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<tr>
<td>OT 908</td>
<td>Community Health</td>
<td>3</td>
</tr>
<tr>
<td>OT 928</td>
<td>Thesis Seminar I</td>
<td>3</td>
</tr>
<tr>
<td>OT 929</td>
<td>Thesis Seminar II</td>
<td>3</td>
</tr>
<tr>
<td>OT 930</td>
<td>Thesis Seminar III</td>
<td>3</td>
</tr>
<tr>
<td>OT 931</td>
<td>Organizational and Professional Issues II</td>
<td>3</td>
</tr>
<tr>
<td>OT 920</td>
<td>Physical Disabilities Fieldwork II</td>
<td>3</td>
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<tr>
<td>OT 921</td>
<td>Psychosocial Fieldwork II</td>
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<tr>
<td>OT 933</td>
<td>Assessment and Evaluation Across the Lifespan</td>
<td>3</td>
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</table>
## Department of Occupational Therapy: Occupational Studies
### Sample Timeline for Completion of Degree

#### YEAR ONE

**Semester One**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>OT 101</td>
<td>Introduction to Occupational Studies</td>
<td>3</td>
</tr>
<tr>
<td>BI 161</td>
<td>Anatomy and Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>PS 101</td>
<td>General Psychology (HBS*)</td>
<td>3</td>
</tr>
<tr>
<td>EN 101</td>
<td>English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>First-Year Seminar</td>
<td>3</td>
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</tbody>
</table>

*Semester Subtotal: 16*

**Semester Two**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>OT 102</td>
<td>Occupational Studies of Wellness/Disability Groups</td>
<td>3</td>
</tr>
<tr>
<td>BI 162</td>
<td>Anatomy and Physiology II (NSP*)</td>
<td>4</td>
</tr>
<tr>
<td>EN 102</td>
<td>English Composition II</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (Constitutions )</td>
<td>3</td>
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<tr>
<td>LASC</td>
<td>Distribution Elective (QR*)</td>
<td>3</td>
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</table>

*Semester Subtotal: 16*

**Comments**

EN 101 with EN 102 satisfies LASC Writing. By the end of Semester two term, students must have an Accuplacer score of 4 to take MA 150. Alternative in fall 2 is PS 275.

#### YEAR TWO

**Semester Three**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>OT 203</td>
<td>Occupational Therapy Theories</td>
<td>3</td>
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<tr>
<td>PS 210</td>
<td>Developmental Psychology (HBS*)</td>
<td>3</td>
</tr>
<tr>
<td>BI 315</td>
<td>Neuroscience</td>
<td>4</td>
</tr>
<tr>
<td>MA 150</td>
<td>Statistics I or PS 275 Psychological Statistics (QR*)</td>
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<tr>
<td>LASC</td>
<td>Distribution Elective (USW*)</td>
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*Semester Subtotal: 16-17*

**Semester Four**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>OT 211</td>
<td>Kinesiology Lab</td>
<td>1</td>
</tr>
<tr>
<td>PS 322</td>
<td>Psychology of Aging</td>
<td>3</td>
</tr>
<tr>
<td>BI 271</td>
<td>Kinesiology (Lecture) (NSP*)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (GP*)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (WAC*)</td>
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</table>

*Semester Subtotal: 13*
### YEAR THREE

#### Semester Five

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>OT 301</td>
<td>Psychosocial Wellness/Disability</td>
<td>2</td>
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<tr>
<td>OT 302</td>
<td>Psychosocial Therapeutic Approaches</td>
<td>3</td>
</tr>
<tr>
<td>OT 304</td>
<td>Psychosocial Therapeutic Approaches Lab</td>
<td>2</td>
</tr>
<tr>
<td>OT 317</td>
<td>Research 1</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (CA*)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (TLC*)</td>
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<tr>
<td><strong>Semester Subtotal</strong></td>
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<td><strong>16</strong></td>
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#### Semester Six

<table>
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<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>OT 312</td>
<td>Physiological Wellness/Disability</td>
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<tr>
<td>OT 313</td>
<td>Physiological Therapeutic Approaches</td>
<td>3</td>
</tr>
<tr>
<td>OT 318</td>
<td>Physiological Therapeutic Approaches Lab</td>
<td>2</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (ICW*)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (QRAC*)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Distribution Elective (DAC*)</td>
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<tr>
<td><strong>Semester Subtotal</strong></td>
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<td><strong>16</strong></td>
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### YEAR FOUR

#### Semester Seven

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>OT 401</td>
<td>Occupational Performance and Context for Elders</td>
<td>2</td>
</tr>
<tr>
<td>OT 402</td>
<td>Therapeutic Approaches for Elders</td>
<td>3</td>
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<tr>
<td>OT 403</td>
<td>Therapeutic Approaches Lab for Elders</td>
<td>2</td>
</tr>
<tr>
<td>OT 404</td>
<td>Assistive Technology I</td>
<td>3</td>
</tr>
<tr>
<td>OT 407</td>
<td>Research II</td>
<td>3</td>
</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
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<td><strong>Semester Subtotal</strong></td>
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</table>
Semester Eight

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>OT 421</td>
<td>Occupational Performance and Context for Children/Adolescents</td>
<td>2</td>
</tr>
<tr>
<td>OT 427</td>
<td>Therapeutic Approaches for Children/Adolescents</td>
<td>3</td>
</tr>
<tr>
<td>OT 423</td>
<td>Therapeutic Approaches Lab Children/Adolescents</td>
<td>2</td>
</tr>
<tr>
<td>OT 424</td>
<td>Assistive Technology II</td>
<td>3</td>
</tr>
<tr>
<td>OT 426</td>
<td>Organizational and Professional Issues I</td>
<td>3</td>
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</table>

Semester Subtotal 13

TOTAL CREDITS= 120-121

Note: The sequence of LASC courses marked with * is a suggestion but serves as a reminder that LASC designated courses must be taken to satisfy the LASC requirements.

Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.

Occupational Therapy Courses

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

OT 101 Introduction to Occupational Studies of Wellness/Disability
Introduction to occupational therapy history, philosophy, wellness/disability continuum, contexts, occupations, occupational performance, professionalization and clinical reasoning.
Offered every year. 3 credits

OT 102 Occupational Studies of Wellness/Disability Groups
Offered every year. 3 credits

OT 193 Special Topics in Occupational Therapy for First-Year Students
All "193" courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval. Introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar.
Offered every year. 3 credits.

OT 203 Occupational Therapy Theories
Investigation of theories basic to occupational therapy, related to occupation, individual and context. Includes current and developing models of practice.
Offered every year. 3 credits

OT 211 Kinesiology Lab
Concurrent with BI 271
Opportunities to develop skills that apply kinesiology to occupational therapy practice.
Offered every year. 1 credit

OT 301 Psychosocial Wellness/Disability
Concurrent with OT 302 and OT 304
Historical themes of the profession, wellness/illness/disability continuum, occupation and context as it applies to psychosocial performance in life roles.
Offered every year. 2 credits
OT 302 Psychosocial Therapeutic Approaches
Occupational performance and context, professionalization, and clinical reasoning will be applied to practice models when addressing psychosocial health and illness.
**Offered every year. 3 credits**

OT 304 Psychosocial Therapeutic Approaches Lab
Directed observation and participation in the clinical application of theories and methods of occupational therapy intervention with psychosocial disorders. Includes Fieldwork I.
**Offered every year. 2 credits**

OT 312 Physiological Wellness/ Disability
*Concurrent with OT 313 and OT 318*
Historical themes of the profession, wellness/illness/disability continuum, occupation and context as it applies to physiological performance in life roles.
**Offered every year. 2 credits**

OT 313 Physiological Therapeutic Approaches
Occupational performance and context, professionalization, and clinical reasoning will be applied to practice models when addressing physiological health and illness.
**Offered every year. 3 credits**

OT 317 Research I
*Prerequisite: MA 150 or PS 275*
Course examines measurement issues, concerns and tools; and why and how to use evidence in practice.
**Offered every year. 3 credits**

OT 318 Physiological Therapeutic Approaches Lab
Directed observation and participation in the clinical application of theories and methods of occupational therapy intervention with physiological disorders. Includes Fieldwork I.
**Offered every year. 2 credits**

OT 400 Special Topics
Selected areas of interest to students and instructor. Topic, prerequisites and instructor are announced in advance.
**Offered every year. 1-3 credits**

OT 401 Occupational Performance and Context for Elders
*Concurrent with OT 402, OT 403 and OT 404*
The wellness/illness/disability continuum will be applied to occupational performance in life roles for the geriatric population.
**Offered every year. 2 credits**

OT 402 Therapeutic Approaches for Elders
Occupational therapy strategies for elders across the wellness/illness/disability continuum with emphasis on occupational performance/context and clinical reasoning.
**Offered every year. 3 credits**

OT 403 Therapeutic Approaches Lab for Elders
Experiential learning with assessments and intervention approaches for elders. Includes Fieldwork 1 experience in various sites off campus.
**Offered every year. 2 credits**

OT 404 Assistive Technology I
Assistive technology related to the needs of the adult and geriatric populations will be explored
**Offered every year. 3 credits**

OT 407 Research II
Course examines research design, quantitative and qualitative, human subject protection and program evaluation. Students will develop a research proposal.
**Offered every year. 3 credits**
OT 411 Occupational Therapy International Service Learning Experience
Instruction in occupational therapy methods with an experiential component providing intervention to an underserved population in a foreign country.
Offered every year. 2 credits.

OT 421 Occupational Performance and Context for Children/Adolescents
Concurrent with OT 423, OT 424 and OT 427
Wellness/illness/disability continuum will be applied to performance in life roles related to the child and adolescent populations.
Offered every year. 2 credits

OT 423 Therapeutic Approaches Lab for Children/Adolescents
Experiential learning with assessments and intervention approaches; professional oral and written communication skill development. Includes Fieldwork I experience.
Offered every year. 2 credits

OT 424 Assistive Technology II
Assistive technology applied to the occupational performance and context of child and adolescent populations.
Offered every year. 3 credits

OT 426 Organizational and Professional Issues I
Introduction to principles of organization, administration and management applied to the delivery of occupational therapy services in various practice settings. Work relationships, ethical issues and laws influencing practice will also be discussed.
Offered every year. 3 credits

OT 427 Therapeutic Approaches for Children/Adolescents
Occupational therapy strategies for child and adolescent populations across wellness/illness/disability continuum with emphasis on occupational performance and context.
Offered every year. 3 credits

OT 903 Clinical Reasoning I
Seminar to apply clinical reasoning skills to case studies integrating all aspects that influence therapeutic decision-making, including, occupational performance areas, components, and contexts.
Offered every year. 3 credits.

OT 905 Clinical Reasoning II
Continuing seminar to apply clinical reasoning skills to case studies integrating all aspects that influence therapeutic decision-making, including occupational performance areas, components, and contexts.
Offered every year. 3 credits.

OT 906 Global Health Issues
Understanding health issues from a global perspective of the economic, political, social, and cultural forces, which impact on health and health services.
Offered every year. 3 credits.

OT 908 Community Health
Community as a context for human functioning and occupational therapy intervention. Includes community placement.
Offered every year. 3 credits.

OT 920 Physical Disabilities Fieldwork II
Twelve weeks of full-time (or equivalent part-time) fieldwork in approved physical disabilities setting with supervision that meets ACOTE Standards.
Offered every year. 3 credits.
OT 921 Psychosocial Fieldwork II
Twelve weeks of full-time (or equivalent part-time) fieldwork in approved psychosocial setting with supervision that meets ACOTE Standards.
Offered every year. 3 credits.

OT 928 Thesis Seminar I
Seminar focusing on the development of thesis proposals.
Offered every year. 3 credits.

OT 929 Thesis Seminar II
Seminar focusing on the collection and analysis of data.
Offered every year. 3 credits.

OT 930 Thesis Seminar III
Seminar focusing on writing and disseminating a research report
Offered every year. 3 credits.

OT 931 Organizational and Professional Issues II
An advanced seminar exploring issues relevant to the changing roles and responsibilities of practitioners and to the rapidly evolving practice contexts.
Offered every year. 3 credits.

OT 932 Specialty Fieldwork II
Twelve weeks of full-time (or equivalent part-time) fieldwork in an approved specialty setting with supervision that meets ACOTE Standards.
Offered every year. 3 credits.

OT 933 Assessment and Evaluation Across the Lifespan
This course provides an overview of the occupational therapy and evaluation process. Selection, interpretation and documentation of assessments will be examined.
Offered every year. 3 credits.
Physical Education  
Department of Health Sciences

The physical education program offers minors in Sport Coaching and Health Fitness and a wide variety of activities including basketball, dance, fitness, golf, sailing, self defense, stress management, tennis, volleyball, weight training, yoga, and individual, dual, and team sports.

Sport Coaching Minor: 18 credits

Coaches have an exceptional opportunity to exert a strong positive influence on players and to that end the minor will adhere to the National Association for Sport and Physical Education (NASPE) coaching standards that emphasize ethics, safety, team play and leadership. Courses will also address the need for coaches to produce the safest environment for players and others and to avoid litigation by adhering to the objectives of the National Federation of State High School Association (NFHS).

Required Courses:
- PE 175 Principles of Coaching 3 credits
- PE 220 Survey of Athletic Training* 3 credits

Elective Courses:
- HC 228 Health Ethics 3 credits
- HE 120 Health and Nutrition 3 credits
- HE 285 Drugs and Society 3 credits
- PE/SO 190 Sport and Society 3 credits
- PE 210 Foundations of Strength and Conditioning 3 credits
- PE 240 Athletic Programs 3 credits
- PE/HE 260 First Aid: Advanced Theory and Skills 3 credits
- PE 420 Practicum in Health/Fitness 3 credits

*prerequisites: BI 161 Anatomy and Physiology, 4 credits, and either HE 170 Humans in Motion, 3 credits, or BI 271 Basic Kinesiology, 3 credits.

A minimum grade of 2.0 must be earned in required and elective courses. Prerequisites must average a minimum of 2.0.
Health Fitness Minor: 18 credits

The minor encompasses both the knowledge and skills required in the growing field of Health Fitness. Applications focus on improving health and fitness at both the individual and population levels.

Required Courses:

- HE 120 Health and Nutrition 3 credits
- PE 210 Foundations of Strength and Conditioning* 3 credits
- PE 220 Survey of Athletic Training* 3 credits

Elective Courses: 9 credits

- PE/HE 150 Health and Physical Education for the Teacher 3 credits
- PE 190 Sport and Society 3 credits
- PE 240 Athletic Programs 3 credits
- PE/HE 260 First Aid: Advanced Theory and Skills 3 credits
- PE/HE 275 Fitness for Life 3 credits
- PE/HE 280 Stress Management 3 credits
- HE 285 Drugs and Society 3 credits
- PE 420 Practicum in Health Fitness 3 credits

*prerequisites: BI 161 Anatomy and Physiology, 4 credits, and either HE 170 Humans in Motion, 3 credits, or BI 271 Basic Kinesiology, 3 credits.

A minimum grade of 2.0 must be earned in required and elective courses. Prerequisites must average a minimum of 2.0.

Physical Education Courses

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

PE 100 Physical Education Activity Courses

Activities include basketball, dance, fitness, golf, racquetball, relaxation, sailing, self-defense, softball, tennis, volleyball, weight training, yoga.

Offered every year. 1 credit.

PE/HE 140 Introduction to Creative Arts and Health

An experiential and didactic introduction to making connections between the arts process/product and health.

Offered every 3 years. 3 credits.

PE/HE 150 Health and Physical Education for the Teacher

The planning, development, implementation and evaluation of comprehensive health education programs.

Offered every year. 3 credits.

PE 175 Principles of Coaching

The values, relationships, and skills necessary to coach children and young adults in competitive athletics.

Offered every 2 years. 3 credits.

PE 190 Sport and Society

Analysis of sport as a social system; the implications of sport within interrelational contexts of other social systems.

Offered every 2 years. 3 credits.

PE 205 Coaching Team Sports for Men

The techniques and strategies of coaching basketball and baseball.

Offered every 2 years. 3 credits.

PE 210 Foundations of Strength and Conditioning

Prerequisites: BI 161 and HE 170 or BI 271

An introduction to the principles of functional training that meet sport specific needs of athletes.

Offered every year. 3 credits.
PE 215 Coaching Tennis
Selecting, training, strategies and teaching techniques in developing a tennis program.
Offered every year. 3 credits.

PE 220 Survey of Athletic Training
Prerequisites: BI 161 and HE 170 or BI 271
General overview of athletic training with a clinical approach to prevention, evaluation and rehabilitation of injuries common to athletes.
Offered every 2 years. 3 credits.

PE 240 Athletic Programs
Financing, scheduling, administering, and evaluating.
Offered every year. 3 credits.

PE/HE 260 First Aid: Advanced Theory and Skill
Common emergencies, cardiopulmonary resuscitation, auto extrication, and emergency childbirth. Opportunity for instructor rating.
Offered every 3 years. 3 credits.

PE/HE 275 Fitness for Life
Knowledge of health-related fitness components and their effect on total wellness; emphasis on developing personalized fitness programs.
Offered every year. 3 credits.

PE/HE 280 Individualized Stress Management and Relaxation
Strategies and techniques for increasing stress resistance based on psychophysiological research.
Offered every year. 3 credits.

PE 300 Fitness Appraisal and Exercise Prescription
Prerequisites: BI 161, BI 162, PE 275
Administration and interpretation of health-fitness tests, formulation of individualized exercise prescriptions and methods of teaching fitness programs.
Offered every year. 3 credits.

PE 400 Independent Study in Physical Education/Coaching
Prerequisite: Consent of department
Opportunity to engage in research in an area of special interest not covered in elective course offerings.
Offered every year. 1 - 6 credits.

PE 410 Field Experience in Physical Education/Coaching
Prerequisite: Consent of department
Organizing and conducting either physical education or coaching activities at the elementary or secondary level.
(40 hours for each credit)
Offered every year. 3-6 credits.

PE 415 Special Topics in Physical Education
Prerequisite: Permission of department and instructor
Covers special interest topics.
Offered every semester. 3 credits

PE 420 Practicum in Health Fitness
Prerequisite: Consent of department
Opportunity to gain practical experience under supervision in a health fitness field placement.
Offered every year. 3 credits.
Faculty
William A. Belanger, Associate Professor (1967)
B.S., Ed.M., Worcester State College; M.N.S., Worcester Polytechnic Institute

Francisco J. Lamelas, Associate Professor (2005)
B.S., University of Wisconsin, Milwaukee; M.S., University of Wisconsin;
M.S., Ph.D., University of Michigan

Sudha R. Swaminathan, Associate Professor (2005)
A.B., (Physics), A.B., (Mathematics) Mount Holyoke College;
M.S., Ph.D., University of Michigan

Requirements for a Minor in Physics: 18 credits in Physics including
PY 221 & PY 222  General Physics I and II or
PY 241 & PY 242  Physics I and II

A physics minor is very useful in many technical fields, since the study of physics develops
an understanding of basic principles, mathematical modeling, and practical applications.
Specific areas where a physics background is useful include imaging techniques in
medicine and biology, analytical instrumentation in chemistry, remote-sensing techniques
in the geosciences, and the development of realistic physical models in computer science
and mathematics.

Physics Courses
For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

PY 101 Introduction to Astronomy
LASC—Natural Systems and Processes
The tools of the astronomer. The nature of stars, their location and cosmology. Planets and the solar system.
Offered every year. 3 credits.

PY 105 Concepts in Physics I
LASC—Natural Systems and Processes (Laboratory Course)
Prerequisite: Accuplacer code 3 or above
Concepts and physical principles of motion, force, mechanical work, energy, and momentum. Torque and angular
momentum. Fluids, heat, and thermodynamics. Two hours lecture and one two-hour laboratory.
Offered every year. 3 credits. Credit will not be awarded for more than one of PY 105, PY 221, and PY 241.
PY 106 Concepts in Physics II
LASC—Natural Systems and Processes
Prerequisite: Accuplacer code 3 or above
Electrostatics, including electric forces and electric potential. Simple circuits, electrical power, and generators. Magnetic fields and forces, light, and relativity. Offered every year. 3 credits. Credit will not be awarded for more than one of PY 106, PY 222, and PY 242.

PY 112 Physics in Art
LASC—Natural Systems and Processes (Laboratory Course); Quantitative Reasoning Across the Curriculum
Prerequisite: Accuplacer code 3 or above
Concepts in optics and modern physics applied to the analysis of paintings, conservation of art objects and detection of forgeries. Two hours lecture and one two-hour laboratory. Offered every year. 3 credits.

PY 114 Physics of Waves
LASC—Natural Systems and Processes; Quantitative Reasoning Across the Curriculum
Prerequisite: Accuplacer code 3 or above
Wave phenomena, including water waves, sound, acoustics, musical instruments, optics and quantum mechanics. Analysis of propagation, power, scattering and interference. Offered every year. 3 credits.

PY 193 Special Topics in Physics for First-Year Students
All "193" courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval. Introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar. Offered every year. 3 credits.

PY 221 General Physics I
LASC—Natural Systems and Processes (Laboratory Course); Quantitative Reasoning Across the Curriculum
Prerequisite: MA 110 or MA 190 (preferred)
Physics with algebra and trigonometry, including kinematics, dynamics, energy, momentum, gravity, oscillators, waves and heat. Three hours lecture and two hours lab. Offered every year. 4 credits. Credit will not be awarded for more than one of PY 105, PY 221, and PY 241.

PY 222 General Physics II
LASC—Natural Systems and Processes (Laboratory Course)
Prerequisite: PY 221
Physics with algebra and trigonometry including electric and magnetic fields, resistance, capacitance, inductance, reflection, refraction, interference, relativity and quantum physics. Three hours lecture and two hours lab. Offered every year. 4 credits. Credit will not be awarded for more than one of PY 106, PY 222, and PY 242.

PY 240 Optics
Prerequisite: One semester of college-level physics and MA 190, or consent of the instructor.
Image formation with mirrors and lenses. Interference, diffraction, dispersion, and polarization. Lasers. Microscopes and spectrometers. Cameras and image processing. Offered every 2 years. 3 credits.

PY 241 Physics I (Mechanics)
LASC—Natural Systems and Processes (Laboratory Course); Quantitative Reasoning Across the Curriculum
Prerequisite: One semester of calculus (may be taken concurrently).
Physics with calculus, including kinematics, dynamics, energy, momentum, gravity, oscillators, waves, and heat. Three hours lecture and two hours lab. Offered every year. 4 credits. Credit will not be awarded for more than one of PY 105, PY 221, and PY 241.

PY 242 Physics II (Electricity, Magnetism and Optics)
LASC—Natural Systems and Processes (Laboratory Course)
Prerequisite: One semester of calculus, PY 241.
Physics with calculus including electric and magnetic fields, resistance, capacitance, inductance, reflection, refraction, interference, relativity and quantum physics. Three hours lecture and two hours lab. Offered every year. 4 credits. Credit will not be awarded for more than one of PY 106, PY 222, and PY 242.
Physics

PY 297 Selected Topics in Physics
Prerequisite: Consent of instructor
Lecture or laboratory course in a selected area in physics. Topic announced in advance.
1-6 credits.

PY 310 Modern Physics
Prerequisite: PY 222 or PY 242, and one semester of calculus.
Offered every 2 years. 3 credits.

PY/CH 360 Introduction to Materials Science
Prerequisites: CH 120, CH 121, and either PY 221, PY 222 or PY 241, PY 242
Offered every 2 years. 3 credits.

PY/CH 370 Introduction to Nuclear Science
Prerequisites: CH 120, CH 121, and either PY 221, PY 222 or PY 241, PY 242
Foundations of nuclear science. Topics include nuclear structure and forces, radioactive decays, nuclear reactions, and modern applications.
Offered every other year. 3 credits.

PY 410 Independent Study In Physics
Prerequisite: Consent of department
Opportunity for advanced students to pursue topics of special interest involving extensive reading, experimentation, and research.
Offered every year. 1-6 credits.

PY/BI 451 Nuclear Instrumentation I
Prerequisite: Consent of NMT coordinator
The structure, functions, and interactions of particulate and non-particulate radiations with matter, detection, calibration, dosage, and statistical methods.
Offered every year. 4 credits.

PY/BI 452 Nuclear Instrumentation II
Prerequisite: Consent of NMT coordinator
Designed to further the skills of operating, calibrating, and performing routine maintenance on scanners, gamma cameras, well counters, and liquid scintillation counters.
Offered every year. 4 credits.
SCHOOL OF HUMANITIES
AND SOCIAL SCIENCES

Dr. Patricia A. Marshall
Associate Vice President for Academic Affairs
Oversight of the School of Humanities and Social Sciences

LOCATION
Sullivan Academic Center
Second Floor, Room S-210

Business Administration and Economics
Communication
Criminal Justice
English
History and Political Science
Philosophy
Psychology
Sociology
Urban Studies
Visual and Performing Arts
World Languages
Courses in Arabic are designed for students whose interests and career plans have an international or multi-ethnic focus. Students who study Arabic will develop listening, speaking, reading, and writing fluency at the beginning and intermediate levels. Arabic 101 and 102 also form part of the requirements for the Minor in Middle East Studies offered by the Department of History and Political Science.

**Requirements for a Minor in Middle East Studies:** 18 credits.

- HI 261  Middle East History I.
- HI 314  Twentieth Century Middle East History
- AB 101  Arabic I
- AB 102  Arabic II
- 6 credits recommended by advisor
Arabic Courses

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

AB 101  Beginning Arabic I  
LASC—Thought, Language and Culture  
Introduction to the Arabic language and cultures of the Arabic-speaking world.  
3 credits

AB 102  Beginning Arabic II  
LASC—Thought, Language and Culture  
A continuation of AB 101, designed for students to acquire additional vocabulary, grammar, and reading ability.  
3 credits

AB 210  Intermediate Arabic I  
LASC—Thought, Language and Culture  
Introduction in advanced rules of Arabic grammar and verb system, and in advanced writing and reading.  
3 credits

AB 211  Intermediate Arabic II  
LASC—Thought, Language and Culture  
Reading and discussion in English of texts dealing with literature, arts, geography, history, and culture of Arabic-speaking world.  
3 credits

Note: Courses in other foreign languages such as German, Latin, Russian, Chinese and Hebrew are offered when demand warrants and staffing permits.
Faculty

Michael C. Hachey, Professor (1993)
B.F.A., M.F.A., Massachusetts College of Art

Stacey Parker, Associate Professor (2007)
B.F.A. Alfred University; M.F.A., Rochester Institute of Technology

Amaryllis Siniossoglou, Professor (2005)
PEP, Royal College of Art, London, England; M.F.A., University of Massachusetts, Amherst; Ecole Nationale Superieure Des Beaux-Arts, Paris, France; Diplome Superieur d'Art Plastique; School of Art, Athens, Greece; Drawing and Painting School, Certificate

Catherine Wilcox-Titus, Associate Professor (2004)
B.A., University of Toronto; M.S., Simmonds College; M.A., Ph.D., Boston University

The art program's objectives are to sharpen visual perception, to deepen understanding of art history, and to teach technical skills and concepts to further the student's appreciation and creation in the visual arts. Interdisciplinary courses relate the visual arts to the arts of music and theatre, in both contemporary and historic periods.

Requirements for a Major
The newly instituted Interdisciplinary Visual and Performing Arts Major offers concentrations in Art, Music, or Theatre. See Visual and Performing Arts Department.

Requirements for a Minor in Art: 18 credits, including a minimum of three credits in art history and at least one art course at the 300-level. Worcester State University reserves (with the student's permission) the right to retain some student work for demonstration and exhibition. The art program is committed to providing a foundation for students' ongoing appreciation and creative involvement in the visual arts, design, and education.
Art Courses

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

AR 100 Cross Media Studio
LASC—Creative Arts
An introduction to selected two- and three-dimensional media through the exploration of a semester-long theme such as the human figure, or forms in nature.
Offered every year. 3 credits

AR 105 Introduction to Animation
This hands-on introductory level course covers the fundamentals and aesthetics of computer animation using the Adobe AfterEffects motion graphics program.
Offered every year. 3 credits

AR 112 World Art Survey I
LASC—Creative Arts; Thought, Language and Culture
Surveys the world's major cultural achievements in the visual arts from the prehistoric period to ca1400.
Offered every year. 3 credits.

AR 113 World Art Survey II
LASC—Creative Arts; Thought, Language and Culture
Major cultural achievements in the visual arts from ca1400 to the early twentieth century.
Offered every year. 3 credits.

AR 117 Visual Design: Two-Dimensions
LASC—Creative Arts
A foundation for visual literacy through studio work utilizing such art elements as line, form, color, and texture.
Offered every year. 3 credits.

AR 122 Visual Design: Three-Dimensions
LASC—Creative Arts
A foundation for visual literacy through studio work utilizing spatial elements such as plane, mass, volume, and structure.
Offered every year. 3 credits.

AR 130 Painting I
LASC—Creative Arts
An introduction to the fundamentals of historical painting styles, techniques, and materials used, with emphasis on visual perception and expression.
Offered every year. 3 credits.

AR 140 Drawing I
LASC—Creative Arts
The development of visual awareness, technical skills, and individual expression in drawing media.
Offered every year. 3 credits.

AR 150 Life Studio I
LASC—Creative Arts
Focus on the human figure through different modes of drawing and painting. Attention to structure and anatomy and their expressive aspects.
Offered every year. 3 credits.

AR 160 Sculpture I
LASC—Creative Arts
Three-dimensional studio creations through a variety of traditional and contemporary materials. Both realistic and abstract concepts are explored.
Offered every year. 3 credits.

AR 165 Creating Cultural Forms
LASC—Creative Arts
A studio course. Concepts of art forms created by a variety of world cultures and art movements of the past and present.
Offered every year. 3 credits.
AR 193 Special Topics in Art for First-Year Students
All "193" courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval. Introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar. Offered every year. 3 credits.

AR 200 History of American Art
LASC—Creative Arts; Thought, Language and Culture
A survey of the visual arts in the United States, from the Colonial Period to the present. Offered every year. 3 credits.

AR 220 Foundations of Modern Art
LASC—Creative Arts; Thought, Language and Culture
Influential 19th century developments such as Realism and Impressionism are discussed in relationship with early 20th century art. Offered every 2 years. 3 credits.

AR 222 Art of the 20th Century
LASC—Creative Arts; Thought, Language and Culture
Explores the major art movements and leading artists of the 20th century. Offered every 2 years. 3 credits.

AR 225 Art Since Mid-Century
LASC—Creative Arts; Thought, Language and Culture
Explores challenges to the traditional definitions of the art object and the expanded materials, media and concepts employed by artists since 1950. Offered every year. 3 credits.

AR 230 Printmaking
LASC—Creative Arts
Introduction to the techniques and aesthetics of monotype and relief. Prints by major artists are examined. Offered every year. 3 credits.

AR 235 Mixed Media
Prerequisite: One studio course or consent of instructor
Advanced investigation and experimentation in the use of interrelated media and materials of two- and three-dimensions. Offered every year. 3 credits.

AR 240 Watercolor
LASC—Creative Arts
A studio course exploring various techniques and expressive forms used by watercolorists of the past and present. Offered every year. 3 credits.

AR 250 The Computer in Studio Art I – Book Arts
The computer as a medium for visual art. Emphasis on individual creations in book arts. Offered every year. 3 credits.

AR 260 Visual Arts in the Schools
LASC—Creative Arts
An exploration of art materials and concepts, and their appropriate use with children. Includes studio projects, art history, and educational theory. Offered every year. 3 credits.

AR 275 Gallery and Museum Studies
LASC—Creative Arts; Thought, Language and Culture
All aspects of installation and exhibition of art work in WSU gallery, including solicitation of art, publicity, display, and management. Offered every 2 years. 3 credits.
AR/CM 285 History of Photography
LASC—Creative Arts; Thought, Language and Culture
The history of photography from 1839 to present, with attention to styles, aesthetics, technical processes, and leading practitioners.
Offered every 2 year. 3 credits.

AR 300 Painting II
Prerequisite: AR 130 or consent of instructor
Continuation of painting with emphasis on individual development through interpretive projects.
Offered every 2 years. 3 credits.

AR 302 Drawing II
Prerequisite: AR 140 or consent of instructor
Advanced projects in drawing with increasing emphasis on individual direction.
Offered every 2 years. 3 credits.

AR 305 Life Studio II
Prerequisite: AR 150 or consent of instructor
Continued drawing and painting focusing on the human figure, with emphasis on interpretive and individual development.
Offered every 2 years. 3 credits.

AR 306 Sculpture II
Prerequisite: AR 160 or consent of instructor
Further exploration of sculptural form with a diversity of materials, techniques, and expressive meaning.
Offered every 2 years. 3 credits.

AR 307 The Computer in Studio Art II – Digital Printmaking
Prerequisites: AR 250, CM 150 or permission of instructor.
Use the computer as a medium for visual art. Software programs for computer-generated image making. Focus on digital printmaking.
Offered every year. 3 credits.

AR 325 Seminar in Contemporary Art
Prerequisite: AR 225 or permission of the instructor.
In-depth study of international movements in contemporary art. Explores the intersection of art and science, abstract and figurative work, installation, site-specific, multimedia and performance art.
Offered every year. 3 credits.

AR 330 Intermediate Printmaking
Prerequisite: AR 230
Continuation of relief printmaking in an individual direction using tone/color and multiple blocks.
Offered every year. 3 credits.

AR 350 Special Topics in Art
Prerequisite: One studio course or consent of instructor
A course covering topics which vary in response to specific student and faculty interest.
Offered every 3 years. 3 credits.

AR 400 Independent Study in Art
Prerequisites: Limited to art minors with minimum of 12 credits
An opportunity for further individual study in a special interest. Self-directed under supervision of faculty.
Offered every year. 3 credits.

AR 402 Internship in Art
Prerequisite: Limited to art minors
An individual experience through internship with a sponsoring community organization, professional institution or individual, i.e., museums, galleries, artists.
Offered every 3 years. 3-6 credits.
Faculty

Mary E. Clay, Assistant Professor (2012)
B.S., Fitchburg State University; M.B.A., Anna Maria College; D.B.A., Argosy University

Laurie A. Dahlin, Professor (2001)
B.S., Nichols College; M.B.A., Assumption College; D.B.A., CMA, Nova Southeastern University

Robert C. Fink, Professor (2002)
B.A., Coe College; M.B.A., University of Iowa; D.B.A., Boston University

Robert V. Holmes, Assistant Professor (2012)
B.S., Lesley University; M.B.A., Salem State University; Ph.D., Northeastern University

Renuka Jain, Professor (1985), Department Chair
M.Sc., Rajasthan University; Ph.D., McGill University

Tejendra N. Kalia, Associate Professor (2004)
B.E., Indian Institute of Technology; M.E., McGill University; M.B.A., Anna Maria College; D.B.A., Nova Southeastern University

Harry Lo, Assistant Professor (2008)
Diploma in Economics, New Asia College; M.A., Ph.D., University of Georgia

Mark L. Love, Assistant Professor (2006)
B.S./B.A., M.B.A., Nichols College; CPA, Commonwealth of Massachusetts; CFF, American Institute of Certified Public Accountants

Augustus N. Luparelli, Professor (2002)
B.A., Fitchburg State College; M.A., Worcester State College; Ph.D., University of Connecticut

Joan (Jay) Mahoney, Professor (2002)
B.S., North Adams State College; M.B.A., Western New England College; Ph.D., State University of New York at Buffalo

Rodney Oudan, Professor (2005)
CIM, Chartered Institute of Marketing; PGCert, University of the West Indies, (UWI); M.M., Cambridge College; D.B.A., Nova Southeastern University

Miriam L. Plavin-Masterman, Assistant Professor (2013)
B.S., Cornell University; M.B.A., Dartmouth College; M.A., Brown University; Ph.D., Brown University

Elizabeth A. Siler, Assistant Professor (2008)
B.A., Boston University; M.B.A., Simmons College; Ph.D., University of Massachusetts, Amherst
Maureen C. Stefanini, Professor (1967)
B.S., Ed.M., Worcester State College; M.S., Management, Massachusetts Institute of Technology; Ed.D., Boston University

James J. Swanson, Professor (1984)
B.S., Bryant College; M.B.A., University of Rhode Island; M.S.T., Bryant College; CPA, Rhode Island

Elizabeth J. Wark, Professor (2007)
B.A., Mount Holyoke College; M.B.A., University of Massachusetts; M.A., Ph.D., Clark University

The Business Administration program enables participants to acquire competencies necessary to manage the human, financial and technological resources of organizations. The major in Business Administration offers three concentrations: Management, Accounting/Finance, Marketing.

**Admission Requirements:** Application to the department after completion of the following prerequisite courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>CS 120</td>
<td>Microcomputer Applications</td>
</tr>
<tr>
<td>EC 110</td>
<td>Introduction to Microeconomics</td>
</tr>
<tr>
<td>EC 120</td>
<td>Introduction to Macroeconomics</td>
</tr>
<tr>
<td>EN 253</td>
<td>Business Communications</td>
</tr>
<tr>
<td>MA 150 or EC 150</td>
<td>Statistics</td>
</tr>
<tr>
<td>MA 202 or EC 202</td>
<td>Business Calculus/Introduction to Mathematical Economics</td>
</tr>
</tbody>
</table>

To be accepted to the major, a student must complete all prerequisite courses with a C (2.0) or better average.

**Requirements for a Major in Business Administration:** 48 credits in Business Administration, of which a minimum of 25 must be completed at Worcester State University.

**Common Business Core:** 36 credits

**Lower Division**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>BA 200</td>
<td>Principles of Management and Organizational Behavior</td>
</tr>
<tr>
<td>BA 210</td>
<td>Fundamentals of Accounting I</td>
</tr>
<tr>
<td>BA 220</td>
<td>Fundamentals of Accounting II</td>
</tr>
<tr>
<td>BA 230</td>
<td>Managerial Accounting or BA 374 Cost Accounting</td>
</tr>
<tr>
<td>BA 250</td>
<td>Analytical Techniques in Business</td>
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</tbody>
</table>

**Upper Division**

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<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>BA 305</td>
<td>Organizational Dynamics</td>
</tr>
<tr>
<td>BA 312</td>
<td>Operations Management I</td>
</tr>
<tr>
<td>BA 316</td>
<td>Financial Management</td>
</tr>
<tr>
<td>BA 318</td>
<td>Principles of Marketing</td>
</tr>
<tr>
<td>BA 350</td>
<td>Business Information Systems and Applications</td>
</tr>
<tr>
<td>BA 320</td>
<td>Business Law I or BA 480 The Legal Environment of Business</td>
</tr>
<tr>
<td>BA 490</td>
<td>Business Strategy and Policy</td>
</tr>
</tbody>
</table>

**BA Electives:** Other Upper Division (300-level or above)

Business Administration courses: at least 12 credits

**Note:** You may apply any two of the following EC courses towards the BA major with a concentration in either Management, International Business, Finance or toward a minor in Business Administration.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>EC 205</td>
<td>Money, Banking and Monetary Policy</td>
</tr>
<tr>
<td>EC 301</td>
<td>Economic Development</td>
</tr>
<tr>
<td>EC 307</td>
<td>International Finance</td>
</tr>
<tr>
<td>EC 308</td>
<td>International Trade</td>
</tr>
</tbody>
</table>
Requirements for a Major in Business Administration, Concentration in Management: The Common Business Core together with a minimum of four additional courses in one of the fellowship areas of studies chosen with the assistance of the advisor.

Requirements for a Major in Business Administration, Concentration in Accounting: The Common Business Core together with four additional courses in the field of accounting chosen with the assistance of the advisor. Typical courses include:
- BA 370 Intermediate Accounting I
- BA 371 Intermediate Accounting II
- BA 375 Federal Income Taxes
- BA 376 Auditing

Requirements for a Major in Business Administration, Concentration in Marketing: The Common Business Core together with four additional courses in the field of marketing chosen with the assistance of the advisor.

Requirement for Major in Business Administration, Concentration in International Business: The common Business Core together with four elective courses in the field of International Business chosen with the assistance of the advisor from the list that follows:
- BA 440 International Business and Management (required)
- BA 494 International Marketing
- EC 307 International Finance
- EC 308 International Trade
- BA 482 Selected Topics in Business Administration
- EC 301 Economic Development
- BA 481 Independent Study
- BA 486 Internship
- BA 351 Managing eBusiness

Requirement for Major in Business Administration, Concentration in Finance: The common Business Core together with, four additional courses in the field of Finance chosen with the assistance of the advisor from the list that follows:
- BA 404 Corporate Finance (required)
- BA 355 Insurance and Risk Management
- BA 415 Investment Analysis
- BA 416 Financial Markets and Institutions
- BA 486 Internship (in area related to finance)
- EC 205 Money, Banking and Monetary Policy
- EC 307 International Finance

Admission Requirements for a Minor in Business Administration: Application to the department after completion of the prerequisite courses. For acceptance to the minor, students must complete the three prerequisite courses with a C (2.0) or better average.

Requirements for a Minor: 27 credits as follows

Prerequisite courses (9 credits)
- CS 120 Microcomputer Applications
- EC 150 Statistics/or MA 150 Statistics
- EC 110 Introduction to Microeconomics/or EC 120 Introduction to Macroeconomics

Required courses (18 credits)
- BA 200 Principles of Management and Organizational Behavior
- BA 210 Fundamentals of Accounting I
- Plus Four (4) additional BA courses
## YEAR ONE

### Semester One

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tr>
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**Semester Subtotal** 15

### Semester Two

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**Semester Subtotal** 15

**Comments**

*One QR must be a MA course*

## YEAR TWO

### Semester Three

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**Semester Subtotal** 15-16

### Semester Four

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<td>BA 250</td>
<td>Analytical Techniques in Business</td>
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<td>BA 318</td>
<td>Principles of Marketing</td>
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**Semester Subtotal** 16
# Business Administration

## Year Three

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<td>BA 230/BA 374</td>
<td>Managerial or Cost Accounting</td>
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**Semester Subtotal:** 15-16

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<td>Business Info Systems</td>
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**Semester Subtotal:** 15

## Year Four

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<td>LASC</td>
<td>Creative Arts (CA)</td>
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<td>LASC</td>
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**Semester Subtotal:** 15

### Semester Eight

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**Semester Subtotal:** 15

Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.
Business Administration Courses (Undergraduate)

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

BA 100 Introduction to Business (only as a free elective)
Introduction to basic concepts related to business practices; includes examination of local, regional, and national organizations in the business world.
Offered every year. 3 credits.

BA 193 Special Topics in Business Administration for First-Year Students
All "193" courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval.
Introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar.
Offered every year. 3 credits.

BA 200 Principles of Management and Organizational Behavior
Study of management practices and behavior in organizational settings. Emphasis on introduction to managerial principles, concepts and fundamentals.
Offered every year. 3 credits.

BA 210 Financial Accounting I
Prerequisites: BA 200, BA 220, CS 120 or 121, MA 150 or EC 150
Identification and analysis of common business problems using proper quantitative techniques and standard business software.
Offered every year. 3 credits.

BA 230 Managerial Accounting
Prerequisite: BA 220
Analysis, interpretation and use of accounting data for effective managerial planning, control and decision-making.
Offered every year. 3 credits.

BA 250 Analytical Techniques in Business
Prerequisites: BA 200, BA 220, CS 120 or 121, MA 150 or EC 150
Identification and analysis of common business problems using proper quantitative techniques and standard business software.
Offered every year. 3 credits.

BA 300 Organization Theory
Prerequisite: BA 200
A macro examination of organizations utilizing current research findings based largely upon a systems/contingency framework, designed to improve organizational effectiveness.
Offered every 2 years. 3 credits.

BA 305 Organizational Dynamics
Prerequisite: BA 200
A study of behavior principles which underlie the prevention and solution of problems in both individual and group contexts.
Offered every year. 3 credits.

BA 306 Human Resource Management
Prerequisite: BA 305
An examination of human resource management including employment laws, recruiting/selection, training/development, and benefits/compensation administration.
Offered every year. 3 credits.

BA 312 Operations Management I
Prerequisites: BA 200, CS 120, MA 150 or EC 150
Applied analysis of operations in service and production systems using quantitative models and calculus; inventory, work measurement, scheduling, quality control.
Offered every year. 3 credits.
Business Administration

BA 315 Quantitative Analysis and Information Systems
Prerequisite: CS 120
Introduction to basic quantitative analysis applied to management planning and operations systems. Includes business information systems and applications.
Offered every 3 years. 3 credits.

BA 316 Financial Management
LASC—Quantitative Reasoning Across the Curriculum
Prerequisite: BA 220
Financial analysis, working capital management and basics of capital budgeting.
Offered every year. 3 credits.

BA 318 Principles of Marketing
Prerequisite: BA 200, EC110, and EC 120
Overview of the full range of activities involved in marketing, develops an understanding of marketing strategy and processes.
Offered every year. 3 credits.

BA 320 Business Law I
Prerequisite: BA 200
Introduction to legal concepts as applied to the study of contracts, personal property, sales, and the Uniform Commercial Code.
Offered every year. 3 credits.

BA 321 Business Law II
Prerequisite: BA 320
Continuation of topics covered in BA 320. Study of laws of partnerships and corporations.
Offered every 3 years. 3 credits.

BA 327 Ethical Decision Making in Business
Prerequisites: BA 200, BA 210, BA 318
This course will identify, discuss and analyze ethical issues faced by business professionals and discuss approaches for resolving ethical dilemmas.
Offered every year. 3 credits.

BA 350 Business Information Systems and Applications
Prerequisite: BA 230 or BA 374, CS 120
Survey of automated business information systems and microcomputer applications with emphasis on business oriented software.
Offered every year. 3 credits.

BA 351 Managing eBusiness
Prerequisites: IT Minor: Core IT Courses • BA Major: Core BA Courses
Digitizing new forms of business organizations to create business-to-business partnerships, business-to-consumer relationships, pathways-to-profitability; Legal, Ethical, Social, Political and Global Issues.
Offered every year. 3 credits.

BA 355 Insurance and Risk Management
Prerequisite: BA 200
This survey course covers the identification and evaluation of risk, and techniques for the management of risk. Commercial and personal risks are studied from the points of view of the corporation, the individual, and the insurer. Areas of emphasis include commercial property, business liability, worker’s compensation, automobile, life, health, disability, and income insurance.
Offered every year. 3 credits.

BA 362 Accounting for Non-Profit Organizations
Prerequisite: None
Specialized area of accounting for unique requirements for non-profit organizations; includes analysis of budgeting, financial statements and other unique accounting requirements needed by management to assess the controls of a non-profit entity.
Offered every 2 years. 3 credits.
BA 370 Intermediate Accounting I  
*Prerequisites: BA 210, BA 220*  
Accounting theory, principles, concepts, and procedures applied to balance sheet and income statement accounts. Presentation and interpretation of financial reports.  
*Offered every year. 3 credits.*

BA 371 Intermediate Accounting II  
*Prerequisite: BA 370*  
Continuation of BA 370.  
*Offered every year. 3 credits.*

BA 372 Advanced Accounting I  
*Prerequisite: BA 370*  
Mergers and consolidations; parent and subsidiary relationships; pooling of interests and purchases; fund accounting; price-level accounting.  
*Offered every year. 3 credits.*

BA 373 Advanced Accounting II  
*Prerequisite: BA 372*  
Special advanced topics including review of Accounting Research Bulletins of the AICPA.  
*Offered every 2 years. 3 credits.*

BA 374 Cost Accounting  
*Prerequisites: BA 200, BA 210, BA 220*  
Accounting for costs in business enterprises. Emphasis placed on fundamental principles including job order, process, and standard costs.  
*Offered every year. 3 credits.*

BA 375 Federal Income Taxes I  
*Prerequisite: BA 370*  
A study of federal income taxation as applied to individuals.  
*Offered every year. 3 credits.*

BA 376 Auditing  
*Prerequisite: BA 370*  
Basic auditing concepts and developments and their application to the examination, evaluation and reporting of financial data.  
*Offered every year. 3 credits.*

BA 377 Federal Income Taxes II  
*Prerequisite: BA 375*  
Federal income taxes for corporations and partnerships.  
*Offered every 2 years. 3 credits.*

BA 380 Negotiations  
*Prerequisites: BA 200, BA 210, BA 220, BA 305, EC 110, EC 120*  
This course focuses on effective negotiations, conflict management, and power and influence in organizational and other settings.  
*Offered every year. 3 credits.*

BA 385 Leadership  
*Prerequisites: BA 200, BA 305*  
This course focuses on leadership theories, skills and applications. Self-assessment and reflection are important learning components of the course.  
*Offered every year. 3 credits.*

BA 400 Management and Organizational Behavior I  
*Prerequisite: BA 305*  
Study of concepts, theory, research, and operational problems of organizational behavior; work groups and intergroup behavior models.  
*Offered every 3 years. 3 credits.*
BA 401 Management and Organizational Behavior II  
**Prerequisite:** BA 400  
Continuation of topics covered in BA 400 with additional theory and case studies; behavioral science/systems approach is taken.  
*Offered every 3 years. 3 credits.*

BA 404 Corporate Finance  
**Prerequisite:** BA 316  
Advanced capital budgeting, capital structure, long-term financing decisions, dividend policy, computer modeling, comprehensive financial strategy cases.  
*Offered every 2 years. 3 credits.*

BA 406 Trends in Marketing  
**Prerequisite:** BA 318  
Integrates all aspects of marketing theory through readings, case studies, class projects, individual projects, and computer simulation of marketing decisions.  
*Offered every 2 years. 3 credits.*

BA 408 Operations Management II  
**Prerequisite:** BA 312  
Continuation of topics of BA 312 with focus on production planning and flow.  
*Offered every 3 years. 3 credits.*

BA 409 Quantitative Analysis and Techniques I: Linear Models for Administration  
**Prerequisite:** BA 315  
Application of QA techniques to problems of linear programming, inventory models, and PERT-CPM networks.  
*Offered every 3 years. 3 credits.*

BA 411 Supply and Value Chain Management  
**Prerequisite:** BA 312  
This course links all of the supply interacting organizations in an integrated two-way communications system to manage high quality inventory.  
*Offered every year. 3 credits.*

BA 415 Investment Analysis  
**Prerequisite:** BA 316  
Survey of investment vehicles, including stocks, bonds, real estate, commodities, mutual funds, and collectibles. Modern portfolio and valuation theories.  
*Offered every year. 3 credits.*

BA 416 Financial Markets and Institutions  
**Prerequisite:** BA 316  
Study of banks, investment banking, money markets, and the financial service industry as they affect long and short-term financing decisions.  
*Offered every 3 years. 3 credits.*

BA 420 Marketing Research  
**Prerequisite:** BA 318  
Nature and scope of marketing research. Application of scientific methods, sources, problem definition, and collection of data, reporting and evaluation.  
*Offered every year. 3 credits.*

BA 422 Retailing  
**Prerequisite:** BA 318  
Demand analysis, consumer behavior, and planning and control of the merchandising functions; retailing as a career.  
*Offered every 3 years. 3 credits.*

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BA 424 Advertising Management  
*Prerequisite: BA 318*  
Advertising from a planning perspective. Advertising and professional promotion strategies with execution and control activities.  
*Offered every 3 years. 3 credits.*

BA 426 Consumer Behavior  
*Prerequisite: BA 318*  
The analysis of the consumer decision process as it affects marketing management decisions. Major factors of influence in this process will be studied including culture, social class, family, and reference groups.  
*Offered every 3 years. 3 credits.*

BA 428 Business to Business Marketing  
*Prerequisite: BA 318*  
Explores business markets which account for more than half the economic activity globally.  
*Offered every 3 years. 3 credits.*

BA 429 Integrated Marketing Communications  
*Prerequisite: BA 318*  
This course is designed for students who have an interest in increasing their knowledge of the marketing promotional process.  
*Offered every 3 years. 3 credits.*

BA 430 Administrative Practices and Management  
*Prerequisite: BA 305*  
Overview and analysis of human conduct in work-organization settings.  
*Offered every 3 years. 3 credits.*

BA 434 Management and Corporate Responsibility  
*Prerequisite: BA 200*  
The theoretical and practical relationships of corporate conflicts of interests, self-regulation, product liability, employee rights, etc. to management decisions.  
*Offered every year. 3 credits.*

BA 440 International Business and Management  
*Prerequisites: BA 316, BA 318*  
Study and analyze the nature, structures and strategies of international/global businesses. Examine international markets, economic systems, value-chains and core competencies of a firm.  
*Offered every 2 years. 3 credits.*

BA 445 Advanced Applications in Computerized Financial Reporting  
*Prerequisites: BA 370, BA 374, or BA 230*  
Hands-on experience with general ledger accounting software emphasizing advanced level accounting concepts and information reporting systems.  
*Offered every 2 years. 3 credits.*

BA 446 Total Quality Management Systems  
*Prerequisite: BA 200*  
Examines the “quality” revolution sweeping American business in manufacturing, health care and other service industries both profit and non-profit.  
*Offered every year. 3 credits.*

BA 474 Corporate Law  
*Prerequisite: BA 320*  
Corporate powers and corporate management. Designed for future corporate executives and accountants.  
*Offered every 3 years. 3 credits.*
BA 480 The Legal Environment of Business
Prerequisite: BA 200
The impact of governmental regulation on business and its response will be evaluated by unique debate-type format.
Offered every year. 3 credits.

BA 481 Independent Study in Business Administration
Prerequisite: BA 200
Independent study in business administration, usually involving field work which is not an internship.
Offered every year. 1-6 credits.

BA 482 Selected Topics in Business Administration
Prerequisites: BA 305, BA 316, BA 318
Selection of topics of mutual interest to the student and faculty.
Offered every year. 1-6 credits.

BA 486 Internship in Business Administration
Prerequisites: BA 305, BA 316, BA 318
Practical experience in operations of business. Internships within co-operative firms with on-site supervision and evaluation.
Offered every year. 1-12 credits.

BA 490 Business Strategy and Policy
Prerequisites: BA 316, BA 318
Capstone course integrating information provided in the functional areas such as finance, marketing, general management, business legal environment.
Offered every year. 3 credits.

BA 492 Selected Topics in Health Administration
Prerequisite: BA 361
Selected topics in health administration of mutual interest to the student and faculty.
Offered every 3 years. 1-6 credits.

BA 493 Selected Topics in Government Administration
Prerequisite: BA 361
Recent developments in public administration of mutual interest to students and faculty.
Offered every 3 years. 1-6 credits.

BA 494 International Marketing
Prerequisites: EC 120, BA 318
With the rapid and continuous changes in a global environment we will examine the complex issues in international marketing faced by today's manager.
Offered every year. 3 credits.
Communication
Department of Communication

Faculty

Julian Berrian, Assistant Professor (2006)
B.A., University of Maryland; M.F.A., Temple University

Donald F. Bullens, Associate Professor (1986), Department Chair
B.S. Ed., M.Ed., Worcester State College

Alta Carroll, Professor (1998)
B.A., Texas A & M University; M.S., Columbia University; Ph.D., Purdue University

Carlos Fontes, Professor (1996)
B.A., Escola Superior de Meios de Communicacao Social, Lisbon;
M.A., Ph.D., University of Massachusetts

Julie D. Frechette, Professor (1999)
B.A., University of New Hampshire; M.A., Ph.D., University of Massachusetts

Suzanne Gainer, Professor (2001)
B.A., St. Vincent College; M.F.A., Rhode Island School of Design

Daniel S. Hunt, Assistant Professor (2013)
B.A., University of Rhode Island; M.S., Boston University College of Communication;
Ph.D., University of Connecticut

Emanuel E. Nneji, Associate Professor (2005)
B.A., University of Nigeria; M.S., University of Lagos; Ph.D., University of South Carolina

Barbara Zang, Professor (2002)
B.S., University of Missouri; M.A., University of Toledo; M.A., University of Missouri;
Ph.D., Indiana University

The Department of Communication at Worcester State University promotes the critical understanding of communication in a culturally diverse and technological world. Grounded on methods of inquiry, the program engages students in the theory and practice of mass communications and intercultural communication. Our goal is to educate students to assess the role of communication in society, and to be proficient communicators and competent users of current technologies. Representing diverse areas of expertise, the faculty emphasizes contemporary issues and media ethics from a global perspective.

Courses focused on media literacy, criticism, production and special topics, prepare students for careers in the field and for further study at the graduate level. Facilities include computer labs, a state-of-the-art television studio, editing suites, electronic field production video equipment and photographic dark rooms.

In addition to course work, students in their junior and senior year who have a GPA of 2.7 or higher are encouraged to apply for media internships with companies and nonprofit
organizations that have a long-standing relationship with the Department. Majors have the opportunity to become members of WSTS-TV 11 and WSCW radio station. The Department sponsors internships and photographic exhibits; in addition, many of our students participate in off-campus communication-related competitions and activities.

**Requirements for a Major in Communication** 36 credits for the Media Theory and Public Communication concentrations and 39 credits for the concentration in Media Production.

**Core Courses**
- CM 100 Introduction to Mass Communication
- CM 105 Media Writing or CM 200 Writing for Communication
- CM 110 Public Speaking
- CM 363 Visual Media Literacy
- CM 384 Media Criticism

**One of the Following Courses**
- CM/WO 213 Gender and Media
- CM/WO 350 Intercultural Communication
- CM/WO 390 Alternative Communication

**Elective Courses:** 18 credits in Communication

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**Sample Timetable for Completion of Degree**

**Communication, Generalist**

**YEAR ONE**

**Semester One**

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<td>CM 100</td>
<td>Introduction to Mass Communications</td>
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**Semester Subtotal** 15

**Semester Two**

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<td>Constitutions</td>
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<td>CM 110</td>
<td>Public Speaking</td>
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**Semester Subtotal** 15
## YEAR TWO

### Semester Three

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Semester Subtotal: 16

### Semester Four

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<td>Human Behavior and Social Processes (HBS)</td>
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Semester Subtotal: 15

Comments:

## YEAR THREE

### Semester Five

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Semester Subtotal: 15

### Semester Six

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Semester Subtotal: 15

Comments:
### YEAR FOUR

#### Semester Seven

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**Comments**

Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.

### Requirements for a Concentration in Journalism

In addition to the six core courses, students will have to complete the following:

#### Required Courses for Concentration

- CM/EN 107 Journalism and Democracy
- CM/EN 272 News Reporting and Writing I
- CM/EN 416 Media Law and Ethics

#### Four of the following Elective courses:

- CM/EN 268 Journalism: Feature Writing
- CM/EN 270 Journalism: Editing
- CM/EN 351 News Reporting and Writing II
- CM/EN 352 Practicum in Journalism
- CM/EN 353 Narrative Journalism
- CM/EN 354 Opinion Writing
- CM 390 Alternative Communication
- CM 359 Documentary Production
- CM 435 Internship
- EN 475 Internship in English
**Pre-requisites:** EN 102 Composition II, CM/EN 107 Journalism and Democracy, and CM/EN 272 News Reporting and Writing I for every journalism course except for CM/EN 270 Journalism: Editing, which has only EN 102 Composition II as a pre-requisite.

## Sample Timetable for Completion of Degree
### Communication/Concentration Journalism

### YEAR ONE

#### Semester One

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<td>English Composition I</td>
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<td>Introduction to Mass Communications</td>
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**Semester Subtotal** 15

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**Semester Subtotal** 15

**Comments**

### YEAR TWO

#### Semester Three

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**Semester Subtotal** 16
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Semester Subtotal: 15

### YEAR THREE

#### Semester Five

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Semester Subtotal: 15

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<td>CM</td>
<td>Journalism Elective</td>
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Semester Subtotal: 15

Comments

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298
YEAR FOUR

Semester Seven

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Semester Subtotal 15

Semester Eight

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Semester Subtotal 15

Comments

Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.

Requirements for the Concentration in Media Production. In addition to the six core courses, students will have to complete the following:

TRACK A: Print Media

Required Courses for this Track

- CM 150 Photography I or
- CM 151 Introduction to Digital Photography
- CM 160 Introduction to Digital Imaging
- CM 231 Photography II
- CM 244 Graphic Design

Elective Courses: 9 credits in Communication
# Sample Timetable for Completion of Degree Communication/Concentration Media Production A: Print Media

## YEAR ONE

### Semester One

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<td>EN 101</td>
<td>English Composition I</td>
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<td>CM 100</td>
<td>Introduction to Mass Communications</td>
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<td>LASC</td>
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**Semester Subtotal 15**

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**Semester Subtotal 15**

### Comments

## YEAR TWO

### Semester Three

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**Semester Subtotal 16**
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**Semester Subtotal** 15

### Comments

### YEAR THREE

#### Semester Five

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**Semester Subtotal** 15

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**Semester Subtotal** 15

### Comments
## YEAR FOUR

### Semester Seven

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**Semester Subtotal 15**

### Semester Eight

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**Semester Subtotal 15**

### Comments

Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.

---

### TRACK B: Broadcast Media

**Required Courses for this Track**

- CM 259 Television Production I
- CM 260 Introduction to Video
- CM 366 Scriptwriting
- CM 396 Video Editing

**Elective Courses:** 9 credits in Communication
# Suggested Timetable for Completion of Degree Communication/Concentration In Broadcast Media

## YEAR ONE

### Semester One

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<tr>
<th>Course No.</th>
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<td>Introduction to Mass Communication</td>
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<td>CM 110</td>
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**Semester Subtotal**: 15

### Semester Two

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**Semester Subtotal**: 15

**Comments**: * Recommended Electives

## YEAR TWO

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**Semester Subtotal**: 16
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**Semester Subtotal** 15

### Year Three

#### Semester Five

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<td>Thought, Language and Culture (TLC)</td>
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<td>LASC</td>
<td>Global Perspective (GP)</td>
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</table>

**Semester Subtotal** 15

#### Semester Six

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CM 359*</td>
<td>Documentary Production*</td>
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<tr>
<td>CM 435*</td>
<td>Media Internship*</td>
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<td>LASC</td>
<td>Creative Arts (CA)</td>
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<tr>
<td>LASC</td>
<td>Individual and Community Well-Being (ICW)</td>
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</table>

**Semester Subtotal** 15

* Recommended Electives

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`Communication`
### YEAR FOUR

#### Semester Seven

<table>
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<tr>
<th>Course No.</th>
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<tbody>
<tr>
<td>CM 360</td>
<td>TV Production II</td>
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</tr>
<tr>
<td>CM 213 or</td>
<td>Gender and Media</td>
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<tr>
<td>CM 350 or</td>
<td>Intercultural Communication</td>
<td></td>
</tr>
<tr>
<td>CM 390</td>
<td>Alternative Communication</td>
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<td>LASC/CM</td>
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**Semester Subtotal** 15

#### Semester Eight

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<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM 404*</td>
<td>Independent Study in Media*</td>
<td>3</td>
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<td>CM</td>
<td>Elective</td>
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<tr>
<td>SELECT</td>
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<tr>
<td>SELECT</td>
<td>General Elective</td>
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<tr>
<td>SELECT</td>
<td>General Elective</td>
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</tbody>
</table>

**Semester Subtotal** 15

**Comments**

* Recommended Electives

Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.

### Requirements for the Concentration in Public Communication.

In addition to the six core courses, students will have to complete the following:

**Required Courses for Concentration (4 courses)**

- CM 180  Introduction to Advertising
- CM 240  Public Relations Principles and Practices
- CM 340  Public Relations Strategy or
- CM 370  Advertising Production
- CM 400  Public Relations Research or
- CM 405  Mass Communication Research

**Elective Courses:** 6 credits in Communication
## Communication

### Sample Timetable for Completion of Degree Communication/Concentration in Public Communication

#### YEAR ONE

**Semester One**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>LASC</td>
<td>First-Year Seminar</td>
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<tr>
<td>EN 101</td>
<td>English Composition I</td>
<td>3</td>
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<tr>
<td>CM 100</td>
<td>Introduction to Mass Communications</td>
<td>3</td>
</tr>
<tr>
<td>CM 110</td>
<td>Public Speaking</td>
<td>3</td>
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<tr>
<td>LASC</td>
<td>Quantitative Reasoning (QR)</td>
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**Semester Subtotal**: 15

**Semester Two**

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<thead>
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<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>EN 102</td>
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<tr>
<td>LASC</td>
<td>Constitutions</td>
<td>3</td>
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<tr>
<td>CM 105 or CM 200</td>
<td>Media Writing Writing for Communication</td>
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<tr>
<td>LASC</td>
<td>Thought, Language and Culture (TLC)</td>
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<tr>
<td>LASC</td>
<td>The United States and Its Role in the World (USW)</td>
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**Semester Subtotal**: 15

**Comments**

#### YEAR TWO

**Semester Three**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>CM 180*</td>
<td>Introduction to Advertising*</td>
<td>3</td>
</tr>
<tr>
<td>CM 240*</td>
<td>Principles of Public Relations*</td>
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<tr>
<td>LASC</td>
<td>Natural Systems and Processes (NSP)</td>
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<tr>
<td>LASC</td>
<td>Thought, Language and Culture (TLC)</td>
<td>3</td>
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<tr>
<td>LASC</td>
<td>Global Perspectives (GP)</td>
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**Semester Subtotal**: 16
### Semester Four

<table>
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<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CM 213 or CM 350 or CM 390</td>
<td>Gender and Media, Intercultural Communication, Alternative Communication</td>
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<td>CM</td>
<td>Major Elective</td>
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<tr>
<td>LASC</td>
<td>Natural Systems and Processes (NSP)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Creative Arts (CA)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Human Behavior and Social Processes (HBS)</td>
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</table>

**Semester Subtotal** 15

**Comments**  
* Taught each fall semester

### YEAR THREE

#### Semester Five

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CM 363</td>
<td>Visual Media Literacy</td>
<td>3</td>
</tr>
<tr>
<td>CM 384</td>
<td>Media Criticism</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Global Perspectives (GP)</td>
<td>3</td>
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<tr>
<td>LASC</td>
<td>Human Behavior and Social Processes (HBS)</td>
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<tr>
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**Semester Subtotal** 15

### Semester Six

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<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CM 340**</td>
<td>Public Relations Strategy**</td>
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<td>CM 370**</td>
<td>Advertising Production**</td>
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<td>LASC</td>
<td>Individual and Community Well-Being (ICW)</td>
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**Semester Subtotal** 15

**Comments**  
** Taught each spring semester
## YEAR FOUR

### Semester Seven

<table>
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<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CM 363</td>
<td>Visual Literacy</td>
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<tr>
<td>CM 384</td>
<td>Media Criticism</td>
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<tr>
<td>CM 400***</td>
<td>Public Relations Research***</td>
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**Semester Subtotal**: 15

### Semester Eight

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<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CM 400***</td>
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<td>CM 405</td>
<td>Mass Communication Research/Capstone</td>
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<td>CM</td>
<td>Journalism Elective</td>
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<td>SELECT</td>
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<tr>
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</table>

**Semester Subtotal**: 15

**Comments**: *** Taught every third semester

Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.

**Requirements for the Concentration in Media Theory.** In addition to the six core courses, students will have to complete the following:

### Required Courses for Concentration

- CM 301  Communication Theory
- CM 404  Independent Study in Media*
- CM 405  Mass Communication Research

**Elective Courses**: 9 credits in Communication
Sample Timetable for Completion of Degree Communication/Concentration in Media Theory

### YEAR ONE

#### Semester One

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>LASC</td>
<td>First-Year Seminar</td>
<td>3</td>
</tr>
<tr>
<td>EN 101</td>
<td>English Composition I</td>
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</tr>
<tr>
<td>CM 100</td>
<td>Introduction to Mass Communications</td>
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<td>CM</td>
<td>Major Elective</td>
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<tr>
<td>LASC</td>
<td>Thought, Language and Culture (TLC)</td>
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**Semester Subtotal** 15

#### Semester Two

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<tr>
<td>EN 102</td>
<td>English Composition II</td>
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<td>LASC</td>
<td>Constitutions</td>
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<td>CM</td>
<td>Major Elective</td>
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<tr>
<td>LASC</td>
<td>The United States and Its Role in the World (USW)</td>
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<tr>
<td>LASC</td>
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**Semester Subtotal** 15

### YEAR TWO

#### Semester Three

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<td>Major Elective</td>
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<td>LASC</td>
<td>Natural Systems and Processes (NSP)</td>
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<tr>
<td>LASC</td>
<td>Human Behavior and Social Processes (HBS)</td>
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</tr>
<tr>
<td>LASC</td>
<td>Creative Arts (CA)</td>
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**Semester Subtotal** 16
### Semester Four

<table>
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<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CM 110*</td>
<td>Public Speaking*</td>
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<tr>
<td>CM 213</td>
<td>Gender and Media</td>
<td>3</td>
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<tr>
<td>LASC</td>
<td>Human Behavior and Social Processes (HBS)</td>
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<td>LASC</td>
<td>Thought, Language and Culture (TLC)</td>
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<td>LASC</td>
<td>Global Perspectives (GP)</td>
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**Semester Subtotal 15**

**Comments**

* Required course for the Major.

### YEAR THREE

#### Semester Five

<table>
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<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CM 363*</td>
<td>Visual Media Literacy*</td>
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</tr>
<tr>
<td>CM 384*</td>
<td>Media Criticism*</td>
<td>3</td>
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<tr>
<td>CM</td>
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<td>3</td>
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<td>LASC</td>
<td>Natural Systems and Processes (NSP)</td>
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**Semester Subtotal 15**

#### Semester Six

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<th>Course Name</th>
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<tbody>
<tr>
<td>CM 301**</td>
<td>Communication Theory**</td>
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<td>Major Elective</td>
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<td>LASC</td>
<td>Individual and Community Well-Being (ICW)</td>
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<td>LASC</td>
<td>Creative Arts (CA)</td>
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**Semester Subtotal 15**

**Comments**

* Required course for the Major.

**Required course for Media Theory Concentration.
YEAR FOUR

Semester Seven

<table>
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<tr>
<th>Course No.</th>
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<td>CM 405**</td>
<td>Mass Communication Research**/Capstone</td>
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<tr>
<td>SELECT</td>
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Semester Subtotal 15

Semester Eight

<table>
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<th>Course Name</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>CM 404**</td>
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<td>CM</td>
<td>Major Elective</td>
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<tr>
<td>SELECT</td>
<td>General Elective</td>
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<tr>
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</table>

Semester Subtotal 15

Comments

** Required course for the Media Theory Concentration
9 elective credits in Major are part of the concentration

Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.

Requirements for a Minor in Communication 18 credits including

CM 100 Introduction to Mass Communication
CM 110 Public Speaking
Plus any 4 electives in Communication

Requirements for a Minor in Communication Education 18 credits including

CM 100 Introduction to Mass Communication
CM 110 Public Speaking
CM/WO 350 Intercultural Communication
CM 384 Media Criticism or
CM 363 Visual Media Literacy
Plus any 2 electives in Communication

Worcester State University/Clark University COPACE BS/MSPC Degree Program

Through a COPACE cooperative program between Worcester State University and Clark University, qualified Communication Majors and Minors during their senior year can work towards a Master of Science in Professional Communication, while concurrently completing their Baccalaureate degree.
Communication Courses

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

CM 100 Introduction to Mass Communication
LASC—Human Behavior and Social Processes; Thought, Language and Culture
An integrated examination of the history, theory, structure, process, and effects of each of the mass media.
Offered every year. 3 credits.

CM 101 Library Skills for Research
The course covers the basics of library research: search strategies and how to use both print and automated research tools.
Offered every 3 years. 1 credit.

CM 103 Survey of Radio and Television
LASC—Human Behavior and Social Processes; Thought, Language and Culture
Perspectives on the development of radio and television technologies, programming, regulation, and economic support, and their impact.
Offered every 2 years. 3 credits.

CM 105 Media Writing
Prerequisite: CM 100
An introduction to various types of mass media writing, from print and broadcast to public relations, advertising and online media.
Offered every year. 3 credits.

CM 106 Communication and the Internet
LASC—Thought, Language and Culture
Focuses on the social and educational implications of the Internet and the application of its various search tools as a means to communication.
Offered every 2 years. 3 credits.

CM/EN 107 Journalism and Democracy
This course introduces students to the history of American journalism and the role of journalism in democratic and non-democratic societies.
Offered every year. 3 credits.

CM 110 Public Speaking
LASC—Thought, Language and Culture
Essentials of speech production and speech writing for large and small groups. Classroom practice in delivering various types of speeches.
Offered every year. 3 credits.

CM 150 Photography I
Covers the basic theory and practice of 35mm B/W photography, including camera handling, film processing, light meters, printing and picture content.
Offered every year. 3 credits.

CM 151 Introduction to Digital Photography
LASC—Creative Arts
Techniques and aesthetics of digital photography. Introduction to the operation of SLR digital cameras and the computer as digital darkroom.
Offered every year. 3 credits.

CM 152 Ecotourism & Photography in Costa Rica
LASC—Global Perspectives; Creative Arts
A multi-level, interdisciplinary photography course with travel to Costa Rica. This course covers basic digital photo techniques and the practices of sustainable eco-tourism. Additional fees apply.
Offered every year. 3 credits.
CM 160 Introduction to Digital Imaging
This course introduces students to the procedures, techniques and concepts of basic digital imaging. In the course students learn to use the computer as a tool for visual image making.
Offered every year. 3 credits.

CM 180 Introduction to Advertising
LASC—Human Behavior and Social Processes
An overview of the advertising including the historical and current roles of advertising in our economy, basic advertising concepts and methods, and social and cultural effects.
Offered every 2 years. 3 credits.

CM 191 Special Topics in Communication
An introductory level course in communications on current or specialized topics.
Offered every year. 3 credits.

CM 193 Special Topics in Communication for First-Year Students
All "193" courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval.
Introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar.
Offered every year. 3 credits.

CM 199 Interpersonal Communication in Media
Study of the communications process as it relates to the production of material in various media, including video, audio, film.
Offered every 2 years. 3 credits.

CM 200 Writing for Communication
Development of writing, research, and critical thinking skills associated with the discipline of communication. Assignments focus on contemporary communication issues.
Offered every year. 3 credits.

CM 204 Analysis of News
This course introduces students to the conventions, ethical issues and the economic, political and socio-cultural forces that affect mainstream and alternative journalism today.
Offered every 2 years. 3 credits.

CM 205 Reporting for Media
This course refines interviewing skills and enables students to develop evidence from documentary sources to create stories for converging media.
Offered every year. 3 credits.

CM 206 Digital Storytelling
Prerequisite: CM 100
Use of personal narrative to construct stories using audio, still and video images, and music tracks in digital format.
Offered every year. 3 credits.

CM 210 Special Topics in Communication
This is a mid-level communication course focused on current specialized topics not covered by the department’s curriculum.
Offered every 2 years. 3 credits.

CM/WO 213 Gender and Media
LASC—Human Behavior and Social Processes; Thought, Language and Culture; Diversity Across the Curriculum; Writing Across the Curriculum
Prerequisite: CM 100
This course will explore how difference is socially constructed along gender lines and will explore the intersections of gender, identity, power and media representation.
Offered every 2 years. 3 credits.
Communication

CM 231 Photography II
Prerequisite: CM 150
Expands basic skills in camera craft, film and print processing and presentation. Instruction and practice in the Zone System, theory and practice of advanced exposure and film development control. Emphasis on photographic composition and efficiency in designing purposeful photographic statements.
Offered every year. 3 credits.

CM 240 Principles of Public Relations
LASC—Human Behavior and Social Processes
Prerequisite: CM 100
An overview of public relations principles in business, politics and society.
Offered every 2 years. 3 credits.

CM 241 Understanding Movies
LASC—Creative Arts; Thought, Language and Culture
An introduction to the aesthetics and critical theories of film as an artistic medium of communication through critical observation of classic and contemporary movies.
Offered every year. 3 credits.

CM 244 Graphic Design
Through hands-on projects, students will learn formal elements of design, principles of typography, idea generation, and issues of responsible design as applied to print media.
Offered every year. 3 credits.

CM/CS 247 Introduction to Multimedia
Prerequisite: Introduction to computers or experience
Use of computers to create digitized video, images, sound, animation, and text for CD-ROM, the internet, television and other productions.
Offered every 2 years. 3 credits.

CM/MU 250 Music of the Cinema: Spectacle, Splendor, and Spielberg
An introduction to the role, impact, and importance of music in motion pictures from silent movies through contemporary film.
Offered every 2 years. 3 credits.

CM 259 Television Production I
LASC—Creative Arts
Basics of studio production including visualization and sequencing of short scripts, sound, graphics, lighting, and technical direction.
Offered every year. 3 credits.

CM 260 Introduction to Video
LASC—Creative Arts
A beginning course in video program production, using lightweight and portable equipment.
Offered every year. 3 credits.

CM/EN 268 Journalism: Feature Writing
Prerequisite: EN 102
Provides advanced training in finding, researching, developing, and writing feature stories for newspapers and magazines.
Offered every 3 years. 3 credits.

CM 270 Media and Globalization
This course examines the emergence of global media and its impact on the development of a global world.
Offered every 2 years. 3 credits.

CM/EN 270 Journalism: Editing
Prerequisite: EN 102
Training in copy selection, copy editing, story placement, headline writing, layout, and use of style books.
Offered every 3 years. 3 credits.
CM/EN 272 News Reporting and Writing I  
*Prerequisites: EN 102 & EN 107*  
Includes fundamentals of news judgment, events coverage, sourcing, interviewing, writing on deadline, fact checking and basic editing.  
*Offered every year. 3 credits.*

CM/AR 285 History of Photography  
*LASC—Creative Arts; Thoughts, Language and Culture*  
The history of photography from 1839 to present, with attention to styles, aesthetics, technical processes, and leading practitioners.  
*Offered every 2 year. 3 credits.*

CM 301 Communication Theory  
*Prerequisite: CM 100*  
Examines the nature and origins of symbol systems, the make up of audiences, the effects of mass media, and concomitant research.  
*Offered every 3 years. 3 credits.*

CM 305 Media for Non-profits  
*Prerequisites: CM 100, CM 105*  
This course covers the writing, research, planning and problem solving necessary to provide media service for a non-profit client.  
*Offered every 2 years. 3 credits.*

CM 340 Public Relations Strategy  
*Prerequisite: CM 240*  
Case study approach to public relations practices, problems, opportunities, and application to practical situations  
*Offered every 2 years. 3 credits.*

CM 345 Media and Democracy  
*Prerequisite: CM 100*  
This course aims to develop an understanding of democracy's requirements and the role of the media in relation to democracy.  
*Offered every 2 years. 3 credits.*

CM/WO 350 Intercultural Communication  
*Prerequisite: CM 100*  
Introductory communication theory and practice across cultural groups defined by race, ethnicity, gender, religion, age, nationality, politics and economics.  
*Offered every 2 years. 3 credits.*

CM/EN 351 News Reporting and Writing II  
*Prerequisite: EN 272*  
Focuses on using documentary evidence in reporting. Students select a reporting specialty area such as sports, business or higher education.  
*Offered every 2 years. 3 credits.*

CM/EN 352 Practicum in Journalism  
*Prerequisite: EN 270 & EN 272*  
Workshop in which students report, write, and edit the online college news magazine. Participate in all aspects of publication.  
*Offered every semester. 3 credits.*

CM/EN 353 Narrative Journalism  
*Prerequisite: EN 272*  
Students analyze and create in-depth journalistic features and nonfiction stories that blend reporting with techniques of fictional storytelling.  
*Offered every 2 years. 3 credits.*
Communication

CM/EN 354 Opinion Writing
Prerequisite: EN 272
Students analyze and practice writing op-eds and other opinion pieces. Learn to write commentary that is publication ready.
Offered every 2 years. 3 credits.

CM 359 Documentary Production
Prerequisite: CM 260
This course engages students in a semester-long production of documentary and introduces key concepts of documentary theory.
Offered every 2 years. 3 credits.

CM 360 Television Production II
LASC—Creative Arts
Prerequisites: CM 259 or CM 260
The student will gain experience in the areas of electronic videotape editing, technology of television engineering, creative video, remote production and other advanced techniques. Primary emphasis is on the production of programs utilizing advanced techniques.
Offered every year. 3 credits.

CM 363 Visual Media Literacy
Prerequisite: CM 100
An introduction to principles of visual media literacy and their application in media production and perception.
Offered every year. 3 credits.

CM 366 Scriptwriting
Prerequisite: CM 100
Creating scripted material for the electronic media. All types, styles, and formats will be covered.
Offered every 2 years. 3 credits.

CM 370 Advertising Production
Prerequisite: CM 100, CM 180
Applied skills in advertising including the creation of advertisements in different media, advertising strategies, media schedules and campaign plans.
Offered every 2 years. 3 credits.

CM/CS 374 Advanced Multimedia
Prerequisite: CM/CS 247 or equivalent
Project-based approach using computers to design multimedia productions to integrate image, sound, and text. Emphasis on creative conceptualization, interface design, and project management.
Offered every 2 years. 3 credits.

CM 384 Media Criticism
LASC—Human Behavior and Social Processes; Thought, Language and Culture; Diversity Across the Curriculum; Writing Across the Curriculum
Prerequisite: CM 100
Evaluation and analysis of film, television, theatre, and radio performances, development of intelligent, ethical standards of judgment.
Offered every year. 3 credits.
CM/WO 390 Alternative Communication  
Prerequisite: CM103  
This course introduces students to the theory and practice of alternative communication and its relationship with culture and politics.  
Offered every 3 years. 3 credits.

CM 396 Video Editing  
LASC—Creative Arts  
Prerequisite: CM 259 or CM 260  
The principles and procedures of editing one-half-inch and three-quarter-inch videotape using manual and electronic techniques and equipment. Students will produce short, edited programs.  
Offered every 2 years. 3 credits.

CM 400 Public Relations Research  
LASC—Human Behavior and Social Processes  
Prerequisite: CM 240  
Study of public relations research concepts, and application for planning, communication and evaluation.  
Offered every 2 years. 3 credits.

CM 404 Independent Study in Media  
Prerequisite: CM 100  
Permits advanced students to investigate topic of special interest through research or production of a project. Periodic consultations with advisor.  
Offered every 2 years. 1-6 credits.

CM 405 Mass Communication Research  
LASC—Human Behavior and Social Processes; Writing Across the Curriculum  
Survey of methods and applications of research in media fields, including advertising, public relations, journalism, new media and political communication.  
Offered every year. 3 credits.

CM 410 Seminar: Topics in Communication  
This course engages students in advanced examination of emerging communication topics and of topics in a faculty's area of expertise.  
Offered every 2 years. 3 credits.

CM/EN 416 Media Law and Ethics  
Prerequisite: EN 272  
An overview of the U. S. legal and justice systems and an examination of ethical issues in mass media.  
Offered every 2 years. 3 credits.

CM 435 Media Internship  
Prerequisite: Two relevant communications courses and consent of department provides opportunity to advanced students to increase experience through internship with sponsoring community organization, institution, or business under appropriate supervision.  
Offered every year. 3-12 credits.
The Bachelor of Science degree in Criminal Justice is a 120 credit-hour program. It is an interdisciplinary major, predicated on a common core of the humanities, social sciences, mathematics, and physical sciences. The goal of the program is to develop in students an increased analytical awareness of the role of law enforcement agencies, courts, and correctional institutions in the criminal justice system. The curriculum includes course work to provide students with awareness of recent advances in human dynamics, civil rights legislation and information technology.

The course of study consists of an extensive overview of the criminal justice system and an intensive examination of each of the major components of the system. The program is designed to serve students who may elect to enter the criminal justice profession immediately upon graduation, students of the liberal arts without professional interest in criminal justice, and students who desire to pursue graduate work. Criminal Justice majors are able to apply for an internship in a criminal justice agency during their senior year.

To request an application form, please call the Admissions Office at 508-929-8040.
Requirements for a Major in Criminal Justice: 39 credits in criminal justice, of which 21 must be completed at Worcester State University.

Major Core: 18 credits

- CJ 101 Introduction to Criminal Justice
- CJ 121 Theories of Crime
- CJ 201 Law Enforcement and Society
- CJ 202 Introduction to Corrections
- CJ 205 American Judicial System
- CJ 331 Research Methods in Criminal Justice

Criminal Justice Electives: 21 credits

Sample Timeline for Completion of Degree: Criminal Justice

**YEAR ONE**

**Semester One**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tr>
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<tr>
<td>EN 101</td>
<td>English Composition I</td>
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<tr>
<td>CJ 101</td>
<td>Introduction to Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>MA</td>
<td>MA 099 or higher based on Accuplacer score</td>
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</tr>
<tr>
<td>LASC</td>
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**Semester Subtotal**: 15

**Semester Two**

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<tr>
<td>EN 102</td>
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<tr>
<td>LASC</td>
<td>Thought, Language and Culture (TLC)</td>
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<tr>
<td>CJ 121</td>
<td>Theories of Crime</td>
<td>3</td>
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<td>CJ 201</td>
<td>Law Enforcement and Society</td>
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<tr>
<td>LASC</td>
<td>Quantitative Reasoning (QR)</td>
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**Semester Subtotal**: 15

**YEAR TWO**

**Semester Three**

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<tr>
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<td>Introduction to Corrections</td>
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<tr>
<td>CJ 205</td>
<td>American Judicial System</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Global Perspective (GP)</td>
<td>3</td>
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<td>LASC</td>
<td>Human Behavior and Social Processes (HBS)</td>
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<tr>
<td>LASC</td>
<td>The United States and Its Role in the World (USW)</td>
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**Semester Subtotal**: 15
## Semester Four

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<tr>
<td>CJ</td>
<td>Elective Course in Major</td>
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<td>LASC</td>
<td>Natural Systems and Processes (NSP)</td>
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<td>LASC</td>
<td>Creative Arts (CA)</td>
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<td>LASC</td>
<td>Individual and Community Well-Being (ICW)</td>
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Semester Subtotal: 16

## YEAR THREE

### Semester Five

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<tr>
<td>CJ</td>
<td>Elective Course in Major</td>
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<tr>
<td>LASC</td>
<td>Natural Systems and Processes (NSP)</td>
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Semester Subtotal: 15

### Semester Six

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<td>CJ 331</td>
<td>Criminal Justice Research Methods</td>
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<td>CJ</td>
<td>Elective Course in Major</td>
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Semester Subtotal: 15

## YEAR FOUR

### Semester Seven

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<td>CJ</td>
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<tr>
<td>SELECT</td>
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Semester Subtotal: 15
Criminal Justice Courses

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

CJ 101 Introduction to Criminal Justice
A survey of the American Criminal Justice System as a socio-political institution. The police, criminal courts, and correctional and rehabilitative endeavors will be analyzed within the framework of empirical research from the perspectives of the social sciences. Required of all first-year students in the Criminal Justice major.
Offered every year. 3 Credits.

CJ 121 Theories of Crime
Prerequisite: CJ 101
An exploration of prominent theories of crime causation, ranging from biological, psychological, sociological, and cultural explanations. Theories are compared and contrasted and implications are discussed as foundations for criminal justice system policy.
3 Credits.

CJ 193 Special Topics in Criminal Justice for First-Year Students
All "193" courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval.
Introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar.
Offered every year. 3 credits.

CJ 201 Law Enforcement and Society
Prerequisites: CJ 101 or its equivalent
The structure and function of law enforcement agencies in contemporary society will be analyzed in their sociological context. Particular emphasis will be placed on the role of the police within the framework of the Criminal Justice System.
Offered every year. 3 Credits.

CJ 202 Introduction to Corrections
Prerequisite: CJ 101 or its equivalent.
An in-depth examination of the American Correctional System. Traditional punitive measures will be analyzed in relation to current reintegration alternatives.
Offered every year. 3 credits.

CJ 205 American Judicial System
Prerequisite: CJ 101 or its equivalent.
An examination of the development of law and the American legal system, including the problems related to the meaning and uses of law; the organizational hierarchy of the courts; and the role of the courts in the criminal justice system.
Offered every year. 3 credits.
CJ 215 Art Crimes
LASC – Thought, Language and Culture; Human Behavior and Social Processes
This course explores a variety of criminal offenses involving the production, consumption, distribution, and display of art, including graffiti/street art, forgery, theft, vandalism, rights infringement, and indecent and politically subversive art. The course examines these offenses from an interdisciplinary perspective, including law, criminology, aesthetics, economics, and cultural studies. Art crimes are examined from the international level to the local one. (This course does not count as a Criminal Justice elective for Criminal Justice majors)
3 credits.

CJ 301 Juvenile Procedure
Prerequisites: CJ 101, CJ 201, CJ 202, CJ 205, or their equivalent.
An examination of the underlying philosophy of juvenile justice and procedures used to process a juvenile alleged to be delinquent through the juvenile justice system. The course will focus on the differences between juvenile procedure and adult criminal procedure by examining recent court decisions and statutory law pertaining to juveniles.
3 credits.

CJ 302 Criminal Law
Prerequisite: CJ 101, CJ 201, CJ 202, CJ 205, or their equivalent.
The function of criminal law and its relationship to various criminal offenses, including crimes against persons and crimes against property.
3 credits.

CJ 303 Patterns of Criminality
Prerequisites: CJ 101, CJ 201, CJ 202, CJ 205, or their equivalent.
The U. S. Department of Justice Index Crimes will be studied along with other crimes; which will be selected on the basis of their contemporary administrative significance and their effect on the criminal justice system in particular.
3 credits.

CJ 304 Prevention and Control
Prerequisites: CJ 101, CJ 201, CJ 202, CJ 205, or their equivalent.
An in-depth examination of the criminal justice system and the efforts it has exerted in an attempt to prevent and control criminal behavior. Course will focus on the traditional methods including probation and parole as well as recent trends in crime control and prevention: the utilization of community based treatment programs and attempts by many criminal justice agencies to avoid the processing of individuals through the system.
3 credits.

CJ 305 Principles of Evidence and Proof
Prerequisites: CJ 101, CJ 201, CJ 202, CJ 205, or their equivalent.
The study of the different types of evidence, relevance, the hearsay rule and its exceptions, impeachment and cross-examination and privileged communications.
3 credits.

CJ 306 Contemporary Problems in Corrections
Prerequisites: CJ 101, CJ 201, CJ 202, CJ 205, or their equivalent.
An intensive analysis of selected problems in institutional and community corrections.
3 credits.

CJ 307 Contemporary Problems in Law Enforcement
Prerequisites: CJ 101, CJ 201, CJ 202, CJ 205, or their equivalent.
An intensive analysis of selected problems in American law enforcement and police-community relations. A major research paper is required.
3 credits.

CJ 308 Rights of the Convicted
Prerequisites: CJ 101, CJ 201, CJ 202, CJ 205, or their equivalent.
An examination of the legal rights of the individual who has been convicted of a crime. This lecture course will focus specifically on both federal and state laws and court decisions dealing with the legal rights of probationers, confined prisoners, and parolees in the American criminal justice system.
3 credits.

CJ 309 Principles of Criminal Investigation
Prerequisites: CJ 101, CJ 201, CJ 202, CJ 205, or their equivalent.
The science of investigation of crimes, laboratory techniques, interpretation of data, and elements of specific crimes.
3 credits.
CJ 310 Organized and White Collar Crime
Prerequisites: CJ 101, CJ 201, CJ 202, CJ 205, or their equivalent.
The methods through which organized crime influences and, in many instances, controls entire communities. Traditional types of crime heavily influenced by organized crime, such as loan sharking and gambling, will be analyzed in an effort to demonstrate the basis of power and wealth of organized crime in the United States. 3 credits.

CJ 311 Victimology
Prerequisites: CJ 101, CJ 201, CJ 202, CJ 205, or their equivalent.
Criminal-victim relationships, with emphasis on victim-precipitated crimes and compensation to the victims. Consideration is given to: concept and significance of victimology; time, space, sex, age, and occupational factors in criminal-victim relationships; victims of murder, rape, other violent crimes and property crimes; victim typology; the public as victim; restitution and compensation to victims. 3 credits.

CJ 312 Women and the Law
Prerequisites: CJ 101, CJ 201, CJ 202, CJ 205, or their equivalent.
An examination of the female and her involvement with the legal processes in the United States. Attention will be focused on the female as the offender and as the victim. Analysis of the various theoretical approaches to understanding the female offender will be presented in addition to an exploration of the recent literature on the female and the criminal justice system. 3 credits.

CJ 313 Quantitative Methods in Criminal Justice
Prerequisites: CJ 331 or its equivalent.
Examines the relationship and application of statistical techniques to theory building and concept construction. Gives an overview of statistical methods and their appropriateness for research in criminal justice. In addition, various computer-oriented analytical tools and data processing systems available to the criminal justice practitioner will be surveyed. 3 credits.

CJ 314 Seminar on Offender Rehabilitation
Prerequisites: CJ 101, CJ 201, CJ 202, CJ 205, or their equivalent.
The “nothing works” doctrine generated by the controversial Martinson Report has resulted in considerable confusion regarding the effectiveness of corrections programs designed to elicit specific behavioral changes on the part of the correctional client. This course will thoroughly examine the debate surrounding the “nothing works” doctrine and present those methods of rehabilitation that have proven effective in the treatment of offenders. Probation, parole and programs for the incarcerated offender will be the primary focus of this course. 3 credits.

CJ 315 Stress and the Criminal Justice System
Prerequisites: CJ 101, CJ 201, CJ 202, CJ 205, or their equivalent.
An intensive examination of the interpersonal stresses indigenous to Criminal Justice practitioners. Stress management within Criminal Justice organizations will be considered in terms of the administrative and functional problems encountered. Special attention will be given to the criminal justice environment which deals with social service and control on a twenty-four hour basis. 3 credits.

CJ 316 Civil Liabilities of Criminal Justice Professionals
Prerequisites: CJ 101, CJ 201, CJ 202, CJ 205, or their equivalent.
The civil liability for harm inflicted on another. Topics to be considered will include: intentional torts such as assault, battery, and false imprisonment; negligence; torts of strict liability; libel, slander and defamation; liability of owners and occupiers of land; and the liability of state and federal employees for harm caused in their respective professional capacities. 3 credits.

CJ 317 Evolution of American Law Enforcement
Prerequisites: CJ 101, CJ 201, CJ 202, CJ 205, or their equivalent.
A critical analysis of the contemporary American law enforcement establishment in relation to the evolutionary forces that have contributed to its development. Excepting modern technology, the law enforcement function tends to run in predictable cycles. Traditional in origin, these cyclical phenomena may be observed in the patterns of older societies. Reflections of the past are deemed vital to a more objective and well-rounded perception of current issues. 3 credits.
Criminal Justice

CJ 319 Economic Crime
Prerequisites: CJ 101, CJ 201, CJ 202, CJ 205, or their equivalent.
The manner in which professionals in business are able to manipulate and control computer systems and engage in various types of white collar crime will be examined. Emphasis will be placed on consumer and computer fraud, embezzlement, and particular attention will be focused on corporate crime and on the criminal justice system's attempts to identify, prevent, and control it. 3 credits.

CJ 320 Criminal Procedure: Fourth Amendment Rights of the Accused
Prerequisites: CJ 205, or its equivalent; or permission of the instructor.
A study of due process, the exclusionary rule, and the legal problems associated with arrests, searches, and seizures. 3 credits.

CJ 321 Criminal Procedure: Fifth and Sixth Amendment
Prerequisite: CJ 205, or its equivalent; or permission of the instructor.
A study of the legal problems associated with interrogations, confessions, entrapment, lineups and wiretapping and electronic surveillance. 3 credits.

CJ 322 Youth Gangs
Prerequisite: Junior standing
This course will offer an in-depth study of youth gangs in the United States. Topics to be examined include various theories of gang formation, group dynamics, and individual factors associated with gang membership. Attention will also be given to the different types of gangs that exist. Given these dynamics, the final portion of the course will focus on prevention and intervention efforts aimed at reducing gang behavior. 3 Credits.

CJ 323 Religion and Crime in Contemporary America
This course will serve as an introduction to issues related to religion and the criminal justice system. Topics will include the religious origins of the legal and correctional systems, religion and contemporary law, religion in prison and corrections, hate crimes and terrorism. 3 Credits.

CJ 324 Restorative Community Justice
Prerequisite: Junior standing
Restorative Community Justice is based on a new vision of criminal justice that stresses offender reintegration through offender accountability. Rather than simply a legal violation, crime is viewed as a breach in the relationship between the offender and the victim, and also the offender and the community. To the greatest degree possible, resolution should rest in the hands of those most directly involved, with the state mediating the conflict. This course will explore the philosophy of restorative justice, and current practices of victim-offender mediation, where the offender is required to directly confront the person(s) harmed, and the victim is given a real voice. It will examine how offenses can be resolved in ways that are positive and constructive for victims, communities, and also for offenders. The student will develop an understanding of the basic tenets of restorative justice, and also knowledge of how this concept is being applied in criminal justice practices in the U.S. and internationally. 3 Credits.

CJ 325 Capital Punishment
This course focuses on capital punishment law, particularly United States Supreme Court decisions addressing constitutional issues relevant to the death penalty. Students will also explore empirical, penological, political, and moral issues related to the death penalty and its administration. 3 Credits.

CJ 326 Planned Change in Criminal Justice
Prerequisite: Junior standing
This course is designed to acquaint students with general theories of planned change at the individual, organizational, and community levels. Special attention will be given to the need for employee involvement and collaboration in working toward organizational goals, with reference to concepts such as reinventing government and total quality management. The emphasis will be on applied theory. Students will be expected to develop their own ideas for change in the fields of policing, courts, or corrections. They would then be required to consider the resistances that would likely arise as their changes are introduced, and how they should best be dealt with, considering planned change theories from the course. 3 Credits.
CJ 327 Race, Ethnicity, and Criminal Justice
Prerequisites: CJ 205
An examination of the issues of race and ethnicity which continue to affect all aspects of criminal justice in America. Whether as offenders, victims, or as persons working (or seeking to work) within the system, African Americans, Hispanics, and other minorities are treated differently than non-minorities. This course explores the core concepts of race and ethnicity as they have developed in our culture, and examines the evidence for and against various forms of racism and discrimination in key institutions of the criminal justice system. The nature and status of constitutional, statutory, and other remedies are also explored.
3 Credits.

CJ 328 Computer Application in Crime Analysis
This course is designed to examine developments in information systems and their applications in the crime analysis environment. Particular attention will be given to management and analysis of crime-related data as well as an assessment of current and future applications in crime analysis. Previous computer experience is not required.
3 Credits.

CJ 329 Crime and the Media
The course will deal with issues related to the mass media and crime in society. The increasing importance of the mass media in shaping peoples perception of and attitudes toward the criminal justice system will be focused on. Other topics will include the media as a cause and cure for crime, biases in the media coverage, the effects of the media on criminal proceedings and crime on television and films.
3 Credits.

CJ 330 Criminal Justice Administration
Prerequisites: CJ 101, CJ 201, CJ 202, CJ 205, or their equivalent.
An examination of organizational theory and its applications within criminal justice agencies. Consideration of the principles of organization and methods adopted by progressive agencies to insure effective criminal justice service to the community will be reviewed.
3 credits.

CJ 331 Research Methods in Criminal Justice
Prerequisites: CJ 101, CJ 201, CJ 202, CJ 205, or their equivalent.
An introduction to scientific methodology as related to criminal justice. The course will focus on the development of hypotheses, data collection, data analysis and hypothesis verification. Attention is also given to basic statistical techniques appropriate for criminal justice research.
Offered every year. 3 credits.

CJ 332 Homicide
Prerequisites: CJ 101, CJ 201, CJ 202, CJ 205, or their equivalent.
An in-depth discussion of the legal definitions of and rationalizations for homicide. The statistical aggregates of those occasions will be considered in terms of demographic and ethno-cultural phenomena. The murder episode is examined within the context of morality.
3 credits.

CJ 333 Terrorism
Prerequisites: CJ 101, CJ 201, CJ 202.
This course will explore the development of terrorism as a form of crime. Topics to be studied include major terrorist groups and their strategies, tactics and targets, jurisdictional issues, anti-and counter-terrorist operations, federal law enforcement, and future trends in terrorism.
3 credits.

CJ 334 Drugs and Crime
Prerequisites: CJ 101, CJ 201, CJ 202.
This course will present an overview of the problems of drug-related crime in contemporary society. Specific drug substances are discussed, as well as legal, cultural, and social factors in connection with drug law enforcement.
3 credits.

CJ 335 Comparative Criminal Justice Systems
Prerequisites: CJ 205
Increasingly, practitioners in the American criminal justice systems are required to interact with their counterparts, as well as citizens from other national jurisdictions. Effective interaction, including cooperation and sharing, requires some understanding of how criminal justice is conceived and practiced in other parts of the world. This course examines and compares key institutions of the criminal justice systems in six model countries, two in Europe, two in Asia, one Islamic nation, and one from Latin America. We look not only at formal organizations in each country, but also at actual practices.
and how they compare with each other and the United States. To understand how differences and similarities have developed, we also learn something of the history, culture, political system and economic conditions of each model country.  

3 Credits.

CJ 336 Supervisory Practices in Law Enforcement  
Prerequisite: Junior standing.
An examination of supervisory practices and principles utilized in public safety agencies; problems confronting the newly promoted employee; theories of organization and leadership; motivation of subordinates; effective communication; training; performance evaluation; disciplinary processes.  
3 credits.

CJ 337 Criminal Justice Ethics  
This course investigates the application of moral logic to problems in the field of Criminal Justice. Issues related to policing, criminal prosecution, and corrections will be studied. Students will be encouraged to induce general moral precepts and rules from the examination of particular situations and problems.  
3 Credits.

CJ 338 Issues in Contemporary Security  
Prerequisite: Junior standing  
An overview of security systems applicable to contemporary industrial and commercial demands. Losses through physical, technological, and personnel hazards are viewed as preventable phenomena if vulnerabilities are recognized and ameliorative measures taken. Counter-measures will be weighed within the framework of loss criticality and cost of effectiveness.  
3 Credits.

CJ 339 Probation, Parole, and Community Corrections  
This course will present an overview of correctional options in the community. It will challenge students to consider how sanctions for criminal offenders can be managed in the community without unduly sacrificing community safety or the integrity of the justice system. Community Corrections is a fluid and continually changing field. The focus will be on main themes and trends in probation and parole. Specific attention will be given to the dual an often conflicting goals of community protection and positive offender change with which the practitioner is typically confronted, the types of policies and programs implemented to meet these goals, and their effectiveness.  
3 Credits.

CJ 340 - 349 Special Topics in Criminal Justice  
An in-depth study of a limited or specialized area within the criminal justice field. Course content will vary according to the area of specialization of the instructor and the interest of the students. May be repeated if course content differs.  
3 credits.

CJ 344 Adult Offenders: Case Studies  
Prerequisite: Junior standing.  
A critical, theoretical examination of certain types of adult offenders, especially those who are socially disadvantaged. This examination will be based largely upon the analysis of qualitative research studies that have been done with adult offenders. Special attention is given to the case study method and to understanding adult offenders as individuals making choices within the constraints of larger political, economic, social and ideological structures.  
3 credits.

CJ 345 Juvenile Offenders: Case Studies  
Prerequisite: Junior standing.  
A critical, theoretical examination of various types of juvenile offenders. This examination will be based largely upon the analysis of qualitative research studies that have been done with juveniles. Special attention is given to the case study method and to understanding juvenile offenders as individuals embedded within and influenced by numerous social structures (e.g., gender, race, family, school and economics).  
3 credits.

CJ 398 Field Practicum in Criminal Justice  
Prerequisite: Permission of the instructor.  
The field practicum class involves the student's participation in the day-to-day functions of a publicly funded criminal justice agency. The course is designed to provide students with an opportunity to translate the theoretically oriented classroom experience into practical application.  
3-6 credits.

CJ 399 Independent Study  
Prerequisite: Permission of the instructor.  
Individual research and independent study related to particular aspect of criminal justice that is of special interest.  
3-6 credits.
Faculty
Wei Pang Lee, Professor (1992)
B.A., Soochow University, Taipei, Taiwan; M.B.A., Northwest Missouri State University; Ph.D., University of Georgia, Athens
William F. O’Brien, Jr., Professor (1997)
B.S., Worcester State College; M.A., Ph.D., Northeastern University
Bonnie Orcutt, Professor (2003)
B.S., Worcester State College; M.A., Ph.D., Clark University
Elizabeth J. Wark, Professor (2007)
B.A., Mount Holyoke College; M.B.A., University of Massachusetts; M.A., Ph.D., Clark University
Janice G. Yee, Professor (2007)
B.A., University of Massachusetts, Dartmouth; M.A., Ph.D., Clark University

The economics program is designed to help students understand the world they live in, analyze important social issues, and adapt to a changing economic climate.

The BS in Economics will provide each student with knowledge of current economic thought and will develop students’ understanding of the role played by economic institutions in society. Having completed a thorough program integrating economic theory and practice, students will be prepared to effectively participate in society as informed citizens to promote social well-being. Students will be prepared to succeed in a wide array of positions in business, government, and nonprofit organizations and will be able to successfully pursue graduate work in economics and related fields, predominately at the Masters level. Qualified majors will have an opportunity for honors and advanced coursework, intensive faculty interactions, national and regional competitions and activities, and economic research.

Graduates with a BS in Economics will be able to:

- Demonstrate the ability to present orally and in writing a coherent, logical economic argument grounded in economic theory.
- Read and assess articles on economic topics.
- Articulate orally and in writing the core economic principles, concepts and theories that form the foundation for economic analysis and economic research.
- Investigate economic issues by synthesizing, building, and using theories/models to predict the behavior of economic agents.
• Evaluate economic issues and real world problems through data analysis and the application of appropriate statistical techniques, quantitative and/or qualitative methods.

The Minor in Economics provides students with an excellent background for work in business fields such as banking, insurance, finance and accounting. Combining an Economics Minor with a B.S. degree in Business Administration helps to give students an edge in the marketplace. The Minor in Economics is equally appropriate for work in the private section, in the not-for-profit section and in the public sector at the federal, state, or local level. The minor may also help to prepare students for careers in teaching, journalism, and law, as well as for admission to graduate programs in public policy, law, business, international relations, journalism and related fields.

Omicron Delta Epsilon, the international honor society in economics, is available to outstanding students.

Requirements for a Major in Economics: 33 credits with EC designation
EC 110  Introduction to Microeconomics
EC 120  Introduction to Macroeconomics
EC 150  Statistics (or another acceptable statistics course)
EC 200  Intermediate Macroeconomics
EC 201  Intermediate Microeconomics

One of the following:
EC 202  Introduction to Mathematical Economics
EC 306  Introduction to Econometrics
(or a course in which calculus is a primary topic)

The remaining 15 (or more) credits may be chosen from economics electives in accordance with special interests and career objectives.

Students are encouraged to take an internship if their program permits.

Requirements for a Minor: 18 credits
EC 110  Introduction to Microeconomics
EC 120  Introduction to Macroeconomics
PLUS Any four additional Economics courses

BA courses that will count towards the major or minor in Economics:
Students pursuing a major or minor in Economics may elect to use ONE of the following BA courses to count towards their electives in the EC major/minor that may also count within the electives of the BA minor. (Note: There are 15 credits of electives in the EC major, 12 credits of electives in the EC minor, and 12 credits of electives in the BA minor.)

BA 316  Financial Management
BA 404  Corporate Finance
BA 415  Investment Analysis
BA 416  Financial Markets and Institutions

EC courses that will count towards the major in Economics and the minor in Business Administration:
Students pursuing a major in Economics and a minor in Business Administration may use ONE of the following EC courses to count both within the 12 credits of elective courses for the BA minor AND within the 15 credits of electives for the EC major.

EC 205  Money, Banking and Monetary Policy
EC 301  Economic Development
EC 307   International Finance
EC 308   International Trade

EC courses that will count towards the major in Business Administration and a minor in Economics:
Students pursuing a major in Business Administration and a minor in Economics may use TWO of the following EC courses to count in both within the 12 credits of elective courses for the BA major AND within the 12 credits of electives for the EC Minor:

EC 205   Money, Banking and Monetary Policy
EC 301   Economic Development
EC 307   International Finance
EC 308   International Trade

EC courses that will count towards the major in Business Administration:
Students pursuing a major in Business Administration may use TWO of the following EC courses to count within the 12 credits of electives for the General Business concentration.

EC 205   Money, Banking and Monetary Policy
EC 301   Economic Development
EC 307   International Finance
EC 308   International Trade

EC courses that will count towards meeting the requirements of the International Business concentration:

EC 301   Economic Development
EC 307   International Finance
EC 308   International Trade

EC courses that will count towards meeting the requirements of the Finance Concentration:

EC 205   Money, Banking and Monetary Policy
EC 307   International Finance.

BA courses and EC courses that will count towards meeting the requirements of a double major in Business Administration and in Economics:
Students pursuing a double major in Business Administration and Economics may use: TWO of the following EC courses to count within the 12 credits of elective (concentration) courses for the BA major, and ONE of the following BA courses to count within the 15 credits of elective courses for the EC major.

EC 205 Money, Banking and Monetary Policy   BA 316 Financial Management
EC 301 Economic Development                 BA 404 Corporate Finance
EC 307 International Finance                BA 415 Investment Analysis
EC 308 International Trade                 BA 416 Financial Markets and Institutions
### Sample Timeline for Completion of Degree:
**Economics (for All Students Entering in Fall 2012 or Later)**

#### YEAR ONE

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tr>
<td></td>
<td>LASC</td>
<td>First-Year Seminar</td>
<td>3</td>
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<tr>
<td></td>
<td>EN 101</td>
<td>English Composition I (WR)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>EC 120</td>
<td>Introduction to Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>EC 150</td>
<td>Statistics (or acceptable statistics course)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>LASC</td>
<td>Thought, Language and Culture (TLC)</td>
<td>3</td>
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**Semester Subtotal 15**

<table>
<thead>
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<th>Semester Two</th>
<th>Course No.</th>
<th>Course Name</th>
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<tbody>
<tr>
<td></td>
<td>EN 102</td>
<td>English Composition II (WR)</td>
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<tr>
<td></td>
<td>LASC</td>
<td>Constitutions (CON)</td>
<td>3</td>
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<tr>
<td></td>
<td>EC 110</td>
<td>Introduction to Microeconomics</td>
<td>3</td>
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<tr>
<td></td>
<td>LASC</td>
<td>Quantitative Reasoning (QR)</td>
<td>3</td>
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<tr>
<td></td>
<td>LASC</td>
<td>The United States and Its Role in the World (USW)</td>
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**Semester Subtotal 15**

#### YEAR TWO

<table>
<thead>
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<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td></td>
<td>EC</td>
<td>Economics Elective (#1)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>LASC</td>
<td>Creative Arts (CA)</td>
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<td></td>
<td>LASC</td>
<td>Natural Systems and Processes (NSP)</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>LASC</td>
<td>Human Behavior and Social Processes (HBS)</td>
<td>3</td>
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</table>

**Semester Subtotal 16**

<table>
<thead>
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<th>Semester Four</th>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tr>
<td></td>
<td>EC</td>
<td>Either EC 202 or 306</td>
<td>3</td>
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<tr>
<td></td>
<td>EC</td>
<td>Economics Elective (#2)</td>
<td>3</td>
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<tr>
<td></td>
<td>LASC</td>
<td>Natural Systems and Processes (NSP)</td>
<td>3-4</td>
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<td></td>
<td>LASC</td>
<td>Global Perspectives (GP)</td>
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<td></td>
<td>LASC</td>
<td>QR Course</td>
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**Semester Subtotal 15-16**
### YEAR THREE

#### Semester Five

<table>
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<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>EC 201</td>
<td>Intermediate Microeconomics</td>
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<tr>
<td>EC</td>
<td>Economic Elective (#3)</td>
<td>3</td>
</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
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<tr>
<td>SELECT</td>
<td>General Elective</td>
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<tr>
<td>LASC</td>
<td>Individual and Community Well-Being (ICW)</td>
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**Semester Subtotal**: 15

#### Semester Six

<table>
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<th>Course No.</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>EC 200</td>
<td>Intermediate Macroeconomics</td>
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</tr>
<tr>
<td>EC</td>
<td>Economic Elective (#4)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Choose One: DAC or WAC or QRAC</td>
<td>3</td>
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<tr>
<td>SELECT</td>
<td>General Elective</td>
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<tr>
<td>SELECT</td>
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**Semester Subtotal**: 15

**Comments**: Students need 1 DAC, 1 WAC and 1 QRAC

### YEAR FOUR

#### Semester Seven

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>LASC/EC</td>
<td>Capstone course or Elective #5</td>
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</tr>
<tr>
<td>LASC</td>
<td>See Comment Below</td>
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</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
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</tbody>
</table>

**Semester Subtotal**: 15

**Comments**: Students need 1 DAC, 1 WAC and 1 QRAC

#### Semester Eight

<table>
<thead>
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<th>Course Name</th>
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</thead>
<tbody>
<tr>
<td>EC</td>
<td>Capstone course or Elective #5</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>See Comment Below</td>
<td>3</td>
</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Subtotal**: 15

**Comments**: Students need 1 DAC, 1 WAC and 1 QRAC
Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.

**Economics Courses**

*For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.*

**EC 102 Consumer Economics**

*LASC—Individual and Community Well-Being*

An in-depth study of personal and family economics, obtaining income, buying wisely, consumer borrowing, saving, and financial investment; the consumer protection and consumer legislation movements will be specifically emphasized. 

*Offered every 2 years. 3 credits.*

**EC 104 Personal Financial Planning**

*LASC—Individual and Community Well-Being*

An investigation of the major vehicles for our personal savings: bonds, stocks, mutual funds, real estate, and retirement and estate planning.

*Offered every year. 3 credits.*

**EC 110 Introduction to Microeconomics**

*LASC—Human Behavior and Social Processes*

An introduction to the operation of the American market system and to the behavior of its participants whether consumers, producers, the government, or other nations engaged in international trade with the United States.

*Offered every year. 3 credits.*

**EC 120 Introduction to Macroeconomics**

*LASC—Human Behavior and Social Processes*

Introduction to economic analysis with particular emphasis upon the national problems of achieving and maintaining full employment, general price stability, and growth of the American economy through time.

*Offered every year. 3 credits.*

**EC 130 Selected Topics**

Selection of topics of mutual interest to student and faculty. Timely topics and issues will be covered.

*Offered every 2 years. 1-3 credits.*

**EC 150 Statistics**

*LASC—Quantitative Reasoning*

Prerequisites: EC 110 or EC 120, and Accuplacer code of 4

Basic tools of statistical analysis appropriate to research in the social sciences; topics include measures of central tendency, hypothesis testing, time series, index numbers, regression and correlation.

*Offered every year. 3 credits.*

**EC 193 Special Topics in Economics for First-Year Students**

All "193" courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval.

Introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar.

*Offered every year. 3 credits.*

**EC 200 Intermediate Macroeconomics**

Prerequisites: EC 110, EC 120 and minimum sophomore status

An intermediate analysis of the determination of the level and growth of national income and employment, special attention given to the problems of inflation and recession and to the national fiscal and monetary policies designed to maintain full employment and stable price levels.

*Offered every year. 3 credits.*

**EC 201 Intermediate Microeconomics**

Prerequisite: EC 110, EC 120 and minimum sophomore status

An intermediate level treatment of the theory of market pricing in a private enterprise system as it affects the resource and output decision of firms and industries under various market structures and the behavior of consumers.

*Offered every year. 3 credits.*
EC 202 Introduction to Mathematical Economics  
Prerequisites: EC 110, EC 120; MA 110 with a grade of C- or above or an Accuplacer code of 6
A survey of some basic mathematical techniques appropriate to the analysis of economic models and application of economic theory. 
Offered every year. 3 credits.

EC 205 Money, Banking, and Monetary Policy  
Prerequisites: EC 110, EC 120
A study of the roles of money, depository institutions, and central bank monetary policy in maintaining stable growth of the American economy. 
Offered every year. 3 credits.

EC 206 Urban Economics  
Prerequisites: EC 110, EC 120
The theory and policy of the growth and development of metropolitan areas; some of the policy-related problems discussed are poverty, residential and commercial land use, and traffic congestion. 
Offered every 3 years. 3 credits.

EC 208 Economics of Health Care  
LASC—Individual and Community Well-Being; Writing Across the Curriculum  
Prerequisites: EC 110, EN 102
Introductory study of the health care industry of the United States; pricing of health care, manpower availability, alternative delivery systems, third party payments, and government role in planning, regulating, and financing health care. 
Offered every year. 3 credits.

EC 210 Current Economic Issues  
Prerequisites: EC 110, EC 120
This course is designed to connect economic knowledge and theory acquired at the introductory level to current economic issues and policy. National and international topics of importance will be considered. For example, pollution, trends in productivity, profitability and distribution, debt and deficits, patterns of investment, trade, and globalization and the economic issues of race, gender and poverty may be covered. 
Offered every year. 3 credits.

EC 215 Labor Economics  
Prerequisites: EC 110, EC 120
A study of the process of wage determination in a market economy, consideration given to the evolution of union organization and collective bargaining affecting wages, hours, working conditions, and grievance procedures for labor. 
Offered every 2 years. 3 credits.

EC 301 Economic Development  
Prerequisites: EC 110, EC 120
A survey of contemporary economic theories concerning less developed countries; social, cultural, and political forces shaping the development of such countries are also investigated. 
Offered every 3 years. 3 credits.

EC 302 Development Planning and Regional Economics  
Prerequisites: EC 110, EC 120
A survey of the problems that must be dealt with by less-developed countries in planning their economic development. Theories of regional economics applicable to both developed and less developed economies. 
Offered every 3 years. 3 credits.

EC 304 Economics of the Environment  
Prerequisites: EC 110, EC 120
Methods of pollution control and the socio-economic problems caused by pollution, current research on ecology and economics, and the impact that limits on pollution may have on income and population growth. 
Offered every 2 years. 3 credits.

EC 306 Introduction to Econometrics  
Prerequisites: EC 110, EC 120, MA 150 or EC 150
The application of statistical techniques to the verification of economic models and examination of economic problems. 
Offered every 2 years. 3 credits.
Economics

EC 307 International Finance
Prerequisites: EC 110, EC 120
Study of how international trade and investment is financed in a world of floating, fixed and managed exchange rate systems. 
Offered every 2 years. 3 credits.

EC 308 International Trade
LASC—Global Perspectives
Prerequisites: EC 110, EC 120
Reasons why nations gain by spatial specialization and exchange with other countries. Analysis of the mechanism by which international equilibrium is restored. Study of trade and foreign exchange policies.
Offered every 2 years. 3 credits.

EC 309 Public Spending and Taxation
Prerequisites: EC 110, EC 120
Analysis of government spending, revenue sharing and taxation; includes the impact of government spending upon efficient use of resources and national growth.
Offered every 2 years. 3 credits.

EC 310 Public Choice
Prerequisites: EC 110, EC 120
The economic analysis of government decision-making. Voting systems, special interest groups, log rolling, rent seeking, bureaucracy and multidimensional versus single issue constituencies.
Offered every 3 years. 3 credits.

EC 312 Natural Resource Economics
Prerequisites: EC 110, EC 120
The use of renewable and non-renewable natural resources in a market economy and the role of government policy concerning them.
Offered every 3 years. 3 credits

EC 400 Independent Study in Economics
Prerequisites: EC 200, EC 201 OR permission of Instructor
For the student whose needs cannot be fully met by available offerings; actual arrangements to be made between student and professor; not intended for general enrollment; a limit of three credits can be acquired.
Offered every year. 1-3 credits.

EC 401 Seminar
Prerequisites: EC 200, EC 201 OR permission of Instructor
A research and discussion process intended to summarize and provide some career orientation to the undergraduate preparation of the economics major at the senior class level.
Offered every 2 years. 3 credits.

EC 402 Internship in Economics
Prerequisites: EC 200, EC 201 OR permission of Instructor
Practical experience in economic analysis with industry, non-profit organizations, government agencies; internships may be of varying length.
Offered every year. 1-12 credits.

EC 403 Special Topics in Economics
Prerequisites: EC 200, EC 201 OR permission of Instructor
Covers selected topics in economics of mutual interest to the student and faculty.
Offered every 2 years. 1-3 credits.
The principal objectives of the English program are to help students to communicate clearly, logically and effectively; to use research methods intelligently; to analyze, interpret and enjoy literature; and to develop a perspective on the world that is informed by intensive study of literature and its critical methods. The program also seeks to
familiarize students with the classics of world literature, emphasizing the major authors, works and literary movements which distinguish English and American literature. At the same time, the program seeks to introduce students to "alternative voices" in literature, voices that are new to the literary canon or that occupy a literary space outside of it. The intellectual growth of majors is carefully nurtured to ensure that they are prepared for diverse career paths, scholarly research, and success in graduate school. Moreover, reflecting the institution's historical mission, the English program provides guidance and support for future teachers of English.

**Requirements for a Major:** 36 credits in English (exclusive of EN 101 and EN 102) which must include the following:

- EN 210  Survey of American Literature I or
- EN 211  Survey of American Literature II
- EN 220  Survey of English Literature I
- EN 221  Survey of English Literature II
- EN 255  Methods of Literary Studies
- EN 360  Shakespeare I

Electives: 21 credits in English (including a minimum of 12 credits in 300 or 400 level literature courses).

Students declaring English as a major must demonstrate a competency in a foreign language at the intermediate level.

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### Sample Timetable for Completion of Degree: English

**YEAR ONE**

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>LASC</td>
<td>First-Year Seminar</td>
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<td>3</td>
</tr>
<tr>
<td>EN 101</td>
<td>English Composition I</td>
<td></td>
<td>3</td>
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<tr>
<td>WL (LASC)</td>
<td>Beginning Language I (TLC*)</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Quantitative Reasoning (QR)</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>The United States and Its Role in the World (USW)</td>
<td></td>
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**Semester Subtotal** 15

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<tbody>
<tr>
<td>EN 102</td>
<td>English Composition II</td>
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<tr>
<td>LASC</td>
<td>Constitutions</td>
<td></td>
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<td>WL (LASC)</td>
<td>Beginning Language II</td>
<td></td>
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<tr>
<td>EN 255</td>
<td>Methods of Literary Studies</td>
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<tr>
<td>LASC</td>
<td>Natural Systems and Processes (NSP)</td>
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**Semester Subtotal** 15
# YEAR TWO

## Semester Three

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<tr>
<td>EN 220</td>
<td>English Literature Survey I</td>
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<tr>
<td>WL</td>
<td>Intermediate Language I</td>
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<tr>
<td>LASC</td>
<td>Natural Systems and Process (NSP)</td>
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<tr>
<td>LASC</td>
<td>Human Behavior and Social Processes (HBS)</td>
<td>3</td>
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<tr>
<td>LASC</td>
<td>Creative Arts (CA)</td>
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Semester Subtotal: 16

## Semester Four

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<th>Course No.</th>
<th>Course Name</th>
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</thead>
<tbody>
<tr>
<td>EN 221</td>
<td>English Literature Survey II</td>
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<td>WL</td>
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<tr>
<td>EN</td>
<td>Major Elective</td>
<td>3</td>
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</tr>
<tr>
<td>LASC</td>
<td>Global Perspectives (GP)</td>
<td>3</td>
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Semester Subtotal: 15

# YEAR THREE

## Semester Five

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<th>Course No.</th>
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<tr>
<td>EN 210 or 211</td>
<td>American Literature Survey I or II</td>
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<tr>
<td>EN</td>
<td>Major Elective (300/400)</td>
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<td>Individual and Community Well-Being (ICW)</td>
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Semester Subtotal: 15

## Semester Six

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<td>Shakespeare I</td>
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Semester Subtotal: 15

Comments

English
## YEAR FOUR

### Semester Seven

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**Semester Subtotal: 15**

### Semester Eight

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</table>

**Semester Subtotal: 15**

### Comments

Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.

### Requirements for a Major in English, Concentration in Writing

15 credits in writing courses (exclusive of EN 101 and EN 102) in addition to the 15 credits in Shakespeare (EN 360); surveys (EN 210 or EN 211; EN 220 and EN 221), and EN 255 required of all majors. The remaining 6 credits must be literature electives at the 300-level or above. The 15 credits in writing will be selected from the following:

- EN 250  Creative Thinking and Critical Writing
- EN 251  Advanced Expository Writing
- EN 252  Technical Writing
- EN 253  Business Communications
- EN 256  Creative Writing: Fiction
- EN 258  Creative Writing: Nonfiction
- EN 260  Creative Writing: Poetry I
- EN 262  Creative Writing: Poetry II
- EN 266  Journalism: Practice and Techniques
- EN 267  Journalism: Advanced Newswriting
- EN 268  Journalism: Feature Writing
- EN 269  Journalism: Interpretive Reporting
- EN 270  Journalism: Editing
- EN 271  Journalism: Workshop
EN 272 News Reporting and Writing I
EN 275 Sportswriting
EN 281 Web Authoring and Publication
EN 351 News Reporting and Writing II
EN 352 Practicum in Journalism
EN 353 Narrative Journalism
EN 354 Opinion Writing
EN 411 Theory and Teaching of Writing
EN 415 Technology and the Teaching of Writing
CM 366 Scriptwriting
A 3-6 credit internship in writing, whether in English (EN410 or EN 475) or other languages (FR 475 or SP 475)

Requirements for a Major in English, Concentration in Journalism: In addition to taking the required courses for the English major and two 300- or 400-level literature electives, students choosing the journalism concentration must take five journalism courses comprised of three required courses and two electives.

The required journalism courses are the following:

EN 107 Journalism and Democracy
EN 272 News Reporting and Writing I
EN 416 Media Law and Ethics

The elective journalism courses are the following:

EN 268 Feature Writing
EN 270 Editing
EN 275 Sportswriting
EN 351 News Reporting and Writing II
EN 352 Practicum in Journalism
EN 353 Narrative Journalism
EN 354 Opinion Writing
EN 475 Internship in English (under supervision of faculty member who teaches journalism)

Prerequisites: EN 102 English Composition II (or equivalent LASC course), EN 107 Journalism and Democracy, and EN 272 News Reporting and Writing I are prerequisites for every journalism course except EN 270 Editing, which has only EN 102 English Composition II (or equivalent LASC course) as a prerequisite.

Women’s Studies: English majors may elect an interdisciplinary concentration in women’s studies. They must complete the requirements for the standard English major. They must have 15 credits in women’s studies courses, with the English courses among them counting toward the major. For more information, see the Women’s Studies section of this catalog.

Requirements for a Minor: 18 credits in English (exclusive of EN 101 and EN 102) which must include the following:

EN 210 Survey of American Literature I or
EN 211 Survey of American Literature II
EN 220 Survey of English Literature I
EN 221 Survey of English Literature II
English electives: 9 credits
The Writing Center

Worcester State University's Writing Center is located in Sullivan 306. Staffed by graduate assistants and peer tutors, the Writing Center's offerings include individual writing tutorials for undergraduate and graduate students; reference material and workshops to help candidates prepare for the Massachusetts Teacher Test; writing across the curriculum resource material for Worcester State University faculty; and online tutorials for a wide range of technology-based subjects.

The Writing Center is fully connected to the campus network and the World Wide Web. The Worcester State University OWL (Online Writing Lab), the Writing Center's online community, hosts a varied collection of reference materials useful for both the academic and business writer. In addition, faculty, students, and members of the greater Worcester community submit their work online and receive feedback and support within 72 hours.

Sessions with Writing Center staff can be arranged on an appointment, drop-in, or online basis, and all services are offered at no charge. For more information, visit the OWL at the following web address: www.worcester.edu/owl.

English Honor Society:

Lambda Iota Tau, an international honor society in literature, is available to outstanding junior and senior English majors and minors.

English Courses (Undergraduate)

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

EN 101 English Composition I
LASC—Writing I
Students learn to address audience and purpose as they develop an effective writing process. Instruction and practice in the process of composing expository essays. Emphasis on planning, drafting, revising and editing. [Required of all students unless exempted by the English Department.]
Offered every year. 3 credits.

EN 102 English Composition II
LASC—Writing II
Focuses on formal academic discourse and research methods, providing a foundation for writing in academic disciplines. A continuation of EN 101. Emphasis on critical thinking, stylistic analysis, argumentation, research and documentation. [Required of all students unless exempted by the English Department.]
Offered every year. 3 credits.

EN 105 Introduction to Literature
LASC—Thought, Language and Culture
A critical introduction to the principal genres of literature: poetry, drama, and fiction.
Offered every year. 3 credits.

EN/CM/GL 107 Journalism and Democracy
This course introduces students to the history of American journalism and the role of journalism in democratic and non-democratic societies.
Offered every year. 3 credits.

EN 130 Ancient Classics of Western Literature
LASC—Thought, Language and Culture
Greek and Roman literary masterpieces in translation, including Homer, Greek tragedy, Plato, Virgil and Roman comedy and satire.
Offered every 2 years. 3 credits.
EN 131 Great Works of Western Literature, Medieval to Modern
Continental masterpieces of the last millennium in translation by such writers as Dante, Cervantes, Voltaire, Dostoevsky, Baudelaire, and Kafka.
Offered every 2 years. 3 credits.

EN 132 World Literature: Survey of Asian, African and Latin American Literature
LASC—Global Perspectives; Thought, Language and Culture; Diversity Across the Curriculum
Representative poems, stories, plays, both ancient and modern, from Asia, Africa, and Latin America.
Offered every year. 3 credits.

EN 140 Introduction to Poetry
LASC—Thought, Language and Culture
Examination and appreciation of the techniques and types of poetry including the sonnet, the pastoral, the mock heroic, and the ode.
Offered every year. 3 credits.

EN 145 Introduction to Drama
LASC—Thought, Language and Culture
Theories and development of tragedy and comedy; plays of Sophocles to Eugene O'Neill as illustrations of these and related genres.
Offered every year. 3 credits.

EN 150 The Short Story
LASC—Thought, Language and Culture
Introduction to the art of the short story through analysis of representative works.
Offered every year. 3 credits.

EN 152 The Novelette
LASC—Thought, Language and Culture
The major practitioners of the novelette over the past century: Conrad, Mann, Kafka, Dostoyevsky, and others.
Offered every 3 years. 3 credits.

EN 156 Mythology
LASC—Thought, Language and Culture
Myths and legends of ancient Greece and Rome which form a part of the classical tradition in English literature.
Offered every year. 3 credits.

EN 158 Science Fiction
LASC—Thought, Language and Culture
The nature and function of nineteenth- and twentieth-century science fiction literature: Wells, Verne, Asimov, Bradbury, and others.
Offered every 2 years. 3 credits.

EN 160 The Literature of the Bible
LASC—Thought, Language and Culture
Biblical writings. Emphasis will be placed on the Old Testament.
Offered every 2 years. 3 credits.

EN 164 Fantasy, Faerie and Folk
LASC—Thought, Language and Culture
Recurrent themes, literary characteristics, and structure of folktales, faerie and fantasy.
Offered every 2 years. 3 credits.

EN 165 Oral Literature: The Art of Storytelling
LASC—Creative Arts; Thought, Language and Culture
An examination of representative types and stories from diverse cultures and of techniques and practices used by their storytellers.
Offered every 2 years. 3 credits.
EN 167 Literature and Human Rights
LASC—Global Perspectives; Diversity Across the Curriculum
An analysis of international creative writing dealing with the subject of human rights. Resource persons from different fields will be utilized.
Offered every 3 years. 3 credits.

EN 168 Film and Literature
An examination of the fundamental, rhetorical techniques of film and literature to determine the similarities of and differences between the two forms of expression.
Offered every 2 years. 3 credits.

EN 169 Ethnic Literature in the U.S.
LASC—Thought, Language and Culture; United States and Its Role in the World; Diversity Across the Curriculum
Offered every year. 3 credits.

EN 170 The Search for Identity: Literature of Self-Discovery
LASC—Thought, Language and Culture; Diversity Across the Curriculum
Understanding the nature and power of fiction, the relation between problems of individual identity, and the operation of the imagination.
Offered every 3 years. 3 credits.

EN 172 Women and Literature
Explores basic issues and problems in literature by and about women.
Offered every 2 years. 3 credits.

EN 174 Women Poets
LASC—Thought, Language and Culture
A close reading and analysis of poetry written by women from a historical as well as a contemporary feminist perspective.
Offered every 3 years. 3 credits.

EN 190 Special Readings in Literature
An introductory literature course responsive to current interests or controversies.
Offered every year. 3 credits.

EN 193 Special Topics in English for First-Year Students
All "193" courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval.
An introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar.
Offered every year. 3 credits.

EN 210 Survey of American Literature I
Prerequisite: EN 102
American literature, beginnings to the Civil War; colonial and federal periods, and the transcendentalists.
Offered every year. 3 credits.

EN 211 Survey of American Literature II
Prerequisite: EN 102
American literature since the Civil War; naturalism and realism.
Offered every year. 3 credits.

EN 220 Survey of English Literature I
Prerequisite: EN 102
The development of English literature from the beginnings to 1798. Required of all English majors.
Offered every year. 3 credits.

EN 221 Survey of English Literature II
Prerequisite: EN 102
The development of English literature from 1798 to the present. Required of all English majors.
Offered every year. 3 credits.
EN 230 Environmental Themes in Literature
This class explores environmental issues as presented in poetry, essays and novels, including such writers as Thoreau, Hemingway and Ann Tyler.
Offered every 3 years. 3 credits.

EN 240 Survey of Postcolonial and Transcultural Literature
LASC—Global Perspectives
Prerequisite: EN 102
Introduction to literatures in English from formerly colonized countries in Africa, Asia, and the Caribbean, and from the postcolonial diaspora.
Offered every year. 3 credits.

EN 250 Creative Thinking and Critical Writing
LASC—Thought, Language and Culture; Writing Across the Curriculum
Prerequisite: EN 102
This course promotes critical and creative thinking through exploring viewpoints of different professions, cultures and eras in various textual forms.
Offered every year. 3 credits.

EN 251 Advanced Expository Writing
Prerequisite: EN 102
Instruction and practice in writing expository essays. Analysis of selected readings on a common theme or subject area.
Offered every 3 years. 3 credits.

EN 252 Technical Writing
LASC—Writing Across the Curriculum
Prerequisite: EN 102
Focuses on how to write and produce basic documents, from research and progress reports to brochures and manuals.
Offered every year. 3 credits.

EN 253 Business Communications
Prerequisite: EN 102
A consideration of accepted business communication conventions; correspondence, memoranda, survey reports, proposals, interim reports, and project reports. [Open to Business Administration majors only.]
Offered every year. 3 credits.

EN 255 Methods of Literary Studies
LASC—Thought, Language and Culture
Prerequisite: EN 102
Introduction to critical methods of interpreting literature through examination of works by major authors.
Offered every year. 3 credits.

EN 256 Creative Writing: Fiction
LASC—Creative Arts
Prerequisite: EN 102
An opportunity to develop the student’s writing ability and critical sense; work of students and professional authors will be analyzed.
Offered every year. 3 credits.

EN 258 Creative Writing: Nonfiction
LASC—Creative Arts
Prerequisite: EN 102
A course focused on memoir and narrative journalism; students analyze and create short works of nonfiction.
Offered every 2 years. 3 credits.

EN 260 Creative Writing: Poetry I
LASC—Creative Arts; Thought, Language and Culture
Prerequisite: EN 102
Developing the student’s skill in the creation of poetry; attention to contemporary trends in American poetry.
Offered every year. 3 credits.
EN 262 Creative Writing: Poetry II
LASC—Creative Arts
Prerequisite: EN 102
Conversation with practicing poets; preparation of a small booklet of poems. EN 260 is not required as a prerequisite. Offered every year. 3 credits.

EN 266 Journalism: Practice and Techniques
Prerequisite: EN 102
Training in developing, reporting, writing, and editing straight news, feature, profile, and interpretive stories. Offered every year. 3 credits.

EN 267 Journalism: Advanced Newswriting
Prerequisite: EN 102
Provides advanced training in the development and writing of straight news stories. Offered every 3 years. 3 credits.

EN 268 Journalism: Feature Writing
Prerequisite: EN 102
Provides advanced training in finding, researching, developing, and writing feature stories for newspapers and magazines. Offered every 3 years. 3 credits.

EN 269 Journalism: Interpretive Reporting
Prerequisite: EN 102
Provides advanced training in developing and writing profiles and interpretive stories. Offered every 3 years. 3 credits.

EN 270 Journalism: Editing
Prerequisite: EN 102
Training in copy selection, copy editing, story placement, headline writing, layout, and use of style books. Offered every 3 years. 3 credits.

EN 271 Journalism Workshop
Prerequisite: EN 102
Provides lab sessions in all aspects of journalism for advanced writers; emphasis on publication. Offered every 3 years. 3 credits.

EN 272 News Reporting and Writing I
Prerequisites: EN 102 & EN 107
Includes fundamentals of news judgment, events coverage, sourcing, interviewing, writing on deadline, fact checking and basic editing. Offered every year. 3 credits.

EN 275 Sportswriting
Prerequisite: EN 102
Introduces students to the journalistic art of sportswriting, reporting, and interviewing for various media. Offered every year. 3 credits.

EN 281 Web Authoring and Publication
An introduction to web authoring and publication, with special emphasis on the conventions of digital discourse. Offered every 2 years. 3 credits.

EN 300 History of the English Language
LASC—Thought, Language and Culture
Prerequisite: EN 102
A study of the origins of the English language from Old English through Middle English to the present. Offered every year. 3 credits.

EN 302 Medieval Literature
The course examines genres in medieval literature, such as drama, poetry, debate, prose and riddles. Offered every 3 years. 3 credits.
EN 303 Arthurian Literature  
*LASC—Thought, Language and Culture*  
This course traces the development of the Arthurian legends from their Celtic origins up through the modern period.  
*Offered every 3 years. 3 credits.*

EN 304 Witchcraft in Medieval and Renaissance Literature  
*LASC—Thought, Language and Culture*  
*Prerequisite: EN 102*  
This course explores how Medieval and Renaissance literature on witchcraft addressed contemporary concerns.  
*Offered every 3 years. 3 credits.*

EN 306 The Renaissance  
*LASC—Thought, Language and Culture*  
*Prerequisite: EN 102*  
The non-dramatic literature of Tudor England; emphasis on More, Wyatt, Sidney, Spenser, the earlier works of Shakespeare, Donne, and Bacon.  
*Offered every 3 years. 3 credits.*

EN 308 Seventeenth-Century Literature  
*Prerequisite: EN 102*  
Prose and poetry of the era with special attention to the major works of Jonson and Donne.  
*Offered every 3 years. 3 credits.*

EN 310 Eighteenth-Century Literature  
*Prerequisite: EN 102*  
The major figures of the Enlightenment with particular emphasis on satire: Dryden, Pope, Swift, Johnson, and Boswell.  
*Offered every 3 years. 3 credits.*

EN 311 Young Adult Literature  
*Prerequisite: EN 102 or EN 250*  
Theoretical and critical approaches to classic and contemporary texts written for young adults aged pre-teen to late teen.  
*Offered every 3 years. 3 credits.*

EN 312 The English Novel of the Eighteenth Century  
*Prerequisite: EN 102*  
Purpose, range, and developments in the novel of the eighteenth century: Defoe, Richardson, Fielding, Smollett, Sterne, and others.  
*Offered every 3 years. 3 credits.*

EN 314 The English Novel of the Nineteenth Century  
*Prerequisite: EN 102*  
Representative nineteenth-century novelists: Austen, Bronte, Dickens, Thackeray, Eliot, Hardy, Conrad, and others.  
*Offered every 3 years. 3 credits.*

EN 316 The Modern British Novel  
*Prerequisite: EN 102*  
Selected works of major British novelists from 1900 through World War II: Joyce, Lawrence, Woolf, Forster, and others.  
*Offered every 3 years. 3 credits.*

EN 318 Romantic Literature  
*Prerequisite: EN 102*  
Poetry and prose with special emphasis on the poetry of Blake, Wordsworth, Coleridge, Shelley, Byron, and Keats.  
*Offered every 3 years. 3 credits.*

EN 320 Victorian Literature  
*LASC—Thought, Language and Culture; Writing Across the Curriculum*  
*Prerequisite: EN 102*  
Study of selected prose and poetry of the major writers of the Victorian period.  
*Offered every 3 years. 3 credits.*
EN 321 Romantic and Victorian Gothic  
LASC—Thought, Language and Culture  
Prerequisite: EN 102  
This genre gives students insight into the important writers, texts, and issues of the Romantic and Victorian eras.  
Offered every 3 years. 3 credits.

EN 324 Continental Novelists I  
Prerequisite: EN 102  
European novelists of the nineteenth and twentieth centuries including Dostoyevsky, Mann, Camus, and others.  
Offered every 3 years. 3 credits.

EN 330 Modern Drama  
Prerequisite: EN 102  
The theories and development of realism, naturalism, expressionism, folk drama; representative plays from Ibsen to O'Neill.  
Offered every 3 years. 3 credits.

EN 332 Contemporary Drama  
Prerequisite: EN 102  
The dramatic works and aesthetics of Beckett, Pinter, and other selected dramatists of the contemporary theatre.  
Offered every 3 years. 3 credits.

EN 334 Modern Poetry  
Prerequisite: EN 102  
Close analysis of the development of British and American poetry from the late nineteenth century to World War II.  
Offered every 3 years. 3 credits.

EN 336 Contemporary Poetry  
Prerequisite: EN 102  
Concentrates on poets whose major work was written after World War II; special attention to authors presently writing and publishing.  
Offered every 3 years. 3 credits.

EN 338 Contemporary Novel  
Prerequisite: EN 102  
American and English novels after World War II, with emphasis on living novelists.  
Offered every 3 years. 3 credits.

EN 340 Twentieth-Century Literature  
Prerequisite: EN 102  
A survey of the major trends in twentieth-century poetry, drama, and fiction.  
Offered every 3 years. 3 credits.

EN 342 The American Novel I  
Prerequisite: EN 102  
The American novel from its origin to 1890; Brown, Cooper, Melville, Hawthorne, and others.  
Offered every 2 years. 3 credits.

EN 344 The American Novel II  
Prerequisite: EN 102  
The American novelists from 1890 to World War II: Crane, Wolfe, Dreiser, Anderson, Hemingway, Steinbeck, and others.  
Offered every 2 years. 3 credits.

EN 345 Women in American Literature  
Prerequisite: EN 102  
The American woman as she is portrayed in fiction, non-fiction, and poetry.  
Offered every 3 years. 3 credits.

EN 346 History of Literary Criticism  
Prerequisite: EN 102  
An historical introduction to speculation concerning the nature and function of literature: selections from Plato to Frye.  
Offered every 3 years. 3 credits.
EN 347 Studies in U.S. Ethnic Literature
LASC—U.S. and the World
Prerequisite: EN 102
Selected topics in U.S. ethnic literature, including thematic and comparative approaches, and in-depth studies of a single ethnic literature.
Offered every 3 years. 3 credits.

EN 348 Postcolonial Women's Writing
LASC—Global Perspectives
Prerequisite: EN 102
Writing by women from colonized and formerly colonized countries on local and global issues shaping women's lives and creative expression.
Offered every 3 years. 3 credits.

EN 350 Chaucer
Prerequisite: EN 102
A study of the development of Chaucer's versatile art and writings as expressive of the later Middle Ages.
Offered every 3 years. 3 credits.

EN 351 News Reporting and Writing II
Prerequisite: EN 272
Focuses on using documentary evidence in reporting. Students select a reporting specialty area such as sports, business or higher education.
Offered every 2 years. 3 credits.

EN 352 Practicum in Journalism
Prerequisite: EN 270 & EN 272
Workshop in which students report, write, and edit the online college news magazine. Participate in all aspects of publication.
Offered every semester. 3 credits.

EN 353 Narrative Journalism
Prerequisite: EN 272
Students analyze and create in-depth journalistic features and nonfiction stories that blend reporting with techniques of fictional storytelling.
Offered every 2 years. 3 credits.

EN 354 Opinion Writing
Prerequisite: EN 272
Students analyze and practice writing op-eds and other opinion pieces. Learn to write commentary that is publication ready.
Offered every 2 years. 3 credits.

EN 360 Shakespeare I
Prerequisite: EN 102
Major plays. Required of all English majors.
Offered every year. 3 credits.

EN 362 Shakespeare II
Prerequisite: EN 102
A continuation of EN 360; includes the sonnets and less familiar plays.
Offered every 2 years. 3 credits.

EN 364 Elizabethan and Jacobean Drama
Prerequisite: EN 102
Study of Shakespeare's contemporaries in the drama, among them Kyd, Marlowe, Jonson, Webster, Middleton, and Ford.
Offered every 3 years. 3 credits.
EN 380 Milton
Prerequisite: EN 102
A study of Milton’s work from early poems to Paradise Lost, Paradise Regained, and Samson Agonistes; includes some prose pamphlets.
Offered every 3 years. 3 credits.

EN 390 The Irish Literary Revival
Prerequisite: EN 102
The Irish literary renaissance; the origins of the movement; includes Joyce, Yeats, Synge, O’Casey, Lady Gregory, and others.
Offered every 3 years. 3 credits.

EN 400 Seminar
Prerequisite: EN 102
Student presentations on individual figures and particular problems in literature.
Offered every year. 3 credits.

EN 410 Writing Practicum
Prerequisite: EN 102
Training and practice in one-to-one assistance for students’ writing for any course, stage, or specific need.
Offered every year. 3-6 credits.

EN 411 Theory and Teaching of Writing
Study of current writing theory and classroom applications at the middle school, secondary and college levels.
Offered every 2 years. 3 credits.

EN 415 Technology and the Teaching of Writing
Prerequisite: EN 102 and Permission of Instructor
An introduction to the use of computer and internet technologies in the teaching of writing.
Offered every 3 years. 3 credits.

EN 416 Media Law and Ethics
Prerequisite: EN 272
An overview of the U. S. legal and justice systems and an examination of ethical issues in mass media.
Offered every 2 years. 3 credits.

EN 425 Independent Study in English
Prerequisite: EN 102, Consent of instructor
An opportunity for further study in a special field of interest under faculty supervision.
Offered every year. 1-6 credits.

EN 450 Special Topics in English
Prerequisite: EN 102
Specific content will vary in response to particular student and faculty interests.
Offered every year. 3 credits.

EN 475 Internship in English
Prerequisite: EN 102, Consent of instructor
Provides majors the opportunity to gain practical experience in areas where they may apply acquired critical and writing skills.
Offered every year. 3-6 credits.
French
Department of World Languages

Faculty

Judith Jeon-Chapman, Professor (1993)
B.A., College of St. Benedict; M.A., Ph.D., University of Washington

Dennis Quinn, Professor (1996), Acting Department Chair
B.A., Worcester State College; M.A., Assumption College;
Ph.D., University of Massachusetts

Courses in French are designed for students whose interests and career plans have an international or multi-ethnic focus. Students who minor in French will develop listening, speaking, reading, and writing fluency and will study the culture, history and literature of the people who use the language.

Alpha Mu Gamma, a national honor society in foreign languages, recognizes excellence in the study of foreign languages. Any Worcester State University student who receives two “A’s” in French at any level at Worcester State University and a 3.0 cumulative G.P.A. is eligible to join. Application for membership is in early February. Contact Professor Judith Jeon-Chapman.

Requirements for a Minor in French: 18 credits in French including:

- FR 100-299, beginning and intermediate courses (12 credits maximum)
- FR 300-499, advanced courses (6 credits minimum)

(Students with advanced knowledge of French should begin at 300-level)

Placement for French Courses: Students are encouraged to discuss placement with French Faculty or the World Languages Department Chair. The following are intended to be general placement guidelines to help students with previous experience with French:

- 0-2 years of French in high school: FR 101 Beginning French I
- 1-2 years of French in high school: FR 102 Beginning French II
- 3 years of French in high school: FR 210 Intermediate French I
- 4 years of French in high school: FR 211 Intermediate French II
- 5 or more years of French in high school: 300-level & 400-level courses
- Native Speakers of French: 300-level & 400-level courses

Students may also take a placement exam in French at the Academic Success Center. It is recommended that the results of the test be discussed with the French Faculty or the World Languages Department Chair, especially if the test places the student below the level recommended above.
French Courses

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

FR 101 Beginning French I
LASC—Thought, Language and Culture
Fundamentals of pronunciation, patterns of speech, basic structures. Develops listening, speaking, reading and writing skills.
Offered every year. 3 credits.

FR 102 Beginning French II
LASC—Thought, Language and Culture
Prerequisite FR 101 or equivalent.
Offered every year. 3 credits.

FR 191 Special Topics in French
An introductory level course in French on current or specialized topics.
Offered every year. 3 credits.

FR 193 Special Topics in French for First-Year Students
All "193" courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval.
An introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar.
Offered every year. 3 credits.

FR 210 Intermediate French I
LASC—Thought, Language and Culture
Prerequisite: FR 102 or equivalent
Review of fundamentals and presentation of more complex grammatical features; development of conversational skills; selected readings, written and oral composition.
Offered every year. 3 credits.

FR 211 Intermediate French II
LASC—Thought, Language and Culture
Prerequisite: FR 210 or equivalent
Continuation of FR 210.
Offered every year. 3 credits.

FR 321 Advanced French Composition I
LASC—Thought, Language and Culture; Writing Across the Curriculum
Prerequisite: Two FR 200 level courses or equivalent
Practice in diverse composition styles as well as review of grammar, and introduction to reading French texts. Conducted in French.
Offered every 3 years. 3 credits.

FR 322 Advanced French Grammar
Prerequisite: Two FR 200 level courses or equivalent
Offered every 3 years. 3 credits.

FR 323 Advanced French Conversation
LASC—Thought, Language and Culture
Prerequisite: Two FR 200 level courses or equivalent
Development of fluency and accuracy, free discussions, prepared oral presentations, practical exercises in oral expression. Conducted in French.
Offered every 3 years. 3 credits.
FR 331 General French Civilization
LASC—Thought, Language and Culture
Prerequisite: Two FR 200 level courses or equivalent
Significant aspects of French history, geography, and cultural achievements to World War I. Conducted in French. Offered every 3 years. 3 credits.

FR 341 Introduction to French Literature
LASC—Thought, Language and Culture
Prerequisite: Two FR 200 level courses or equivalent
Major periods and genres of French literature. Conducted in French. Offered every 3 years. 3 credits.

FR 342 Survey of French Literature I
LASC—Thought, Language and Culture
Prerequisite: Two FR 200 level courses or equivalent
Selections from the epic, drama, lyric poetry, and the major prose writers to major authors of the classical period. Conducted in French. Offered every 2 years. 3 credits.

FR 344 Survey of French Literature II
LASC—Thought, Language and Culture
Prerequisite: Two FR 200 level courses or equivalent
Major authors of the eighteenth and nineteenth centuries. Conducted in French. Offered every 2 years. 3 credits.

FR 346 Twentieth Century French Literature
LASC—Global Perspectives; Thought, Language and Culture
Prerequisite: Two FR 200 level courses or equivalent
Major novelists, dramatists, and poets from the turn of the century to the present. Conducted in French. Offered every 3 years. 3 credits.

FR 401 Seminar in French Studies
Prerequisite: For advanced students
Special topics in French language, literature or civilization. Offered every 3 years. 3 credits.

FR 402 Independent Study in French
Prerequisite: Consent of instructor
Study of a special topic. Both content and eligibility subject to departmental guidelines and approval. Offered every year. 1-6 credits.

FR 403 Teaching Assistantship in French
Prerequisite: FR 321 or instructor’s approval. Suggested for advanced students of French.
Teaching Assistants in French will regularly attend the beginning or intermediate-level courses to which they are assigned to assist the professor. Offered every year. 3 credits.

FR 475 Internship in French
Prerequisite: Consent of instructor and department.
Provides majors practical experience in areas where speaking, reading, and writing skills may be applied. Offered every year. 3 credits.

Note: Courses in other foreign languages such as German, Latin, Russian, Chinese and Hebrew are offered when demand warrants and staffing permits.
Faculty

Joseph P. Baratta, Associate Professor (1999)
B.A., St. John’s College; M.A., M.A.T., Ph.D., Boston University

Erika Briesacher, Assistant Professor (2012)
B.A., Illinois Wesleyan University; M.A., Southern Illinois University; Ph.D., Kent State University

Bruce S. Cohen, Associate Professor (1965)
A.B., M.A., Rutgers University

Martin Fromm, Assistant Professor (2013)
B.A., Brown University; M.A., Stanford University; Ph.D., Columbia University

Aldo V. Garcia Guevara, Associate Professor (2006)
B.A., University of North Carolina-Asheville; M.A., Ph.D., University of Texas-Austin

Michael Gesin, Assistant Professor (2007)
B.A., Worcester State College; M.A., Ph.D., Brandeis University

Charlotte Haller, Associate Professor (2004)
B.A., Brown University; M.A., Ph.D., University of Wisconsin

Tona J. Hangen, Associate Professor (2008)
B.S., Massachusetts Institute of Technology; Ph.D., Brandeis University

Peter Holloran, Associate Professor (1999)
A.B., Suffolk University; M.A., Ph.D., Boston University

Tanya Mears, Assistant Professor (2010)
B.S., Tuskegee University; M.A., Ph.D., University of Massachusetts, Amherst

Frank S. Minasian, Associate Professor of Political Science (1968), Department Chair
A.B., Clark University; M.A.T., Assumption College

Najib E. Saliba, Professor (1971)
A.B., Miami University; M.A., Ph.D., University of Michigan

Robert W. Smith, Assistant Professor (2007)
B.A., Syracuse University; M.A., Ph.D., College of William and Mary

David J. Twiss, Associate Professor (2012)
B.S., M.Ed., Worcester State College; M.A., Assumption College

The purpose of the discipline is to provide students with extensive course offerings to enable them to cope with a complex and ever-shrinking world. The study of history and political science also provides students with a broad background for a wide variety of professional occupational opportunities. Within the History major are concentrations in Public History,
and Foreign Service. The discipline also offers a minor in Pre-Law, a minor in Middle East Studies, and an honors seminar course taken at the American Antiquarian Society. Phi Alpha Theta, the national history honor society, is open to distinguished History majors.

Requirements for a Major in History: 42 credits including:

- HI 103 & HI 104 & HI 105  World Civilization I & II & III
- HI 111 & HI 112  US History I & II

US History electives: 6 credits
European History electives: 6 credits
Area Studies electives: 6 credits
One other elective in history, which can be from the “General” category: 3 credits
Two electives must be at the 300 or 400 level

Course in historical methods, to be taken during sophomore or junior year: 3 credits
HI 411 The Historian’s Craft (Prerequisites: HI 103, 104, 111 and 112) or HI 440 Internship (with departmental approval)
(For majors entering in curriculum year 2010 and later) Senior capstone experience, usually taken during Fall of your senior year: 3 credits
HI 460 Senior Research Seminar in History, or HI 470 Senior Thesis in History. If you are an Education double-major, the senior capstone may be fulfilled by submission of a History Learning Portfolio based on your student teaching experience with departmental approval.

*Students who double major education and history do not need to complete elective requirement.

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### Sample Timetable for Completion of Degree: History

#### YEAR ONE

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tr>
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<tr>
<td></td>
<td>EN 101</td>
<td>English Composition I</td>
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<tr>
<td></td>
<td>HI 111</td>
<td>U.S. History I</td>
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<tr>
<td></td>
<td>MA</td>
<td>Math Foundations Course</td>
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<td></td>
<td>HI 103</td>
<td>World Civilization I</td>
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<td><strong>Semester Subtotal</strong></td>
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<tr>
<td></td>
<td>EN 102</td>
<td>English Composition II</td>
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<td></td>
<td>HI 112</td>
<td>U.S. History II</td>
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<tr>
<td></td>
<td>HI 104</td>
<td>World Civilization II</td>
<td>3</td>
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<td>LASC</td>
<td>Constitutions</td>
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<td></td>
<td>LASC</td>
<td>Quantitative Reasoning (QR)</td>
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## YEAR TWO

### Semester Three

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<tr>
<td>HI 105</td>
<td>World Civilization III</td>
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<tr>
<td>HI</td>
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<tr>
<td>HI</td>
<td>1 of 2 European History Electives</td>
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<td>LASC</td>
<td>Natural Systems and Process (NSP)</td>
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<td>LASC</td>
<td>Global Perspective (GP)</td>
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**Semester Subtotal**: 16

### Semester Four

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<tr>
<td>HI</td>
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<tr>
<td>HI</td>
<td>2 of 2 US History Electives</td>
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<td>LASC</td>
<td>The United States and Its Role in the World (USW)</td>
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<td>Natural Systems and Process (NSP)</td>
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<td>LASC</td>
<td>Thought, Language and Culture (TLC)</td>
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**Semester Subtotal**: 15

### Comments

## YEAR THREE

### Semester Five

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<td>HI</td>
<td>2 of 2 European History Electives</td>
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<tr>
<td>HI</td>
<td>2 of 2 Non US/Non European</td>
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<tr>
<td>HI 411</td>
<td>The Historian's Craft</td>
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<td>LASC</td>
<td>Global Perspectives (GP)</td>
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<td>LASC</td>
<td>Individual and Community Well-Being (ICW)</td>
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**Semester Subtotal**: 15

### Semester Six

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<tr>
<td>HI</td>
<td>Elective in Major</td>
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<tr>
<td>LASC</td>
<td>Human Behavior and Social Processes (HBS)</td>
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<tr>
<td>LASC</td>
<td>Thought, Language and Culture (TLC)</td>
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<td>LASC</td>
<td>Creative Arts (CA)</td>
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**Semester Subtotal**: 15

### Comments
### YEAR FOUR

#### Semester Seven

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<td>LASC</td>
<td>Creative Arts (CA)</td>
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<td>LASC</td>
<td>Human Behavior and Social Processes (HBS)</td>
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**Semester Subtotal** 15

#### Semester Eight

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<tr>
<td>SELECT</td>
<td>General Elective</td>
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</tr>
</tbody>
</table>

**Semester Subtotal** 15

**Comments**

Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.

### Requirements for a Minor in History: 24 credits

- HI 103 & HI 104 & HI 105  World Civilization I and II and III
- HI 111 & HI 112  US History I and II
- HI 411  The Historian's Craft
- History electives: 6 credits

### Requirements for a Minor in Middle East Studies: 18 credits

- HI 261  Middle East History I
- HI 314  Twentieth Century Middle East History
- AB 101  Arabic I
- AB 102  Arabic II
- 6 credits recommended by advisor

### Requirements for a Minor in Pre-Law: 22 credits

- PO 102  Constitutions: US and Massachusetts
- PO 103  Fundamentals of Legal Research
- 2 of these 3 courses:
  - HI/PO 218  US Constitutional History I
  - HI/PO 219  US Constitutional History II
  - HI 241  English Constitutional History
- Seminar in Constitutional History HI 420, 421, 422 or as an
- HI 400 Independent Study
- 9 credits from selected listing or substituted with advisor's permission
History

Requirements for a Major in History, Concentration in Public History: Juniors and seniors have the opportunity for independent study and off-campus internships. Students may receive academic credit for internships in history museums, historic restorations, historic libraries, archives, or in any one of a great variety of agencies in state, county, and local government. Internship/independent study credit may be given for internships in private sector agencies which have a public interest. Public history concentrators will be able to complete the requirements for the history major and the political science minor.

Requirements for a Major in History, Concentration in Foreign Service: Programs are individually planned with the student’s advisor and prepare individuals for careers in the State Department and the intelligence community. In addition to required courses, students will be encouraged to elect courses in the areas of economics, languages, management, geography, and related fields.

History Courses (Undergraduate)

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

HI 103 World Civilization I
LASC—Global Perspectives; Thought, Language and Culture
Surveys economic, social, political, and intellectual development of world civilizations and their inter-relationship from ancient times to 1500
Offered every year. 3 credits.

HI 104 World Civilization II
LASC—Global Perspectives; Thought, Language and Culture
Surveys economic, social, political, and intellectual development of world civilizations and their inter-relationship from 1500 to 1914
Offered every year. 3 credits.

HI 105 World Civilization III
LASC—Global Perspectives; Thought, Language and Culture
Surveys economic, social, political, and intellectual development of world civilizations and their inter-relationship from 1914 to the present.
Offered every year. 3 credits

HI 111 US History I
LASC—Constitutions; United States and Its Role in the World
From colonization through the Civil War era. A study of politics, society, economy, diplomacy, and culture in that period.
Offered every year. 3 credits.

HI 112 US History II
LASC—Constitutions; United States and Its Role in the World
From the Civil War era to the present. Topics include politics, society, economy, and culture in modern America.
Offered every year. 3 credits.

HI 193 Special Topics in History for First-Year Students
All "193" courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval. Introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar.
Offered every year. 3 credits.

HI/PO 201 International Relations I
LASC—Global Perspectives; United States and Its Role in the World; Writing Across the Curriculum
Prerequisite: PO 101 or HI 103 or HI 104
Theory and practice of international security (realism and internationalism) and international political economy (liberalism and protectionism) in their historical context.
Offered every year. 3 credits.
HI/PO 202 International Relations II: Globalization
LASC—Global Perspectives; United States and Its Role in the World; Writing Across the Curriculum
Prerequisite: PO 101 or HI 103 or HI 104
The promise and problems of globalization (spread of free market capitalism and political democracy).
Offered every year. 3 credits.

HI 203 The United States Since 1945
LASC—United States and Its Role in the World; Diversity Across the Curriculum; Writing Across the Curriculum
Explains the history and culture of the United States since 1945.
Offered every other year. 3 credits.

HI 204 History of Science and Technology
LASC—Global Perspectives; Thought, Language and Culture; Writing Across the Curriculum
Progress of science from the Enlightenment, including applied science or technology from the 19th century.
Complements History of Mathematics.
Offered every year. 3 credits.

HI 205 Native America
This survey covers the broad sweep of Native American history and focuses on the encounter between American and European civilizations and how Native culture has adapted through the centuries.
Offered every 2 years. 3 credits.

HI 206 A History of Warfare
An examination of the role of war in conflict resolution, great battles which changed history, and the impact of technology on war.
Offered every 2 years. 3 credits.

HI 207 American West: Myth and Reality
The historic development of the West, its impact on the American character, and a study of how myths become accepted “fact.”
Offered every 2 years. 3 credits.

HI 208 American Immigrant History
Survey of immigration. Topics such as old-world background, impact on US, nativism, cultural pluralism, religion, mobility, family and politics.
Offered every year. 3 credits.

HI/PO 211 History of US Foreign Policy I
LASC—United States and Its Role in the World
Prerequisite: HI 111 or HI 112
Colonial origins to the era of the Spanish American War. The sources and development of US foreign policy in that period.
Offered every year. 3 credits.

HI/PO 212 History of US Foreign Policy II
LASC—United States and Its Role in the World
Prerequisite: HI 111 or HI 112
From 1900 to recent times: US foreign policy traditions and the challenges of great power status.
Offered every year. 3 credits.

HI 213 Colonial Latin America
The people of Latin America from Pre-Columbian societies to the wars for independence, focusing on race, sex and power.
Offered every other year. 3 credits.

HI 214 Modern Latin America
LASC—Thought, Language and Culture; Global Perspectives; Diversity Across the Curriculum
The people of Latin America from independence to the present, focusing on race, sex and power.
Offered every other year. 3 credits.
History

HI 215 History of American Thought
LASC—Thought Language and Culture; United States and Its Role in the World; Diversity Across the Curriculum; Writing Across the Curriculum
Prerequisites: HI 111 or HI 112
Explores the history of ideas in the United States, including major intellectual movements, thinkers, and texts. Cross-listed with Women's Studies.
Offered every 3 years. 3 credits.

HI 216 Economic History of the US
An introduction to United States economic development; particular attention will be paid to industrialization and the labor force.
Offered every year. 3 credits.

HI 217 US Social History
LASC—Thought Language and Culture; United States and Its Role in the World; Diversity Across the Curriculum; Writing Across the Curriculum
Survey of social and cultural history. Topics such as family, religion, education, popular literature, architecture, transportation and reform.
Offered every 2 years. 3 credits.

HI/PO 218 US Constitutional History I
LASC— Constitutions; Human Behavior and Social Processes; United States and Its Role in the World
The development of American constitutional history to 1865.
Offered every 2 years. 3 credits.

HI/PO 219 US Constitutional History II
LASC— Constitutions; Human Behavior and Social Processes; United States and Its Role in the World
The development of the U.S. Constitution since 1865.
Offered every 2 years. 3 credits.

HI 221 African-American History I
The people of African descent from the emergence of the slave trade to the Civil War, focusing on race, gender, and power.
Offered every year. 3 credits.

HI 222 African-American History II
The people of African descent from the end of the Civil War through the twentieth century, focusing on race, gender, and power.
Offered every year. 3 credits.

HI 223 History of France I
Prerequisite: HI 103 and HI 104
Social, cultural, and military developments of France during the Middle Ages and the Capetian, Valois, and Bourbon periods to 1750.
Offered every two years. 3 credits.

HI 224 English History I
LASC—Thought Language and Culture; Writing Across the Curriculum
Prerequisite: HI 103 or HI 104
English history from earliest settlement to the reign of Elizabeth I. Origins of the Common Law, Parliament, and English liberty.
Offered every year. 3 credits.

HI 225 English History II
LASC—Thought, Language and Culture; Writing Across the Curriculum
Prerequisite: HI 224
English history through the English Revolution, the Industrial Revolution, the British Empire, the World Wars, and decline.
Offered every year. 3 credits.

HI 226 Latin American History through Film
This course will explore how filmmakers have portrayed Latin American History in their movies.
Offered every 3 years. 3 credits.
HI 230 Nicaragua, the US and the World
LASC—United States and Its Role in the World; Diversity Across the Curriculum; Thought, Language and Culture
The course will examine the impact of globalization and imperialism on the lives of Nicaraguans at home and in their diasporic communities.
Offered every year. 3 credits.

HI 231 European Intellectual History I
Prerequisite: HI 103 or HI 104
The main theoretical works, philosophic, psychological and scientific, from Plato to the eighteenth century.
Offered every 3 years. 3 credits.

HI 232 European Intellectual History II
Prerequisite: HI 103 or HI 104
The main theoretical works, philosophic, psychological and scientific, of the nineteenth and twentieth centuries.
Offered every 3 years. 3 credits.

HI 234/HI 235 Russian History I and II
A study of major political, economic, social, intellectual, and diplomatic currents in Russia, from the Kievan era to Stalin.
Offered every 2 years. 3 credits each.

HI 236/HI 237 Modern Far East History I and II
Civilizations dramatically different from our own, focusing upon China, Japan, and Southeast Asia since 1600.
Offered every year. 3 credits each.

HI 240 History of American Popular Culture
This course is an introduction and survey of the multidisciplinary field of American Popular Culture, analyzing popular or non-elite culture in the United States from the colonial era to present.
Offered every year. 3 credits.

HI/PO 241 English Constitutional History
LASC—Global Perspectives; Human Behavior and Social Processes
Development of English Constitution from Magna Carta through revolution, supremacy of Parliament, reform acts, entry into European Union, and devolution.
Offered every 2 years. 3 credits.

HI 242 History of Early Modern Europe
Forces that shaped Europe since the Reformation: the political, economic, and intellectual context of the external expansion as well as the internal turmoils, such as the Thirty Years War and the European economy to 1789.
Offered every 3 years. 3 credits.

HI 244 American Urban History
The process of accelerating urbanization in America since the nineteenth century: cultural, social, economic and political aspects of urban life.
Offered every 3 years. 3 credits.

HI 245 History of Modern Germany I
The origins and growth of Brandenburg-Prussia; their impact on the rest of Germany from the foundation of the Holy Roman Empire to the emergence of the Second Reich in 1871.
Offered every 3 years. 3 credits.

HI 246 History of Modern Germany II
German economic and political crises from 1870 to the present.
Offered every 3 years. 3 credits.

HI 247 Central America and the Caribbean
This survey examines the political, cultural and social history of Central America and the Caribbean from pre-Columbian times to the present with an emphasis on the 20th century.
Offered every 3 years. 3 credits.

HI 248 Seminar on Globalization and Human Rights
LASC—USW, GP, DAC
A.I.D. program participants in their sophomore year will explore globalization and human rights and issues of personal growth and academic development.
Offered every three years. 3 credits
HI 249 US Labor History I
The relationship between workers, their employers, and the surrounding community between 1815 and World War II. Offered every 2 years. 3 credits.

HI 257 Political Terrorism in Historical Perspective
A comparative approach to the terrorist movements of the nineteenth and twentieth centuries, concentrating on the European groups. Offered every 2 years. 3 credits.

HI 258 Russia Since the Stalin Era
An analysis of the major political, economic and diplomatic developments in the (former) Soviet Union since the death of Stalin; the formation of the Commonwealth of Independent States. Offered every 2 years. 3 credits.

HI 260 Egypt Since 1798
A discussion of Napoleon's occupation of Egypt, the rise of Muhammad ‘Ali, Suez Canal, British Occupation, Egyptian Nationalism, Nasser’s Revolution. Offered every 3 years. 3 credits.

HI 261 Middle East History I
LASC—Global Perspectives; Thought, Language and Culture
The rise and expansion of Islam: the Caliphate, Muslim religion, civilization, and its impact on the West, decline of medieval Islam. Offered every 2 years. 3 credits.

HI 262 Middle East History II: The Ottoman Empire, 1289-1920
LASC—Global Perspectives; Thought, Language and Culture; Writing Across the Curriculum
The Ottoman Empire: expansion, institutions, impact on Europe, decline of the Empire. Offered every 2 years. 3 credits.

HI 263 US – Middle East Relations
LASC—Global Perspectives; United States and Its Role in the World
Prerequisite: HI 103 or HI 104 or HI 111 or HI 112
Course will discuss the influence the Middle East has had on US policy since US independence to the present. Offered every 2 years. 3 credits.

HI 264 American Constitutional Law
American Constitutional Law; civil liberties, rights of criminal defendants, Federal-state relations, interpreting the Constitutions. Offered every 2 years. 3 credits.

HI 266 US – Latin American Relations
LASC—United States and Its Role in the World; Diversity Across the Curriculum; Writing Across the Curriculum
Will analyze the political, economic, social, and cultural impact of the interactions between and among the governments and people of the US and Latin America. Offered every year. 3 credits.

HI 270 History of Modern Italy
Study of modern Italy from 1789 to the present. Offered every three years. 3 credits.

HI 271 Women and Work in Historical Perspective
Prerequisite: HI 103 or HI 104 or HI 111 or HI 112
This course undertakes to examine women’s work conditions and the opposition to its continuation in Europe and America, 16th–19th centuries. Offered every 2 years. 3 credits.

HI 273 Ideas of Men and Women in Historical Perspective
Prerequisite: HI 103 or HI 104 or HI 111 or HI 112
This survey course focuses on ideas about the sexes which have predominated in the West. Offered every 2 years. 3 credits.
HI 274 Sex, Marriage and the Family in Historical Perspective
LASC—Thought, Language and Culture; Diversity Across the Curriculum
Prerequisite: HI 103 or HI 104 or HI 111 or HI 112
This course will undertake a study of courtship, marriage and family life-cycle patterns in England and America during the 19th century.
Offered every 2 years. 3 credits.

HI 285 History of Baseball
LASC—Thought, Language and Culture; United States and Its Role in the World; Diversity Across the Curriculum
History of baseball from the first bat-and-ball games to the present.
Offered every 3 years. 3 credits.

HI 290 Health and Healing in America
LASC—Individual and Community Well-Being; Thought, Language and Culture; Writing Across the Curriculum
Explores topics in the history of medicine, health, disease, and healing in US history.
Offered every 2 years. 3 credits.

HI 300 The Early National Period of the US: 1783-1829
LASC—United States and Its Role in the World; Thought, Language and Culture
Prerequisite: HI 111
The Confederation, Constitution, the emergence of political parties, and the rise of American nationality.
Offered every 2 years. 3 credits.

HI 302 Medieval History
Prerequisite: HI 103
Cultural, social, and diplomatic European history of the Middle Ages from fall of the Roman Empire until the rise of the Renaissance.
Offered every 3 years. 3 credits.

HI 303 Colonial History I
Prerequisites: HI 111, HI 112
European background and reasons for American colonization, intercolonial rivalries, formation of the 17th century English colonies. British colonial policy to 1689.
Offered every 2 years. 3 credits.

HI 305 Ancient History
Prerequisite: HI 103
The history, culture, and politics of ancient Greece and Rome.
Offered every 2 years. 3 credits.

HI 306 Renaissance and Reformation
Prerequisite: HI 103
Intellectual and cultural history of Europe from the middle of the thirteenth to the middle of the sixteenth century.
Offered every 3 years. 3 credits.

HI 308 Europe in the Age of Revolution and Nationalism: 1789-1870
Prerequisite: HI 103 or HI 104
The French Revolution, Napoleon, Congress of Vienna; nationalism, liberalism, socialism; Second French Empire; German and Italian unification.
Offered every 2 years. 3 credits.

HI 310 Massachusetts History
Prerequisites: HI 111 or HI 112
A survey of Massachusetts history from its colonial origins to the present era, including the social, economic, political, constitutional development of state history and culture.
Offered every year. 3 credits.

HI 312 Twentieth Century Europe I
Prerequisites: HI 103 or HI 104
The politics and economics of WW I; the pattern of restlessness between the wars in the rise of dictatorship in Germany, Italy, and Spain; the regimentation of economic control.
Offered every 2 years. 3 credits.
HI 313 Twentieth Century Europe II
Prerequisites: HI 103 or HI 104
Politics and diplomacy of World War II; the dynamics of the rebirth of Europe since VE Day. The effects of total war upon Europe.
Offered every 2 years. 3 credits.

HI 314 Twentieth Century Middle East History
LASC—Global Perspectives; Thought, Language and Culture; Diversity Across the Curriculum
Prerequisite: HI 103 or HI 104 or HI 105 or HI 111 or HI 112 or HI 261
The Young Turk Revolution, division of Ottoman Empire in World War I; rise of new states; the Arab-Israeli conflict.
Offered every 2 years. 3 credits.

HI 316 American-Russian Relations 1781 - Present
Prerequisite: HI 104 or HI 105 or HI 111 or HI 112
An analysis of American-Russian relations from their inception to the present, stressing the period since 1917.
Offered every 2 years. 3 credits.

HI 317 The US and East Asia
Prerequisite: HI 104 or HI 105 or HI 111 or HI 112
An examination of the American role in East Asia, focusing upon American-Chinese relations, American-Japanese relations, and the Indo-China conflict.
Offered every 3 years. 3 credits.

HI/PO 320 Citizen Nation
LASC—Constitutions; Thought, Language and Culture; United States and Its Role in the World; Diversity Across the Curriculum; Writing Across the Curriculum
Prerequisites: HI 111 or HI 112
Explores the history and meaning of citizenship in the United States, including discrimination, rights struggles and changing citizenship criteria.
Offered every 3 years. 3 credits.

HI/PO 323 Empire
Prerequisite: HI 103 and HI 104
Theories and models of colonization, the reaction of colonized peoples, and the way historians analyze imperialism from 1400 to 1920's.
Offered every three years. 3 credits.

HI/PO 330 Politics of the Middle East I
Prerequisite: HI 104 or HI 105 or HI 111 or HI 112 or PO 101 or HI 261 or HI 314
Discusses governments and politics of eastern Arab countries, Turkey, Iran, and Israel. International rivalries in the area are also discussed.
Offered every year. 3 credits.

HI 333 Women in Latin America
Prerequisite: HI 233 or equivalent
Examines the roles of women in diverse societies including Mexico, Brazil and Caribbean nations. Emphasis on the modern period.
Offered every 3 years. 3 credits.

HI 345 Religions in America
LASC—Thought, Language and Culture; United States and Its Role in the World; Diversity Across the Curriculum; Writing Across the Curriculum
Prerequisites: HI 111, HI 112
Considers topics in American religious history and explores religious diversity in the past and in contemporary United States.
Offered every 3 years. 3 credits.

HI 349 America on Film
Prerequisite: HI 111 or HI 112
This course examines the origins and nature of the U.S. film industry and how it uses and abuses history from 1893 to the present.
Offered every 2 years. 3 credits.
HI 350 Native American Women
Prerequisite: HI 205 or equivalent
Examines Indian women from the time of European contact to the modern era. Emphasizes culture, community and arenas of power.
Offered every 3 years. 3 credits.

HI 351 Age of Jackson
LASC—United States and Its Role in the World; Thought, Language and Culture
Prerequisites: HI 111 or HI 112
Political, social, economic, and intellectual developments in the second quarter of the nineteenth century.
Offered every 3 years. 3 credits.

HI 352 Civil War and Reconstruction
Prerequisite: HI 111
Sectionalism, slavery, and modern industrial warfare as well as their impact on the political and racial fabric of America.
Offered every 2 years. 3 credits.

HI 353 The Age of Reform: 1877-1920
Prerequisites: HI 111, HI 112
An analysis of the transformation of America, including reform response to the Gilded Age’s industrialization, urbanization, and immigration patterns.
Offered every 2 years. 3 credits.

HI 356 The History of the Cold War
LASC—United States and Its Role in the World
Prerequisites: HI 104 or HI 105 or HI 112
The origins of the Cold War, American, Soviet and Chinese foreign policies, arms control negotiations and future prospects.
Offered every 3 years. 3 credits.

HI 366 American Revolutionary Period
LASC—Thought, Language and Culture; United States and Its Role in the World
Prerequisites: Consent of instructor
Basic problems between English colonies and mother country, military aspects of the American Revolution, Confederation Period, making of the Constitution.
Offered every 2 years. 3 credits.

HI/PO 380 American Foreign Policy Since the Cold War
LASC—Human Behavior and Social Processes; United States and Its Role in the World
Prerequisite: PO 101 or HI 112 or HI 212
Instruments of American foreign policy; major foreign policy developments since 1989.
Offered every 2 years. 3 credits.

HI 381 The First World War
The origins, course, and consequences of the First World War.
Offered every three years. 3 credits.

HI 400 Independent Study in History
Prerequisite: Consent of instructor
Special topics for advanced research and study under the guidance of a faculty member.
Offered every year. 1-3 credits.

HI 411 The Historian's Craft
Prerequisites: HI 103, HI 104, HI 111, HI 112
A methods course providing hands-on exploration of American history as both a professional field and a scholarly discipline.
Offered every year. 3 credits.
HI 420 Seminar in American Constitutional History
Prerequisite: Consent of instructor
Reading, research and discussion on a specially selected phase of American constitutional development; an original paper of significant scholarship is required.
Offered every 3 years. 3 credits.

HI 421 Seminar in English Constitutional History
Reading, research and discussion on a phase of English constitutional development; an original paper of significant scholarship is required.
Offered every 3 years. 3 credits.

HI 422 Seminar in Ancient Constitutional History
Prerequisite: Consent of instructor
Reading, research and discussion on a phase of ancient constitutional development; an original paper of significant scholarship is required.
Offered every 3 years. 3 credits.

HI 430 European History and Historians
Prerequisite: Consent of instructor
The study of Europe's major schools of historical thought with emphasis on how Europe's history has been written.
Offered every 3 years. 3 credits.

HI 435 Issues in Modern Middle East
Prerequisite: HI 261 or HI 314 or HI 330
Emphasizes reading, research and writing. Students will choose issues, research them, make a class presentation, then develop the presentation into a paper.
Offered every 3 years. 3 credits.

HI/PO 440 Internship in American Studies
Prerequisite: Consent of instructor
Internships in museums, archives, government agencies, etc. Performing a variety of tasks at beginning professional level in cooperating institutions.
Offered every year. 3-6 credits.

HI 450 Special Topics in History
Selected areas of interest to students and instructors.
Offered every year. 3 credits.

HI 460 Senior Research Seminar in History
LASC—Capstone, Writing Across the Curriculum
Prerequisite: Successful completion of HI 411, and EN 102 or EN 250
Capstone research, writing and portfolio seminar for seniors in the history major; students produce a substantive original research paper.
Offered every year. 3 credits.

HI 470 Senior Thesis in History
LASC—Capstone, Writing Across the Curriculum
Prerequisite: Successful completion of HI 411, and EN 102 or EN 250
History major capstone option for students who intend to write senior thesis in history.
Offered every year. 3 credits.
Music
Department of Visual and Performing Arts

Faculty

Kyle D. Martin, Professor (1998)
B.M., Hardin-Simmons University; M.M., D.M.A., Eastman School of Music

Christie B. Nigro, Professor (1989)
B.M., Syracuse University; M.M., Yale University; Ph.D., University of Massachusetts

Robert K. Sahagian, Professor (1968)
B.M., New England Conservatory of Music; M.M., Ph.D., Michigan State University

The music faculty offers courses in the performance, history, the theory of music and applied music. Students are provided with opportunities to perform in ensembles as well as take a wide variety of classroom courses to enhance musical understanding and literacy.

Requirements for a Major

The newly instituted Interdisciplinary Visual and Performing Arts Major offers concentrations in Art, Music, or Theatre. See Visual and Performing Arts Department.

Requirements for a Minor in Music: 18 credits in music of which 3 credits are required in each of the following: Music Theory (MU 100 Music Fundamentals or MU 101 Fundamental of Music and Aural Skills or MU 205 Harmony I), Music History (MU 115 Music Appreciation or historical period courses), and Applied Studies (private lessons or ensembles).

Music Courses

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

MU 100 Music Fundamentals
LASC—Creative Arts
An introduction to the rudiments of music theory, including pitch and rhythmic organization. Emphasis is placed on intervals, major and minor scales, reading and writing rhythm, and chord structures.
Offered every year. 3 credits.

MU 101 Fundamentals of Music and Aural Skills
LASC—Creative Arts
An introduction to reading and writing conventional music notation, the fundamentals of music theory, and basic aural skills. Emphasis will be placed on intervals, scales, chords, rhythmic values, sight-singing, melodic dictation, and aural recognition of intervals and chords.
Offered every year. 3 credits
Music

MU 102 Applied Music
Prerequisite: Audition required
Instruments offered: Piano, voice, clarinet, flute, saxophone, trumpet, trombone, French horn, violin, cello, percussion, classical guitar, organ. Instructors for other instruments may be arranged by special request to Music Department. Private instruction in an instrument or voice, one-half hour lesson per week. Studio fee required. May be repeated. Offered every year. 1 credit.

MU 115 Music Appreciation
LASC—Creative Arts
A general survey of masterpieces of the major composers of various periods in the history of music. Offered every year. 3 credits.

MU 125 Jazz Appreciation
Surveys the history of jazz, beginning with the earliest roots in the American South to today. Offered every year. 3 credits.

MU 140 World Music
LASC—Creative Arts
An introduction to music of various cultures and continents including music of Africa, Asia, Latin America, The Middle East and India. Offered every year. 3 credits.

MU 150 Opera
Analysis of the masterworks of the standard operatic repertoire. Offered every year. 3 credits.

MU 175 Music in America
A survey of music history and literature in America including gospel spirituals, jazz, popular and classical music. Offered every 3 years. 3 credits.

MU 190 Class Piano
Prerequisite: MU 100 or MU 101
Basic piano proficiency. Class topics will include an introduction to the keyboard, hand position, and music theory. Solo literature appropriate to the level will be studied. Offered every year: 1 credit

MU 193 Special Topics in Music for First-Year Students
All "193" courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval. Introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar. Offered every year. 3 credits.

MU 195 Class Guitar
Prerequisite: MU 100 or MU 101
An introduction to playing the guitar, including technique, reading tabs and notation, and harmonization of melodies with chords. Solo literature appropriate to the level will be studied. Students are required to provide an instrument. Offered every year: 1 credit

MU 200 Issues in Music
This course deals with topics of special interest, in both seminars and applied environments at an introductory level. Offered every other year. 3 credits.

MU 202 Applied Music
Prerequisite: Audition required
Note: Please refer to instrument listing for MU 102
Private instruction in an instrument or voice, one-half hour lesson per week. Studio fee required. May be repeated. Offered every year. 1 credit.

MU 204 Composition
LASC—Creative Arts
Prerequisite: MU 100 or MU 101
An introduction to compositional methods and techniques. Students develop personal expression by creating musical works while exploring use of melody, harmony, timbre, rhythm, texture, and tonality within conventional musical forms. Offered every other year. 3 credit.
MU 205 Harmony I
LASC—Creative Arts
Prerequisite: MU 100
Analysis and application of harmonization techniques using diatonic chords. Further emphasis is placed on voice-leading, figured bass, melodic construction, and embellishing tones.
Offered every year. 3 credits.

MU 210 Harmony II
LASC—Creative Arts
Prerequisite: MU 205
Analysis and application of harmonization techniques using diatonic and chromatic chords. Emphasis is placed on voice-leading, non-chord tones, secondary chords, and modulation.
Offered every year. 3 credits.

MU 213 Music Technology of MIDI Systems and Digital Audio
Prerequisite: MU 100 or knowledge of notation and department consent
Offered every year. 3 credits.

MU 215 Chorus and Music Theory
LASC—Creative Arts
Prerequisite: Audition required
Mixed choral repertoire and performance, covering vocal problems and techniques. Introduction to music theory, rhythms, intervals, basic chordal structures, harmonization. Participation in college chorus required.
Offered every year. 3 credits.

MU 220 Chorus
LASC—Creative Arts
Prerequisite: MU 215
Mixed chorus repertoire. May be repeated.
Offered every semester. 1 credit.

MU 225 Band
LASC—Creative Arts
Prerequisite: Audition required
Study and experience in repertoire and performance. May be repeated.
Offered every year. 1 credit.

MU 226 Band and Music Theory
LASC—Creative Arts
Prerequisite: Audition required
Study and experience in music notation and style of instrumental music. Participation in college band required.
Offered every year. 3 credits.

MU 230 New England Jazz Artists
To enhance the student's knowledge of jazz by studying and analyzing the music of the great jazz artists and venues of the New England area.
Offered every year. 3 credits.

MU 231 Women in Music
LASC—Creative Arts; Thought, Language and Culture
A survey of the role of women in music, particularly the great women composers from Medieval to Contemporary times. Category1. 3 credits.

MU 234 Music of the Baroque Period
The period 1600-1750 with emphasis on Bach and Handel.
Offered every 3 years. 3 credits.

MU 235 Music of the Classical Period
The period 1750-1827; Haydn, Mozart and Beethoven.
Offered every 3 years. 3 credits.
Music

MU 237 Music in the Elementary School
LASC—Creative Arts
Discover the benefits of using music to enrich general education from preschool through high school. Develop your own musicianship through learning to use your singing voice, learning to play the recorder, learning to read notation and gaining an overview of western music history.
*Offered every year. 3 credits.*

MU 240 Music of the Romantic Period
A survey of nineteenth-century music beginning with Beethoven.
*Offered every 2 years. 3 credits.*

MU 245 Twentieth-Century Music
A comprehensive study and general listener’s approach to contemporary music beginning with Impressionism.
*Offered every 2 years. 3 credits.*

MU/CM 250 Music of the Cinema: Spectacle, Splendor, and Spielberg
LASC—Creative Arts; Thoughts, Language and Culture
An introduction to the role, impact, and importance of music in motion pictures from silent movies through contemporary film.
*Offered every 2 years. 3 credits.*

MU 255 The Golden Era of Piano Music
LASC—Creative Arts
A survey of piano music beginning with Beethoven and continuing through the Romantic tradition to the early twentieth century.
*Offered every year. 3 credits.*

MU 260 Symphonic Music
LASC—Creative Arts
A survey of symphonic music beginning with the classical period.
*Offered every year. 3 credits.*

MU 265 The Concerto
LASC—Creative Arts
The concerto from the eighteenth to the twentieth century with emphasis on the development of the piano concerto.
*Offered every 2 years. 3 credits.*

MU 270 Music in Horror Films
A survey of scores composed for horror films. Emphasis is placed on the role of music in the genre and the composer's interpretation of various components of screenplays, including narrative, characters, and emotional content.
*Offered every other year. 3 credits.*

MU 281 Music History I
LASC—Creative Arts
A general survey of western art music from the Medieval, Renaissance, and Baroque periods.
*Offered every year. 3 credits.*

MU 282 Music History II
LASC—Creative Arts
A general survey of western art music from the Classical and Romantic periods, and the twentieth century.
*Offered every year. 3 credits.*
MU 300 Chorale
LASC—Creative Arts
Prerequisites: By audition only
Study and performance of a cappella choral literature from the Middle Ages to contemporary times. May be repeated.
Category 1. 1 credit.

MU 302 Applied Music
Prerequisite: Audition required
Note: Please refer to instrument listing for MU 102
Private instruction in an instrument or voice, one-half hour lesson per week. Studio fee required. May be repeated.
Offered every year. 1 credit.

MU 310 The American Musical in Performance
Study, rehearsal and performance of a great American musical. Music, acting and dance will all be skills which are developed.
Offered every other year. 3 credits.

MU 321 Small Music Chamber Ensemble
LASC—Creative Arts
Prerequisite: By audition or consent of the instructor
The performance of musical works by a small ensemble.
Offered every year. 1 or .5 credit.

MU 380 Form and Analysis
Prerequisite: MU 210
An introduction to and analysis of the formal structures of music.
Offered every 3 years. 3 credits.

MU 400 Independent Study in Music
Prerequisite: Consent of instructor
An opportunity for further study in a special field of interest under faculty supervision.
Offered every year. 1-6 credits.

MU 402 Applied Music
Prerequisite: Audition required
Note: Please refer to instrument listing for MU 102
Private instruction in an instrument or voice, one-half hour lesson per week. Studio fee required. May be repeated.
Offered every year. 1 credit.

MU 410 Special Topics in Music
This course will allow members of the music faculty to develop courses of special interest. This would include seminars on specific composers or compositions, in both classroom and applied studio environments.
Offered every 3 years. 3 credits.
Faculty

José J. Mendoza, Assistant Professor (2012)
B.A., University of California at San Diego; M.A., San Francisco State University;
Ph.D., University of Oregon

Courtney D. Schlosser, Professor (1971)
A.B., George Washington University; Ed.M., Ed.D., Boston University

Daniel C. Shartin, Professor (1993)
B.A., M.A., Ph.D., University of California at Los Angeles

Henry C. Theriault, Professor (1998)
B.A., Princeton University; Ph.D., University of Massachusetts

Kristin Waters, Professor (1999)
A.B., Bard College; M.A., Ph.D., University of Connecticut

The study of philosophy helps students to develop insights into the nature of individuals, societies, and values, and it helps them to think critically about themselves and the world around them. By studying philosophical works from the past and present, students engage theories about such central concepts as personhood, justice, gender, knowledge, and science.

Requirements for a Minor in Philosophy: 18 credits, including:

- PH 260 Philosophy of Science
  (formerly PH 140 Philosophy of Science and Nature)
  and at least one of:

- PH 101 Ancient Western Philosophy
- PH 102 History of Modern Western Philosophy, 1600-1800
- PH 201 19th Century European Philosophy
  or
- PH 202 Selected Topic in 20th – 21st Century Philosophy
Requirements for a Minor in Philosophy and Law: 18 credits, including:

- PH 231 Philosophy of Law
- PH 240 Political Theory

A minimum of one course in logic:

- PH 110 Critical Thinking
- or
- PH 115 Formal Logic I

A minimum of one course in ethics:

- PH 130 Ethics: Human Values and Conduct
- PH 131 Medical Ethics
- PH 132 Business Ethics
- or
- PH 133 Social and Political Ethics

A minimum of one course in the history of philosophy:

- PH 101 Ancient Western Philosophy
- PH 102 History of Modern Western Philosophy, 1600-1800
- PH 201 19th Century European Philosophy
- or
- PH 202 Selected Topic in 20th – 21st Century Philosophy

Any elective philosophy course(s) if sixth course is not from one of the lists above.

Recommended:

- PH 151 Race, Gender, and the Law
- PH 215 Formal Logic II
- PH 241 Genocide and Human Rights
- PH 251 Mass Violence Against Women
- PH 260 Philosophy of Science
- PH 360 Philosophy of History

Minors should contact the Chair of the Philosophy Department to arrange for departmental advising, and they should select their philosophy courses in consultation with their departmental advisor. Advising can include support for a student’s graduate, law, or other professional school application process.

Philosophy Courses

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

PH 100 Introduction to Philosophy

LASC—Human Behavior and Social Processes; Thought, Language and Culture

An introduction to the fundamentals of philosophy: its vocabulary, problems, and methods.
Offered every year. 3 credits.

PH 101 Ancient Western Philosophy

An introduction to fundamental topics in Western philosophy through works by philosophers including Plato and Aristotle.
Typically offered at least every two years. 3 credits.

PH 102 History of Modern Western Philosophy, 1600-1800

LASC—Human Behavior and Social Processes; Thought, Language and Culture

Engages central topics of Western philosophy through study of important modern philosophers, typically from Descartes through Kant.
Typically offered at least every two years. 3 credits.
PH 110 Critical Thinking  
LASC—Thought, Language and Culture  
An examination of critical thinking through informal logical analysis of argument styles, including identification of fallacious arguments.  
Offered every year. 3 credits.

PH 115 Logic 1  
LASC—Quantitative Reasoning  
A study of introductory symbolic (formal) logic, covering sentential logic and the foundations of predicate logic.  
Offered every year. 3 credits.

PH 130 Ethics: Human Conduct and Values  
LASC—Human Behavior and Social Processes; Thought, Language and Culture  
An examination of the nature of morality and value and their place in the world of human action.  
Offered every year. 3 credits.

PH 131 Medical Ethics  
LASC—Human Behavior and Social Processes; Thought, Language and Culture  
An introductory-level examination of various ethical issues such as abortion, euthanasia, cloning and other genetics issues, access to healthcare, race and healthcare, and women's health.  
Typically offered at least every three years. 3 credits.

PH 132 Business Ethics  
LASC—Human Behavior and Social Processes; Thought, Language and Culture  
An introduction to ethical theory and issues such as truth-in-advertising, product liability, affirmative action, employer and employee rights and duties, whistle blowing, and corporate responsibility.  
Typically offered at least every two years. 3 credits.

PH 133 Social and Political Ethics  
LASC—Human Behavior and Social Processes; Thought, Language and Culture; Diversity Across the Curriculum  
Investigates major social and political theories and their applications to selected problems of justice.  
Typically offered every two years. 3 credits.

PH 150 Women in Western Ideas  
LASC—Human Behavior and Social Processes; Thought, Language and Culture; Diversity Across the Curriculum  
Investigates the concept of woman from ancient Greece to the present.  
Typically offered every two years. 3 credits.

PH 151 Race, Gender and the Law  
LASC—Constitutions; Thought, Language and Culture; United States and Its Role in the World  
A philosophical approach to issues of race and gender as expressed in legislation, judicial interpretation, enforcement, and public policy.  
Typically offered at least every three years. 3 credits.

PH 163 Philosophy on Television  
LASC—Thought, Language and Culture; United States and Its Role in the World  
An introduction to philosophy through philosophical writings on popular television shows.  
Typically offered at least every three years. 3 credits.

PH 170 Ancient Chinese Philosophies in a Cultural Perspective  
LASC—Global Perspectives; Thought, Language and Culture  
Examines ancient Chinese philosophies of Taoism, Confucianism, Buddhism, and neo-Confucianism in the context of contemporary developments in China; Communism, Capitalism, and Western influences considered.  
Typically offered every two years. 3 credits.

PH 171 Buddhism: Theory and Meditative Experience  
LASC—Global Perspectives; Thought, Language and Culture  
Examines the origins, texts, principles, and practices of Buddhist philosophy including the Four Noble Truths and Eightfold Path for individual practice.  
Typically offered at least every three years. 3 credits.
PH 172 Asian Philosophies and Contemporary Perspectives  
LASC—Global Perspectives  
Studies the philosophies of India, China, Japan, and the vitality of ancient traditions in a time of cultural change: Buddhism, Taoism, Confucianism, Jainism, Hinduism and Islam.  
Typically offered every year. 3 credits.

PH 177 Introduction to Latin American Philosophy  
LASC—Thought, Language and Culture; Global Perspectives; Diversity Across the Curriculum  
An introduction to many of the principal texts, thinkers, and debates within Latin American philosophy.  
Typically offered every year. 3 credits.

PH 180 Sports and Philosophy  
LASC—Individual and Community Well-Being  
Examines key ethical and other issues in sports, including competition, fair play, sportspersonship, drug use, race and gender, and violence.  
Typically offered every year. 3 credits.

PH 190 Special Topics in Philosophy  
An introductory philosophy course on a current or specialized topic.  
Typically offered at least every three years. 3 credits.

PH 193 Special Topics in Philosophy for First-Year Students  
All "193" courses are approved for LASC, but area(s) of approval may vary by section. See current course listing for specific LASC area approval.  
An introductory course covering a topic of special interest to first-year students. Offered only as a First-Year Seminar.  
Typically offered at least every three years. 3 credits.

PH 201 19th Century European Philosophy  
LASC—Human Behavior and Social Processes; Thought, Language and Culture  
Engages the radical new philosophical ideas developed on the European Continent in the 19th Century, beginning with Hegel.  
Typically offered at least every three years. 3 credits.

PH 202 Selected Topic in 20th – 21st Century Western Philosophy  
LASC—Human Behavior and Social Processes; Thought, Language and Culture  
Addresses a specific topic in 20th – 21st Century Western Philosophy. The topic will be indicated in each PH 202 registration listing.  
Typically offered at least every three years. 3 credits.

PH 215 Logic 2  
LASC—Quantitative Reasoning  
Prerequisite: PH 115  
A study of intermediate symbolic (formal) logic including multi-placed predicates and identity.  
Typically offered at least every three years. 3 credits.

PH 220 Philosophy of Mind  
Prerequisite: EN 102  
An investigation of the relationship between mental processes and physical states – and implications for such issues as personal identity and free will.  
Typically offered at least every three years. 3 credits.

PH 221 Existentialism and Phenomenology  
LASC—Thought, Language and Culture; Global Perspectives  
Examines the Existentialist movement of the first half of the 20th Century.  
Typically offered at least every three years. 3 credits.

PH 230 Religious Philosophies, East and West  
An examination of the major religious systems, both oriental and occidental.  
Typically offered at least every three years. 3 credits.
**Philosophy**

**PH 231 Philosophy of Law**  
*LASC—Constitutions; Human Behavior and Social Processes; United States and Its Role in the World; Diversity Across the Curriculum*  
*Prerequisite: EN 102*  
Survey of the legal theories and issues and the philosophical bases of key legal and related political concepts.  
*Typically offered at least every three years. 3 credits.*

**PH 240 Political Theory**  
*LASC—Thought, Language and Culture; United States and Its Role in the World*  
Investigates concepts including political power, equality, revolution, liberties, slavery, socialism and liberalism, patriarchal power, race and gender.  
*Typically offered at least every three years. 3 credits.*

**PH 241 Genocide and Human Rights**  
*LASC—Global Perspectives; United States and Its Role in the World*  
Treats the ethical, political, and other dimensions of systematic mass violence through case studies and general theoretical analyses.  
*Typically offered at least every three years. 3 credits.*

**PH 242 Race, Nation, Class, Gender, and Sexuality**  
*LASC—Human Behavior and Social Processes; United States and Its Role in the World*  
Examines these five important social categories that define the political, legal, economic, and cultural contexts in which we live.  
*Typically offered at least every three years. 3 credits.*

**PH 250 Global Feminisms**  
*LASC—Global Perspectives; Thought, Language and Culture*  
Investigates the theoretical underpinnings of women’s movements for equal rights around the globe.  
*Offered every 2 years. 3 credits.*

**PH 251 Mass Violence Against Women**  
*LASC—Global Perspectives; United States and Its Role in the World*  
A philosophy-based, interdisciplinary course examining historical and contemporary mass violence against women.  
*Typically offered at least every three years. 3 credits.*

**PH 260 Philosophy of Science**  
*LASC—Human Behavior and Social Processes; Thought, Language and Culture*  
Critically investigates such questions as: What distinguishes sciences from pseudo-sciences? When is a theory confirmed? What is a law of nature?  
*Typically offered at least every two years. 3 credits.*

**PH 261 Philosophy of Religion**  
An examination of the roles of faith and reason in beliefs concerning a deity and in such issues as the problem of evil.  
*Typically offered at least every two years. 3 credits.*

**PH 263 Film and Philosophy**  
*LASC—Global Perspectives; Thought, Language and Culture*  
An intermediate study of films presenting philosophical ideas and of philosophical ideas about film.  
*Typically offered at least every three years. 3 credits.*

**PH 264 Philosophy of Education**  
Examines philosophical approaches to education through readings of various authors such as Plato, Rousseau, Wollstonecraft, and Dewey.  
*Typically offered at least every three years. 3 credits.*
PH 290 Advanced Special Topics in Philosophy
A treatment of a current or specialized topic for students beyond the introductory level.
Typically offered at least every three years. 3 credits.

PH 301 Individual Figure in the History of Western Philosophy
Prerequisite: EN 102
Studies a specific Western philosopher. The philosopher for a given semester will be indicated in the course registration listings.
Typically offered at least every three years. 3 credits.

PH 302 Topics in American Philosophy
Prerequisite: EN 102
Treats a selected set of topics in the history of philosophy in the United States.
Typically offered at least every three years. 3 credits.

PH 320 Topics in Metaphysics and Epistemology
Prerequisite: EN 102
A study of selected topics in theories of mind, language, and knowledge.
Typically offered at least every three years. 3 credits.

PH 340 Selected Topics in Social and Political Philosophy
Prerequisite: EN 102
Explores a particular social and political issue, as indicated in the registration course listing, from a philosophical perspective.
Typically offered at least every three years. 3 credits.

PH 360 Philosophy of History
LASC—Global Perspectives; United States and Its Role in the World
Prerequisite: One semester of philosophy
Explores the different philosophical approaches to the study and writing of history and the nature of historical change and development.
Typically offered at least every three years. 3 credits.

PH 361 Philosophy of Art
Prerequisite: One semester of philosophy
An investigation of the nature of aesthetic experience.
Typically offered at least every three years. 3 credits.

PH 390 Independent Study
Prerequisite: Consent of the instructor
An individual or small group student study, under the guidance of a faculty member, of a special philosophical topic not covered in other course offerings.
3 credits.

PH 391 Internship in Philosophy
Prerequisite: EN 102
Provides an opportunity for mid-level or advanced students to increase their philosophical knowledge and understanding.
3 credits.
Political Science
Department of History and Political Science

Faculty
Joseph P. Baratta, Associate Professor (1999)
B.A., St. John’s College; M.A., M.A.T., Ph.D., Boston University

Tona J. Hangen, Associate Professor (2008)
B.S., Massachusetts Institute of Technology; Ph.D., Brandeis University

Frank S. Minasian, Associate Professor (1968), Department Chair
A.B., Clark University; M.A.T., Assumption College

Najib E. Saliba, Professor (1971)
A.B., Miami University; M.A., Ph.D., University of Michigan

Robert W. Smith, Assistant Professor (2007)
B.A., Syracuse University; M.A., Ph.D., College of William and Mary

David J. Twiss, Associate Professor (1968)
B.S., Ed.M., Worcester State College; M.A., Assumption College

Requirements for a Minor in Political Science: 18 credits
PO 101 Principles of Political Science
Political Science electives: 15 credits

Political Science Courses

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

PO 101 Principles of Political Science
LASC—Human Behavior and Social Processes
An introduction to political analysis; study of the concepts of power, legitimacy, natural law, justice and liberty.
Offered every year. 3 credits.

PO 102 Constitutions: US and Massachusetts
LASC—Constitutions; United States and Its Role in the World
Examines the origins and development of the United States and Massachusetts Constitutions. Meets Massachusetts General Laws, Chapter 73, Sec 2A requirement.
Offered every year. 3 credits.
PO 103 Fundamentals of Legal Research
Locating the text of statutes, regulations and court decisions (state and national) for a particular date and on specific subjects.
*Offered every 3 years. 1 credit.*

PO 193 Special Topics in Political Science for First-Year Students
Introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar.
*Offered every year. 3 credits.*

PO/HI 201 International Relations I
*LASC—Global Perspectives; United States and Its Role in the World; Writing Across the Curriculum*
Theory and practice of international security (realism and internationalism) and international political economy (liberalism and protectionism) in their historical context.
*Offered every year. 3 credits.*

PO/HI 202 International Relations II
*LASC—Global Perspectives; United States and Its Role in the World; Writing Across the Curriculum*
Prerequisite: PO 101 or HI 103 or HI 104
The promise and problems of globalization (spread of free market capitalism and political democracy).
*Offered every year. 3 credits.*

PO 210 American Government
*LASC—Human Behavior and Social Processes; United States and Its Role in the World*
Examines our national government and politics.
*Offered every year. 3 credits.*

PO/HI 211 History of US Foreign Policy I
*LASC—United States and Its Role in the World*
Prerequisite: HI 111 or HI 112
Colonial origins to the era of the Spanish-American War. The sources and development of US foreign policy in that period.
*Offered every year. 3 credits.*

PO/HI 212 History of US Foreign Policy II
*LASC—United States and Its Role in the World*
Prerequisite: HI 111 or HI 112
From 1900 to recent times; US foreign policy traditions and the challenges of great power status.
*Offered every year. 3 credits.*

PO 213 The Modern Presidency
*LASC—Human Behavior and Social Processes; United States and Its Role in the World*
This course will examine the evolution of the presidency. Special attention is given to those presidents who have expanded the office.
*Offered every 3 years. 3 credits.*

PO 215 State and Local Government
*LASC—Human Behavior and Social Processes; United States and Its Role in the World*
Examines sub-national governments and politics in the United States; the structure and problems of these governments.
*Offered every year. 3 credits.*

PO 216 Political Parties and Pressure Groups
*LASC—United States and Its Role in the World; Human Behavior and Social Processes*
Examines the organization, functions, and methods of political parties; the role of interest groups in the American political process.
*Offered every year. 3 credits.*

PO 217 The Legislative Process
The nature and function of the US Congress, including legislative campaigns, politics, and major problems of Congress.
*Offered every 3 years. 3 credits.*
PO/HI 218 US Constitutional History I
LASC—Constitutions; Human Behavior and Social Processes; United States and Its Role in the World
The development of American constitutional history to 1865.
Offered every 2 years. 3 credits.

PO/HI 219 US Constitutional History II
LASC—Constitutions; Human Behavior and Social Processes; United States and Its Role in the World
The development of the U.S. Constitution since 1865.
Offered every 2 years. 3 credits.

PO 220 Comparative Politics I
LASC—Global Perspectives; Human Behavior and Social Processes
A comparative study of the politics and governments of Great Britain, Germany, and Russia.
Offered every 3 years. 3 credits.

PO 221 Comparative Politics II
LASC—Global Perspectives; Human Behavior and Social Processes
A comparative study of the political and social systems of South Africa and India, including recent trends in their political development.
Offered every 3 years. 3 credits.

PO/HI 241 English Constitutional History
LASC—Global Perspectives; Human Behavior and Social Processes
Development of English Constitution from Magna Carta through revolution, supremacy of Parliament, reform acts, entry into European Union, and devolution.
Offered every 2 years. 3 credits.

PO/HI 259 Crisis Management
A study of the decision making process regarding crisis situations, i.e., the role of the President, Congress, Intelligence Community and the Military.
Offered every 2 years. 3 credits.

PO/HI 320 Citizen Nation
LASC—Constitutions; Thought, Language and Culture; United States and Its Role in the World; Diversity Across the Curriculum; Writing Across the Curriculum
Prerequisites: HI 111 or HI 112
Explores the history and meaning of citizenship in the United States, including discrimination, rights struggles and changing citizenship criteria.
Offered every 3 years. 3 credits.

PO/HI 323 Empire
Prerequisite: HI 103 and HI 104
Theories and models of colonization, the reaction of colonized peoples, and the way historians analyze imperialism from 1400 to 1920’s.
Offered every three years. 3 credits.

PO/HI 330 Politics of the Middle East I
Prerequisite: PO 101 or HI 261 or HI 314
Discusses governments and politics of eastern Arab countries, Turkey, Iran, and Israel. International rivalries in the area are also discussed.
Offered every year. 3 credits.
PO 350 The Government and Politics of the Soviet Union and the Russian Federation
Prerequisite: PO 101
An analysis of the forces and institutions which have influenced political developments in the Soviet Union and the Russian Federation since 1917.
Offered every 3 years. 3 credits.

PO 355 Foreign Policy of the Soviet Union and the Russian Federation
Prerequisite: PO 101
An analysis of the instruments and developments of the Soviet Union's and the Russian Federation's foreign policies since 1917.
Offered every 3 years. 3 credits.

PO 370 Crisis Politics
Prerequisite: PO 101
Analysis of theories regarding the roots of violence, revolution, and terrorism. Special attention will be devoted to violence in America.
Offered every 2 years. 3 credits.

PO/HI 380 American Foreign Policy Since the Cold War
LASC—United States and Its Role in the World; Human Behavior and Social Processes
Prerequisite: PO 101 or HI 112 or HI 212
Instruments of American foreign policy; major foreign policy developments since 1989.
Offered every 2 years. 3 credits.

PO 400 Independent Study in Political Science
Prerequisite: Consent of Instructor
Special topics for advanced research and study under the guidance of a faculty member.
Offered every year. 1 - 3 credits.

PO/HI 440 Internship in American Studies
Prerequisite: Consent of Instructor
Internships in museums, archives, government agencies, etc. Performing a variety of tasks at beginning professional level in cooperating institutions.
Offered every year. 3 - 6 credits.

PO 450 Special Topics in Political Science
Selected areas of interest to students and instructors.
Offered every 3 years. 3 credits.
Faculty

Amy Cota-McKinley, Associate Professor (2002)
B.A., University of Wisconsin-Milwaukee; M.S., Jacksonville State University;
Ph.D., Colorado State University

Lori J. Dawson, Professor (1995)
B.A., Suffolk University; M.A., Ph.D., University at Albany, State University of New York

Charles R. Fox, Ph.D.
O.D., New England College of Optometry; B.A., M.A., St. John's University;
Ph.D., Brandeis University

Bernard J. Guarini, Associate Professor (1965),
B.S., College of the Holy Cross; M.A., Clark University; M.A., C.A.G.S.,
Assumption College

Vrinda Kalia, Assistant Professor (2011)
B.A., Jesus and Mary College; M.A., Ph.D., Clark University

Bonnie G. Kanner, Professor, Department Chair (1997)
B.A., M.S., C.A.S., University at Albany, State University of New York;
Ph.D. Clark University

Richard K. Kimball, Associate Professor (1985)
A.B., Dartmouth College; Ph.D., State University of New York, Buffalo

Lauren Mizock, Assistant Professor (2012)
B.A., Oberlin College; M.A., Ph.D., Suffolk University

Brandi Silver, Associate Professor (2003)
B.S., M.S., Ph.D., Colorado State University

Emily Soltano, Professor (1999)
B.A., Ph.D., University at Albany, State University of New York

Champika K. Soysa, Professor (2003)
B.A., Mount Holyoke College, M.A., Ph.D., Clark University

Colleen Sullivan, Assistant Professor (2012)
B.S. Frostburg State University; M.A., Ph.D., University of Maryland, Baltimore County

Seth Surgan, Associate Professor (2006)
B.A., University of North Carolina at Chapel Hill; M.A., Ph.D., Clark University

Marc J. Wagoner, Assistant Professor (2004)
B.A., Morehouse College, Atlanta, GA; Ph.D., University of Minnesota
Psychology courses acquaint students with basic principles of learning, motivation, development, and interpersonal relationships, providing a foundation for effective living and a background for a variety of career opportunities. The major provides students with a wide range of marketable and graduate study skills that include interpersonal awareness, problem-solving, research, and computer literacy.

Baccalaureate degree holders are prepared for entry level positions in a broad range of areas including health and social services, mental health, organizational leadership and management, community relations, education, human resources, program development, public affairs, social science research, and programs for women. Psychology is recognized in Massachusetts as a certificate academic major for Early Childhood and Elementary Education students. Those who major in psychology are able to develop an expertise in one of the Department's areas of concentration: Mental Health Services, Developmental Process, and Industrial/Organizational Psychology. Those with bachelor's degrees in psychology work in the same fields as do psychologists with graduate degrees. Some of the department's alumni:

- Counsel or teach people in group homes, nursing homes, and clinics
- Are case managers in insurance companies
- Plan and execute research
- Help young people in juvenile courts, schools and recreational programs
- Are behavior specialists
- Counsel drug addicts and victims of abuse

The department provides solid preparation for graduate work in psychology by helping students develop specializations and providing opportunities for the development of excellent research skills. The department offers an HONORS program and an internship program and operates a state-of-the-art computer laboratory. Psi Chi, the national honor society in psychology, is available to outstanding students who major in the discipline.

The **minor** program offers an opportunity for students wishing to develop a core understanding of psychology. The minor is not meant for students whose primary interest is the study of psychology; instead, it is a complement to other fields of study where knowledge of psychology and its methods would be beneficial.

**Admission Requirements:** Admission is open to any student who is interested in psychology and who can maintain a 2.0 grade point average in the required and elective psychology courses.

**Standards for Minimum Academic Performance in the Psychology Major:** The Psychology major requires a minimum grade of C- in all courses applied to the major. Courses may be repeated. The C- minimum grade does not apply to psychology courses beyond those applied to the major (four specified, four from specified areas and four elective courses). Students must maintain a minimum overall GPA of 2.0 in the major, consistent with Worcester State University policy.

**Requirements for a Major in Psychology:** The Psychology major requires successful completion of 12 courses in Psychology. Four of these courses are specific core requirements; four are from specified areas and the remaining four are electives. The minimum of 37 credits must include the following four core courses:

- PS 101 General Psychology
- PS 205 Research Methods
- PS 275 Psychological Statistics
- PS 307 Applied Research Methods

and at least **four** courses (12 credits) from the following, including one from each of **four** different areas:
Area 1 — Developmental
1 — PS 210 Developmental Psychology
2 — PS 312 Psychology of Adolescence
3 — PS 322 Psychology of Aging

Area 2 — Social Psychology
1 — PS 250 Social Psychology
2 — PS 252 Applied Social Psychology

Area 3 — Personality and Abnormal Psychology
1 — PS 330 Theories of Personality
2 — PS 335 Abnormal Psychology
3 — PS 340 Introduction to Psychometrics

Area 4 — Learning and Cognition
1 — PS 325 Psychology of Learning
2 — PS 345 Cognitive Psychology

Area 5 — Biopsychosocial Processes
1 — PS 280 Sensation and Perception
2 — PS 380 Physiological Psychology
3 — PS 222 Introduction to Health Psychology

and 12 credits in psychology electives. At least three courses (nine credits) must be at a 300 and/or 400 level.

Evening Psychology: The required core courses for the Psychology Major may be completed with evening or summer courses. Many core courses are offered in the evening during each academic year as well as some elective courses. Internships and independent study courses, however, are only offered in fall and spring day courses.

HONORS Program: The HONORS program is designed to increase opportunities for students of outstanding ability to engage in independent work and prepare for more challenging futures. It is especially recommended for students planning to pursue graduate education.

The HONORS project must be completed and presented to the faculty sponsor. Students are required to make an oral presentation on the project in a session open to all faculty and students in the department.

Admission to the HONORS program is by application. The admission requirements, closing date for application and instructions for completing the application process may be obtained from the Department Office.

Concentrations: Students may choose to simply major in psychology without a particular specialization (by completing the Requirements for a Major in Psychology) or may choose to major in psychology with a specialization by completing the requirements for a concentration in Mental Health Services, Industrial/Organizational Psychology or Developmental Processes. They may also specialize by completing the requirements for an Interdisciplinary Concentration in Women's Studies.

Requirements for a Major in Psychology, Concentration in Mental Health Services: 40 credits.

This concentration prepares students for graduate school and/or employment in agencies serving the mental health needs of special populations, including people with mental disabilities, addiction, and cognitive, emotional, and behavioral problems. In addition to the four core and four area courses in psychology, the following courses are required:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS 330</td>
<td>Theories of Personality</td>
</tr>
<tr>
<td>PS 335</td>
<td>Abnormal Psychology</td>
</tr>
<tr>
<td>PS 340</td>
<td>Introduction to Psychometrics</td>
</tr>
</tbody>
</table>
PS 400 Internship in Psychology (3 hours)
or PS 318 Behavior Management
or PS 315 Physical and Sexual Abuse
PS 435 Clinical Psychology
PS 492 Capstone in Mental Health

Requirements for a Major in Psychology, Concentration in Developmental Processes: 37 to 43 credits.
This concentration provides background for students planning careers related to developmental disabilities, special education, child and adolescent services, or hospital and nursing home programs for the disabled or aging. Developmental Process is especially recommended for students in education.
The four core and four specified area psychology courses are required plus:

- PS 210 Developmental Psychology
- PS 312 Psychology of Adolescence
  or PS 322 Psychology of Aging
- PS 325 Psychology of Learning
  or PS 345 Cognitive Psychology
- PS 380 Physiological Psychology
- PS 410 Seminar in Developmental Processes

and three electives selected from the following:

- PS 310 Development of Exceptional Children and Youth
- PS 318 Behavior Management
- PS 320 Development of Thinking and Knowing
- PS 355 Social and Personality Development
- PS 400 Internship in Psychology

PS 400 Internship in Psychology is recommended for any student who has not had an appropriate fieldwork experience.

Requirements for a Major in Psychology, Interdisciplinary Concentration in Women's Studies: 15 credits. Psychology majors may elect an interdisciplinary concentration in Women's Studies beyond the requirements of the Psychology major. Five courses may be selected from any course with a "WO" prefix, from at least two disciplines.

Minor in Psychology: Students may choose to minor in psychology without a particular specialization (by completing the Requirements for a Minor in Psychology) or may choose to minor in psychology with a specialization in Developmental Disabilities Psychology.

Requirements for a Minor in Psychology: The Psychology minor requires successful completion of six courses in Psychology. The minimum 18 credits must include:

- PS 101 General Psychology

and 15 credits in psychology electives
## Psychology

### Sample Timetable for Completion of Degree: Psychology

#### YEAR ONE

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>LASC</td>
<td>First-Year Seminar</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>EN 101</td>
<td>English Composition I</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PS101</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>LASC</td>
<td>The United States and Its Role in the World (USW)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>LASC</td>
<td>Global Perspective (GP)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Semester Subtotal</strong></td>
<td><strong>15</strong></td>
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<table>
<thead>
<tr>
<th>Semester Two</th>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td></td>
<td>EN 102</td>
<td>English Composition II</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>LASC</td>
<td>Constitutions</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PS Area</td>
<td>200 level Psych area (Not PS205)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>LASC</td>
<td>Quantitative Reasoning (QR)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>LASC</td>
<td>Thought, Language and Culture (TLC)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Semester Subtotal</strong></td>
<td><strong>16</strong></td>
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</table>

### YEAR TWO

<table>
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<tr>
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<tbody>
<tr>
<td></td>
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<td>200 level elective</td>
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<td></td>
<td>PS200 level</td>
<td>200 level Area class</td>
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<tr>
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<td>LASC</td>
<td>Natural Systems and Processes (NSP)</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>LASC</td>
<td>Global Perspectives (GP)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>LASC</td>
<td>Human Behavior and Social Processes (HBS)</td>
<td>3</td>
</tr>
<tr>
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<td><strong>Semester Subtotal</strong></td>
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</table>
### Semester Four

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<th>Credits</th>
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<td>PS205</td>
<td>Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>PS275</td>
<td>Psychological Statistics</td>
<td>4</td>
</tr>
<tr>
<td>LASC</td>
<td>Natural Systems and Processes (NSP)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Thought, Language and Culture (TLC)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Creative Arts (CA)</td>
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</tbody>
</table>

**Semester Subtotal** 16

### YEAR THREE

#### Semester Five

<table>
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<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PS 307</td>
<td>Applied Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>PS Area</td>
<td>PS Area class</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Human Behavior and Social Processes (HBS)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Individual and Community Well-Being (ICW)</td>
<td>3</td>
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<tr>
<td>SELECT</td>
<td>General Elective</td>
<td>3</td>
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</tbody>
</table>

**Semester Subtotal** 15

#### Semester Six

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
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<td>PS Area Class</td>
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<tr>
<td>PS</td>
<td>Major Elective</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Creative Arts (CA)</td>
<td>3</td>
</tr>
<tr>
<td>PS</td>
<td>Major Elective</td>
<td>3</td>
</tr>
<tr>
<td>PS</td>
<td>Major Elective</td>
<td>3</td>
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</tbody>
</table>

**Semester Subtotal** 15

Comments
Psychology Courses (Undergraduate)

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

**PS 101 General Psychology**

*LASC—Human Behavior and Social Processes*

Introduction to history of psychology, scientific method; brain/nervous system, development, learning, motivation, sensation/perception, personality, psychopathology, psychotherapy, cognitive processes, social behavior. *Offered every year.* 3 credits.

**PS 191 Topics in Psychology**

This course is an exploration of current and specialized topics in Psychology. It will not be counted toward the major. *Offered every year.* 3 credits.

**PS 193 Special Topics in Psychology for First-Year Students**

All "193" courses are approved for LASC but may vary by section. *See current course listing for specific LASC area approval.* Introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar. *Offered every year.* 3 credits.

**PS 205 Research Methods**

*LASC—Writing Across the Curriculum*

Prerequisite: PS 101

Exploration of psychological research methodologies including: scientific method; design, conduction, analysis, and reporting of research; ethical principles and APA format. *Offered every year.* 3 credits.
PS 210 Developmental Psychology
LASC—Human Behavior and Social Processes
Prerequisite: PS 101
Physical, social, emotional, intellectual, and moral development from conception to adolescence is examined within a framework of various theories.
Offered every year. 3 credits.

PS 222 Introduction to Health Psychology
Prerequisites: PS 101
Introduction to the areas and methods of Health Psychology. Topics include: epidemiology, behavior change, compliance, alternative medicine, healing, chronic illness.
Offered every 2 years. 3 credits.

PS 224 Positive Psychology
Prerequisite: PS 101
Exploration of the psychological research on a fulfilling and flourishing life including happiness, self-esteem, love, goalsetting, mindfulness and spirituality.
Offered every other year. 3 credits

PS 250 Social Psychology
Prerequisite: PS 101
The psychological dynamics of social interaction including verbal and nonverbal communication, group dynamics and attitude formation and change.
Offered every year. 3 credits.

PS 252 Applied Social Psychology
Prerequisite: PS 101
Survey of applied social psychology including: psychology in educational, organizational, and legal settings; diversity, environmental, health, media, and consumer issues.
Offered every year. 3 credits.

PS 255 Psychological Foundations of Diversity
Prerequisite: PS 101
Explores the gender, racial/ethnic, multiple-group membership, cultural, social class, religious, disability and sexual orientation facets of diversity.
Offered every 3 years. 3 credits.

PS 260 Psychology of Human Sexuality
Prerequisite: PS 101
Sexuality as a foundation of personality. The wide range of human sexuality is explored; sexual development, roles, attitudes and behaviors.
Offered every 2 years. 3 credits.

PS 263 Psychology of Women
Prerequisite: PS 101
Women’s psychological development throughout the lifespan will be examined, including female development, achievement, stereotyping, stress, violence and psychological disorders.
Offered every 2 years. 3 credits.

PS 275 Psychological Statistics
LASC—Quantitative Reasoning; Quantitative Reasoning Across the Curriculum
Prerequisites: PS 101, Score of 3 on math Accuplacer or passing grade in college level math class
Data tabulation; graphing; measurement of central tendency, variability and correlation; hypothesis testing applied to psychological and sociological data. Hand and computer analysis.
Offered every year. 4 credits.

PS 280 Sensation and Perception
Prerequisite: PS 101
Selected sensory and perceptual processes are studied in the context of current theory and research.
Offered every year. 3 credits.
PS 295 Special Topics in Psychology
Prerequisites: PS 101
Selected areas of mutual interest to instructor and students. Topics and prerequisites are announced in advance.
Offered every year. 3 credits.

PS 297 Independent Study: Research in Psychology
Prerequisites: PS 101, PS 205 or PS 275, Consent of instructor
Students pursue an area of research interest under faculty supervision. May include assisting faculty with ongoing research. Written report(s) required.
Offered every semester. 1-3 credits

PS 307 Applied Research Methods
Prerequisites: PS 101, PS 205, PS 275
Extension of research design and methods introduced in PS 205: Research Methods, including applied research design, statistical analysis, and scientific writing.
Offered every year. 3 credits.

PS 310 Development of Exceptional Children/Youth
Prerequisites: PS 101, PS 210
Characteristics and needs of children with exceptionalities including behavior retardation, giftedness, physical or sensory disabilities, emotional or social maladjustments.
Offered every 2 years. 3 credits.

PS 312 Psychology of Adolescence
Prerequisite: PS 101, PS 210
The mental, emotional, social and physical changes of contemporary adolescence are examined with emphasis on family, peer and school influences.
Offered every year. 3 credits.

PS 315 Physical and Sexual Abuse
Prerequisites: PS 101
Etiology, characteristics, consequences, treatment, and prevention of various forms of physical, sexual, and emotional abuse in children, adolescents, and adults.
Offered every 2 years. 3 credits.

PS 318 Behavior Management Techniques
Prerequisites: PS 101
Considers the basic concepts of behavior management, including behavior modification for exceptional and normal populations.
Offered every year. 3 credits.

PS 320 Development of Thinking and Knowing
Prerequisites: PS 101, PS 210
This course will examine human development of thinking and knowing from the Piagetian/Neo-Piagetian, Information Processing and Sociocultural Perspectives.
Offered every year. 3 credits.

PS 322 Psychology of Aging
Prerequisite: PS 101, PS 210
Adulthood and old age are studied with special emphasis on current developmental theories.
Offered every year. 3 credits.

PS 325 Psychology of Learning
Prerequisite: PS 101
Learning as a fundamental concept in understanding behavior; examines principles and theories of learning, emphasizing experimental findings.
Offered every year. 3 credits.

PS 330 Theories of Personality
Prerequisites: PS 101
A survey of major theories of personality. Why people behave as they do is explored through the different theories.
Offered every year. 3 credits.
PS 335 Abnormal Psychology
Prerequisite: PS 101
Etiology, dynamics, and treatment of psychopathology and their relation to normal personality are considered from traditional and contemporary perspectives.
Offered every year. 3 credits.

PS 340 Introduction to Psychometrics
Prerequisites: PS 101, PS 275
Methods and instruments used in the evaluation of the psychological attributes of human beings.
Offered every year. 3 credits.

PS 345 Cognitive Psychology
LASC—Writing Across the Curriculum
Prerequisite: PS 101
This course introduces students to areas of cognitive psychology including memory, language processing and decision making.
Offered every year. 3 credits.

PS 350 Group Dynamics
Prerequisite: PS 101
Group process deals with the basic issues of leadership, membership, developmental stages and types of groups, theoretically and experientially.
Offered every year. 3 credits.

PS 355 Social and Personality Development
Prerequisites: PS 101, PS 210
This course will examine social and personality development from Piagetian, Neo-Piagetian and Sociocultural perspectives.
Offered every year. 3 credits.

PS 360 Industrial/Organizational Psychology
Prerequisite: PS 101
A concentration on the work of the psychologist in industry/business and other organizational settings in the public and private sectors.
Offered every year. 3 credits.

PS 365 Cultural Psychology
LASC—Thoughts, Language and Culture; Human Behavior and Social Processes; Writing Across the Curriculum
Prerequisite: PS 101, EN 102, PS 210
This course addresses the role culture plays in human psychological processes and approaches to researching cultural aspects of human action.
Offered every year. 3 credits.

PS 380 Physiological Psychology
Prerequisite: PS 101
Psychobiological problems; current physiological research in emotion, motivation and learning and the use of physiological methods in psychology.
Offered every year. 3 credits.

PS 385 Motivation
Prerequisite: PS 101
A study of conditions that arouse, direct and sustain behavior. Topics include: goals, competence, control, arousal, self-esteem, achievement and stress.
Offered every year. 3 credits.

PS 390 History and Systems of Psychology
Prerequisite: PS 101
An historical perspective, tracing the development of psychology into a science.
Offered every year. 3 credits.
**Psychology**

**PS 400 Internship in Psychology**  
Prerequisite: Consent of Instructor  
Provides opportunity to advanced students to increase experience through internship with sponsoring community organization, institution, or business under appropriate supervision.  
Offered every year. 1-3 credits

**PS 405 Independent Study: Topics in Psychology**  
Prerequisites: PS 101, PS 205, PS 275, Consent of Instructor  
Students pursue an area or topic of interest under faculty supervision. Written report(s) required  
Offered every semester. 3 credits.

**PS 407 Independent Study: Advanced Research in Psychology**  
Prerequisites: PS 101, PS 205, PS 275, PS 307, Consent of instructor  
Students undertake empirical research under faculty supervision. Written report(s) required.  
Offered every semester. 3 credits.

**PS 410 Seminar in Developmental Psychology**  
Prerequisites: PS 101, PS 210 or PS 312  
Patterns of physical, mental and emotional development are explored with emphasis on independent work.  
Offered every year. 3 credits.

**PS 435 Clinical Psychology**  
Prerequisites: PS 101, PS 335  
Practical issues, methods and techniques of current psychotherapies with emphasis on psychoanalytic, client-centered, and behavioral approaches.  
Offered every year. 3 credits.

**PS 460 Advanced Industrial/Organizational Psychology**  
Prerequisites: PS 101, PS 360, any two of PS 250, PS 340, PS 350, PS 385  
An in-depth exploration of selected topics from the field of Industrial/Organizational Psychology.  
Offered every year. 3 credits.

**PS 480 Advanced Research Methods**  
Prerequisites: PS 101, PS 205, PS 275, PS 307  
Laboratory procedures and techniques on an advanced level applied to selected independent projects.  
Offered every 3 years. 3 credits.

**PS 485 Psychobiology of Mental Disorders**  
Prerequisites: PS 101, PS 380  
Human brain behavior relationships; neurological correlates of attention, cognition, perception, consequences of damage upon behavior.  
Offered every 2 years. 3 credits.

**PS 492 Seminar in Mental Health**  
Prerequisites: PS 101, PS 330, PS 335 and either PS 340 or PS 435  
This capstone seminar emphasizes knowledge and experiential skill-building necessary for entry into the field of Mental Health Services.  
Offered every year. 3 credits.

**PS 499: Honors Thesis**  
Prerequisites PS 101, PS 205, PS 275, PS 307, Concurrent registration in PS 407, Consent of Instructor  
Students participate in a seminar, complete an ongoing Honors Project, and prepare a thesis and summary poster for presentation.  
Offered in spring. 1 credit
Sociology

Department of Sociology

Faculty

Michelle Corbin, Assistant Professor (2011)
B.S., Western Michigan University; M.S. Eastern Michigan University;
Ph.D., University of Maryland

Sonya Conner, Assistant Professor (2011)
B.S., University of Louisiana at Lafayette; M.A., Ph.D., University of Oklahoma

Matthew Johnsen, Associate Professor (2007), Department Chair
A.B., Dartmouth College, Hanover, NH; M.S., New Hampshire College, Manchester;
Ph.D., North Carolina State University, Raleigh

Fortunata S. Makene, Associate Professor (2007)
B.A., University of Dar Es Salaam, Tanzania; M.S., St. Cloud State University,
Minnesota; Ph.D., University of Minnesota, Twin Cities

Francisco Vivoni, Assistant Professor (2013)
B.A., Universidad Puerto Rico en Rio Piedras;
Ph.D., University of Illinois at Urbana, Champaign

The sociology department strives to help its students develop insights about the workings of the social world and the influence of social structure. Its goal involves not just understanding the world, but working to change it. The departmental curriculum aims to help students uncover root causes of social problems and refine their personal understanding of social responsibility and economic justice. The sociology department embraces the goals of personal, community, and global citizenship. Ultimately, the department strives to provide guidance and teaching designed to help students live better lives in an atmosphere of mutual respect.

As a department engaged in public sociology, faculty strive to teach in ways that stress critical thinking joined with action, to advise and mentor students to prepare for lifelong learning and meaningful careers, to encourage students and faculty to collaborate with peers and partners in the community and contribute to the field, and to engage in service to prepare sociology majors to act in complex settings at home and at work, in their communities and the world. The department encourages majors and minors to participate in study away/study abroad activities.

Admission Requirements: Admission to the Sociology major is based on maintaining acceptable grades in the general foundation requirements and interest in the field of sociology. Interested persons may contact the Chair of the Sociology Department for further information. Upon admission, each major is assigned an advisor and receives an orientation in sociology.
**Sociology**

**Requirements for a Major in Sociology:** 30 credits including:

SO 100  Introduction to Sociology  
SO 270  Social Theory I  
SO 275  Social and Behavioral Statistics  
SO 280  Research Methods of Sociology

A maximum of two courses at the 100 level  
A minimum of three courses at the 300 and/or 400 level

All courses taken beyond the minimum requirements will be credited as electives.

**Requirements for a Minor:** 18 credits including:

SO 100  Introduction to Sociology or  
SO 200  Contemporary Social Problems

All prerequisites for 300 and 400 level courses must be met if the student wishes to elect courses at these levels.

**Five Year Bachelor of Science in Sociology/Masters in Non-Profit Management**

Through a combined five-year Bachelor of Science in Sociology/Masters in Non-Profit Management program of studies, it is possible for motivated full-time students who are sociology majors to complete a five-year program leading to degrees including both a Bachelors in Sociology and Masters in Non-Profit Management.

Students who have completed 90 undergraduate credits may apply for admission into the special five-year BS/MS program if they have an overall GPA of not less than 3.0 and a sociology major GPA of not less than 3.25. Students must complete an undergraduate internship, independent study or capstone project that incorporates work with a community-based organization as part of their undergraduate work. Students must meet all other requirements for admission to the Masters in Non-Profit Management. However, the GRE requirement is waived for students with an overall GPA of 3.25 or higher.

In order to complete the joint degree, in the final year of their Bachelors work, students take three graduate-level courses (9-11 credits) which would be counted toward both their undergraduate credit requirements and also toward requirements for the masters degree. This would allow students to complete course requirements for the Bachelors and Masters degrees in five years (60 months).

**Sample Timetable for Completion of Degree: Sociology**

**YEAR ONE**

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
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<tr>
<td></td>
<td>EN 101</td>
<td>English Composition I</td>
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</tr>
<tr>
<td></td>
<td>LASC</td>
<td>First-Year Seminar</td>
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<tr>
<td></td>
<td>SO 100</td>
<td>Introduction to Sociology</td>
<td>3</td>
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<tr>
<td></td>
<td>LASC</td>
<td>Quantitative Reasoning (QR)</td>
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<td>Constitutions</td>
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## Semester Two

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<tr>
<td>EN 102</td>
<td>English Composition II</td>
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<td>SO</td>
<td>Any 100 or 200 level course in major</td>
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<td>LASC</td>
<td>Natural Systems and Processes (NSP)</td>
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<td>Thought, Language and Culture(TLC)</td>
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<td>LASC</td>
<td>Human Behavior and Social Processes (HBS)</td>
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**Semester Subtotal** 16

### Comments

## YEAR TWO

### Semester Three

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<tr>
<td>SO 270</td>
<td>Social Theory I</td>
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<td>SO 280</td>
<td>Research Methods of Sociology</td>
<td>3</td>
</tr>
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<td>LASC</td>
<td>Global Perspectives (GP)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Natural Systems and Processes (NSP)</td>
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**Semester Subtotal** 15

### Semester Four

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<tbody>
<tr>
<td>SO 275</td>
<td>Social and Behavioral Statistics</td>
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<tr>
<td>SO</td>
<td>Any 200 level class</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Global Perspectives (GP)</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Creative Arts (CA)</td>
<td>3</td>
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<tr>
<td>LASC</td>
<td>The United States and Its Role in the World (USW)</td>
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**Semester Subtotal** 15

### Comments

## YEAR THREE

### Semester Five

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<tr>
<td>SO</td>
<td>Distribution elective in Major</td>
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</tr>
<tr>
<td>LASC</td>
<td>Human Behavior and Social Processes (HBS)</td>
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<tr>
<td>LASC</td>
<td>Individual and Community Well-Being (ICW)</td>
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**Semester Subtotal** 15
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<td>300/400 level course</td>
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<tr>
<td>SO</td>
<td>Distribution elective in Major</td>
<td>3</td>
</tr>
<tr>
<td>LASC</td>
<td>Thought, Language and Culture (TLC)</td>
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</tr>
<tr>
<td>SELECT</td>
<td>General Elective</td>
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<tr>
<td>SELECT</td>
<td>General Elective</td>
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</tbody>
</table>

**Semester Subtotal** 15

### Comments

- SOC 300/400 level course
- Distribution elective in Major
- Thought, Language and Culture (TLC)
- General Elective

### YEAR FOUR

#### Semester Seven

<table>
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<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<td>LASC/ SO 499</td>
<td>Sociology Capstone (or LASC Capstone)</td>
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<tr>
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**Semester Subtotal** 15

### Semester Eight

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<tr>
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<td>General Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Subtotal** 15

### Comments

- Once LASC requirements are satisfied, students may select general requirements.
- Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.
Sociology Courses

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

SO 100 Introduction to Sociology
LASC—Human Behavior and Social Processes
Introduction to the scientific study of social life through the identification and analysis of regularized patterns of human behavior and relationships.
Offered every year. 3 credits.

SO 110 Cultural Anthropology
Cross cultural analysis of the human capacity, for adaptation and technological and ideological development. Significant field studies will be examined.
Offered every year. 3 credits.

SO 190 Sport and Society
Analysis of sport as a social system. The implication of sport within interrelational contexts of other social systems.
Offered every 2 years. 3 credits.

SO 193 Special Topics in Sociology for First-Year Students
All "193" courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval. Introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar.
Offered every year. 3 credits.

SO 199 Special Topics
Introductory level topics. Topic announced at pre-registration.
Offered every 3 years. 3 credits.

SO 200 Contemporary Social Problems
LASC—Human Behavior and Social Processes
Analysis of social, political, urban, and industrial changes which have introduced specific problems into contemporary society.
Offered every year. 3 credits.

SO 205 Issues in American Society
Prerequisite: SO 100
Identification and analysis of current social issues facing contemporary American society, and critique of policies and programs designed to resolve these issues.
Offered every 2 years. 3 credits.

SO 215 Medical Sociology
LASC—Human Behavior and Social Processes; Individual and Community Well-Being
Prerequisite: SO 100
The structure of health care delivery systems and role interaction between levels of health care personnel, patients, and families of patients.
Offered every year. 3 credits.

SO 220 Sociology of the Family
LASC—Human Behavior and Social Processes
Prerequisite: SO 100
A comparative approach to the study of family systems with emphasis on the changing patterns of family life.
Offered every year. 3 credits.

SO 225 Family in Middle Eastern Societies
Prerequisite: SO 100
Study of family systems in the Middle East and the forces of change affecting traditional family patterns.
Offered every 3 years. 3 credits.
SO 230 Political Sociology
Prerequisite: SO 100
Foundations of social movements in political phenomena, social conditions and emerging political institutions; the structural basis of social change and politics. Offered every 3 years. 3 credits.

SO 235 Music and Social Change
LASC—Creative Arts, Human Behaviors and Social Processes
Using case studies, social theory and historical materials, this course explores the role of music in social change. Offered every 3 years: 3 credits.

SO 240 Sociology of Education
Prerequisite: SO 100
Study of modern educational systems, emphasizing the social, political and economic factors that influence its organization and its functions. Offered every 2 years. 3 credits.

SO 250 Sociology of Religion
LASC—Human Behavior and Social Processes; Individual and Community Well-Being; Diversity Across the Curriculum
Prerequisite: SO 100
A cross-cultural comparative study of the nature of religious institutions as systems of socially determined and socially relevant beliefs and practices. Offered every 2 years. 3 credits.

SO 255 Sociology of Disability
LASC—Human Behavior and Social Processes; Individual and Community Well-Being; Diversity Across the Curriculum
Using theory and practical application, this course explores the impact of impairment and disability within a societal context. Offered every 2 years: 3 credits.

SO 270 Social Theory I
Prerequisite: SO 100
Fundamental concepts and intellectual traditions, especially the contributions of Comte, Spencer, Marx, Toennes, Durkheim, and Simmel. Offered every year. 3 credits.

SO 275 Social and Behavioral Statistics
Prerequisites: SO 100 and any 200 Sociology Course; SO 280 recommended
Data tabulation; graphing; measurement of central tendency, variability, and correlation; hypothesis testing applied to psychological and sociological data. Hand and computer analysis. Offered every year. 3 credits.

SO 280 Research Methods of Sociology
Prerequisite: SO 100
An analysis of the research function in sociology; the conduct of research appropriate to undergraduate students; the formal presentation of research papers. Offered every year. 3 credits.

SO 285 Race, Class and Gender
LASC—Diversity Across the Curriculum; Human Behavior and Social Processes
An introduction to dominant-minority group relations through the investigation of the patterns and dynamics of differentiation, inequality and discrimination. Offered every semester. 3 credits.

SO 299 Special Topics
Prerequisite: SO 100
Intermediate level topics. Topic announced at pre-registration. Offered every 3 years. 3 credits.
SO 300 Social Change
LASC—Social Processes and Community Well-Being; Writing Across the Curriculum
Prerequisites: Two courses at 200-level, EN 102
A study of the conditions, patterns, and consequences of social transformations with emphasis on institutional and individual patterns of adjustment and adaptation.
Offered every 3 years. 3 credits.

SO 305 Applied Sociology and Community Research
Prerequisites: SO 100, SO 280; SO 275 recommended
Explores the theory and methods of applied sociology, including ethnographic, institutional, participatory research techniques in community settings.
Offered every 3 years. 3 credits.

SO 310 Formal Organizations
Prerequisites: Two courses at 200-level
The structure and function of, and communications systems within, formal and complex organizations; primary focus on theoretical aspects of organizations.
Offered every 3 years. 3 credits.

SO 315 Collective Behavior
Prerequisites: Two courses at 200-level
Processes by which new norms and forms of social organization emerge from group behavior, aggregate behavior, and social movements.
Offered every 3 years. 3 credits.

SO 330 Criminology
Prerequisites: Two courses at 200-level
Theoretical perspective on crime, criminals and the social aspects of interrelationships within, and between the components of the criminal justice system.
Offered every year. 3 credits.

SO 335 Juvenile Delinquency
Prerequisites: Two courses at 200-level
Dynamics of small group involvement and other environmental influences in the shaping of an individual’s personality.
Offered every 3 years. 3 credits.

SO 340 Social Psychology
Prerequisites: Two courses at 200-level
Dynamics of small group involvement and other environmental influences on the shaping of an individual’s personality.
Offered every year. 3 credits.

SO 345 Sociology of Deviance
Prerequisites: Two courses at 200-level
Study of the nature and consequences of deviant behavior with emphasis on socialization, social relationships, and patterns of social control.
Offered every 3 years. 3 credits.

SO 350 Social Stratification
LASC—Human Behavior and Social Processes; Writing Across the Curriculum; Diversity Across the Curriculum
Prerequisites: Two courses at 200-level, EN 102
Investigation of the recurrent patterns of social differentiation, social ranking, and the unequal distribution of rewards.
Offered every 2 years. 3 credits.
SO 355 Gender and Sexuality
This course introduces the sociologist study of gender and sexuality. This course examines how social institutions and cultural norms construct particular gender roles and sexual identities within society.
Offered every year. 3 credits.

SO 360 Urban Sociology
Prerequisites: Two courses at 200-level
A cross-cultural study of urban social systems and the phenomena and problems connected with the planning process.
Offered every 2 years. 3 credits.

SO 375 Contemporary Social Theory
Prerequisites: SO 270
Review of sociological theories, analytical tools, and conceptual schemes prevalent in contemporary debate and consensus.
Offered every 3 years. 3 credits.

SO 400 Independent Study
Prerequisites: Four prior courses in sociology and consent of instructor/chair.
For advanced sociology majors only; topic to be approved by an independent study advisor.
Offered every year. 1-6 credits.

SO 410 Field Work
Prerequisites: Four prior courses in sociology and consent of instructor/chair.
Data collection based on participant observation within a social service organization; assignment approval by field work advisor.
Offered every year. 1-6 credits.

SO 420 Seminar in Sociology
Prerequisites: Four prior courses in sociology and consent of instructor/chair.
Advanced study topics in selected areas of sociology; announcement made at pre-registration time.
Offered every 3 years. 1-3 credits.

SO 425 Global Development
LASC—Global Perspectives; Human Behavior and Social Processes; Writing Across the Curriculum
This course gives an overview of the field of development and processes of development and underdevelopment in developing countries.
Offered every 2 years. 3 credits.

SO 435 Introduction to Social Enterprise
LASC—Human Behavior and Social Processes; Individual and Community Well-Being; Writing Across the Curriculum
Prerequisites: 60 undergraduate credits, EN 120
This course examines social entrepreneurship and social enterprise in a global context.
Offered every year. 3 credits.

SO 499 Sociology Capstone
LASC—Human Behavior and Social Processes
Prerequisites: SO 270, SO 275, SO 280
This course is an overview of the discipline of sociology, emphasizing mastery of the discipline at an undergraduate level.
Offered every year. 4 credits.
Spanish
Department of World Languages

Faculty

Guillermina Elissondo, Professor (1999)
B.A., Universidad Católica de Mar del Plata, Argentina; M.A., Michigan State University; Ph.D., University of North Carolina – Greensboro

Judith Jeon-Chapman, Professor (1993)
B.A., College of St. Benedict; M.A., Ph.D., University of Washington

Jeanne Laplatney, Assistant Professor, (2013)
B.A., University of North Carolina; M.A., Ph.D., University of Virginia

Ana Pérez-Manrique, Associate Professor (2006)
B.A., Universidad de Málaga, Spain; M.A., University of South Carolina; Ph.D., Florida State University

Juan Orbe, Professor (1996)
B.A., Universidad Nacional de La Plata, Argentina; M.A., Ph.D., Michigan State University

Dennis Quinn, Professor (1996), Acting Department Chair
B.A., Worcester State College; M.A., Assumption College; Ph.D., University of Massachusetts

Courses in Spanish are designed for students whose interests and career plans have an international or multi-ethnic focus. Students who major or minor in a language will develop listening, speaking, reading, and writing fluency and will study the culture, history and literature of the people who use the language.

Alpha Mu Gamma, a national honor society in foreign languages, recognizes excellence in the study of foreign languages. Any Worcester State University student who receives two “A’s” in Spanish, or two “A’s” in French, at any level and who has a 3.0 cumulative GPA is eligible to join. Application for membership is in early February. Contact Professor Judith Jeon-Chapman.

The Major in Spanish: The major in Spanish is designed to offer students the opportunity to consolidate their study of the language with a related field of study. Students who major in Spanish can choose to concentrate on 1) the Standard Spanish Major, 2) K-12 Teaching Certification in Spanish or 3) Spanish for the Professions. All of these programs have been configured to maximize the potential of the student in today’s professional climate as well as to prepare the student for admittance into graduate programs at other institutions. Students who major in Spanish will develop fluency in listening, speaking, reading and writing skills and will study the culture, history and literature of Spain and the Americas.
Students are strongly encouraged to take a Placement Exam in Spanish at the Academic Success Center. Study-Abroad opportunities are available for language study in several Spanish-speaking countries.

Information on the Spanish Clinic, Spanish Club, and Spanish Table can be found at the Department of World Languages website.

**Requirements for a Major in Spanish:** 36 credits including:

- **SP 210-211** Intermediate Spanish courses (6 credits maximum: These courses may be waived by oral and/or written examination)
- **SP 321** Advanced Spanish Composition I *
- **SP 322** Advanced Spanish Composition II
- **SP 323** Advanced Spanish Conversation I **
- **SP 326** Spanish for the Professions
- **SP 331** Spanish Civilization
- **SP 332** The Hispanic World Today or SP 333 The Hispanic Presence in the United States

Spanish Literature courses (6 credits minimum)

Spanish Electives in Advanced Language, Civilization or Literature

Students must demonstrate competency in a second foreign language at the elementary level.

* Required of all students unless exempted by the Department of World Languages.

**This course is a required course for all non-native Spanish speakers.

(Students with advanced knowledge of Spanish should begin at 300-level)

---

**Sample Timetable for Completion of Degree: Spanish**

**YEAR ONE**

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>LASC</td>
<td>LASC</td>
<td>First-Year Seminar</td>
<td>3</td>
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<tr>
<td>EN 101</td>
<td>EN 101</td>
<td>English Composition I</td>
<td>3</td>
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<tr>
<td>SP 210</td>
<td>SP 210</td>
<td>Intermediate Spanish I</td>
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<tr>
<td>LASC</td>
<td>LASC</td>
<td>Natural Systems and Processes (NSP)</td>
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<td>US and the World (USW)</td>
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**Semester Subtotal** 15

<table>
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<td>LASC</td>
<td>LASC</td>
<td>Quantitative Reasoning (QR)</td>
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<td>LASC</td>
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**Semester Subtotal** 15

**Comments**
## YEAR TWO

### Semester Three

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<td>SP 323</td>
<td>Advanced Spanish Conversation I</td>
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Comments

## YEAR THREE

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<td>SP</td>
<td>300/400 Literature Elective</td>
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<td>LASC</td>
<td>Individual and Community Well-Being (ICW)</td>
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Comments
### Year Four

#### Semester Seven

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<td>LASC/SP</td>
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**Semester Subtotal** 15

#### Semester Eight

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<tr>
<td>SELECT</td>
<td>General Elective</td>
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</table>

**Semester Subtotal** 15

### Comments

Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.
Requirements for a Major in Spanish with Concentration in Spanish/Education: 36 credits including:

SP 210-211 Intermediate Spanish courses (6 credits maximum: These courses may be waived by oral and/or written examination)

SP 321 Advanced Spanish Composition I *

SP 322 Advanced Spanish Composition II

SP 323 Advanced Spanish Conversation I **

SP 326 Spanish for the Professions

SP 331 Spanish Civilization

SP 332 The Hispanic World Today or SP 333 The Hispanic Presence in the United States

SP 355 The Effective Teaching of a Foreign Language

Spanish Literature courses (9 credits minimum)

* Required of all students unless exempted by the Department of World Languages.

** This course is a required course for all non-native Spanish speakers.

(Students with advanced knowledge of Spanish should begin at 300-level)

Students must also complete the requirements established by the Education Department. The course of study which leads to teaching certification is in Secondary Education.

Students must also demonstrate competency in a second foreign language at the intermediate level.

Sample Timetable for Completion of Degree: Spanish, Secondary Education Minor

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<td><strong>Course No.</strong></td>
<td><strong>Course Name</strong></td>
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<td>EN 101</td>
<td>English Composition I</td>
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<td>SP 210</td>
<td>Intermediate Spanish I</td>
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<td>PS 101</td>
<td>General Psychology I</td>
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<td>WL/LASC</td>
<td>Other Language 101 course (TLC)</td>
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| **Semester Two** | |
| **Course No.** | **Course Name** | **Credits** |
| EN 102 | English Composition II | 3 |
| LASC | Constitutions | 3 |
| SP 211 | Intermediate Spanish II | 3 |
| PS 312 | Psychology of Adolescence | 3 |
| WL | Other Language 102 course | 3 |
| **Semester Subtotal** | 15 |

Comments
## YEAR TWO

<table>
<thead>
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<td>Introduction to the Teaching Profession</td>
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<th>Course Name</th>
<th>Credits</th>
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<tr>
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<td>SP 322</td>
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<td>SP 331</td>
<td>Spanish Civilization</td>
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<td>ED 250</td>
<td>Educational Psychology Middle and Secondary Majors</td>
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<td>WL</td>
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<td></td>
<td>LASC</td>
<td>Natural Systems and Processes (NSP)</td>
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<td></td>
<td>LASC</td>
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## YEAR THREE

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<td></td>
<td>SP 326</td>
<td>Spanish for the Professions</td>
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<td>SP</td>
<td>Either 332 or 333</td>
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<td></td>
<td>ED 251</td>
<td>Foundations of Education</td>
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<td>LASC</td>
<td>Global Perspectives (GP)</td>
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<tr>
<td></td>
<td>LASC</td>
<td>Quantitative Reasoning (QR)</td>
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<td></td>
<td>LASC</td>
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<tbody>
<tr>
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<td>300/400 Literature Elective</td>
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<td>ED 270</td>
<td>Diversity and Multicultural Education</td>
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<td>LASC</td>
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## YEAR FOUR

### Semester Seven

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<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>LASC/SP</td>
<td>300 or 400 Level Literature Elective/CAPSTONE</td>
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<td>SP 355</td>
<td>Effective Teaching of a Foreign Language</td>
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<td>ED 351</td>
<td>Principles of Curriculum</td>
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<td>ED 353</td>
<td>Effective Teaching in the Secondary School</td>
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<td>ED 371**</td>
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**Semester Subtotal: 18 credits**

### Semester Eight

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<td>Seminar: Teaching Practicum</td>
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**Semester Subtotal: 12 credits**

**Comments:**

- Students must take and pass the MTEL in their subject matter to be admitted into Stage 3.

Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.

### Concentration in Spanish for the Professions: (36 credits)

This concentration must be completed in conjunction with a minor or major in another field. The concentration in Spanish for the Professions is recommended for students with a second major or minor for whom a college-level command of the language significantly enhances opportunities for graduate school and/or employment. This course of study must be approved by the department.

**Required courses:**

- **SP 210-211** Intermediate Spanish courses (6 credits maximum: These courses may be waived by oral and/or written examination)
- **SP 321** Advanced Spanish Composition I* and/or **SP 322** Advanced Spanish Composition II
- **SP 323** Advanced Spanish Conversation I**
- **SP 326** Spanish for the Professions
- **SP 327** Projects and Issues in Spanish for the Professions
- **SP 331** Spanish Civilization
- **SP 332** The Hispanic World Today or **SP 333** The Hispanic Presence in the United States
- Spanish Literature courses (3 credits minimum)
- Internship in Spanish (3 credits minimum)
- Spanish Electives in Advanced Language, Civilization, Literature, Internship or Special Topics in Spanish for the Professions

There is no second foreign language requirement for this concentration.

*Required of all students unless exempted by the Department of World Languages.

**This course is a required course for all non-native Spanish speakers.
# Sample Timetable for Completion of Degree: Spanish for the Professions

## YEAR ONE

### Semester One

<table>
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<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tr>
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**Semester Subtotal: 15**

### Semester Two

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**Semester Subtotal: 15**

## YEAR TWO

### Semester Three

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**Semester Subtotal: 16**

### Semester Four

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**Semester Subtotal: 15**
### YEAR THREE

#### Semester Five

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<td>LASC</td>
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Semester Subtotal 15

#### Semester Six

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<th>Course Name</th>
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<td>Spanish Civilization</td>
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Semester Subtotal 15

### YEAR FOUR

#### Semester Seven

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Semester Subtotal 15

#### Semester Eight

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Semester Subtotal 13-18

Comments

Spanish
Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.

Requirements for a Minor in Spanish: 18 credits including:
- SP 100-299, beginning and intermediate courses (12 credits maximum)
- SP 300-499, advanced courses (6 credits minimum)

(Students with advanced knowledge of Spanish should begin at 300-level)

Spanish Courses

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

SP 101 Beginning Spanish I
LASC—Thought, Language and Culture
Basic oral and written proficiency for daily communication; may be taken as a self-contained unit or as a basis for further development. Audio-visual method.
Offered every year. 3 credits.

SP 102 Beginning Spanish II
LASC—Thought, Language and Culture
Prerequisite: SP 101 or equivalent
Continuation of SP 101.
Offered every year. 3 credits.

SP 191 Special Topics in Spanish
An introductory level courses in Spanish on current or specialized topics.
Offered every year. 3 credits.

SP 193 Special Topics in Spanish for First-Year Students
All “193” courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval.
An introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar.
Offered every year. 3 credits.

SP 210 Intermediate Spanish I
LASC—Thought, Language and Culture
Prerequisite: SP 102 or equivalent
Conversational patterns, idioms, dialogues, and special vocabularies for daily life situations.
Offered every year. 3 credits.

SP 211 Intermediate Spanish II
LASC—Thought, Language and Culture
Prerequisite: SP 210 or equivalent
Continuation of SP 210.
Offered every year. 3 credits.

SP 321 Advanced Spanish Composition I
LASC—Thought, Language and Culture
Prerequisite: Two SP 200 level courses
Facility in prose reading and writing; study of style of selected authors; variety of expression through word discrimination, and advanced grammatical structures.
Offered every year. 3 credits.
SP 322 Advanced Spanish Composition II
LASC—Thought, Language and Culture
Prerequisite: SP 321 or equivalent
Continuation of SP 321. Offered every year. 3 credits.

SP 323 Advanced Spanish Conversation I
LASC—Thought, Language and Culture
Prerequisite: Two SP 200 level courses.
Intensive conversational practice for improving intonation, pronunciation, fluency, review of language usage. This course is for non-native Spanish speakers only. Offered every year. 3 credits.

SP 324 Advanced Spanish Conversation II
LASC—Thought, Language and Culture
Prerequisite: SP 323 or equivalent.
Continuation of SP 323. Offered every year. 3 credits.

SP 326 Spanish for the Professions
LASC—Global Perspectives; Thought, Language and Culture
Prerequisite: SP 321, SP 323 or instructor’s approval.
Intensive practice with language and documents used in private and public sectors including business, medicine, communication, education and social services. Offered every year. 3 credits.

SP 327 Projects and Issues in Spanish for the Professions
Prerequisite: SP 321, SP 323, SP 324 or instructor’s approval.
Close study of selected projects and bicultural issues for Spanish professionals. Offered every year. 3 credits.

SP 331 Spanish Civilization
Prerequisite: Two SP 200 level courses
A historical survey of Spanish social, cultural, and political life. Conducted in Spanish. Offered every year. 3 credits.

SP 332 The Hispanic World Today
LASC—Global Perspectives; Diversity Across the Curriculum
Prerequisite: Two SP 200 level courses
Social, economic and political institutions; value systems and customs. Conducted in Spanish. Offered every 2 years. 3 credits.

SP 333 The Hispanic Presence in the United States
Prerequisite: Two SP 200 level courses
Sociocultural study of Hispanics in the United States, with a focus on major contemporary issues. Conducted in Spanish. Offered every 2 years. 3 credits.

SP 341 Readings in Spanish Literature
Prerequisite: SP 321, SP 323, SP 324 or instructor’s approval.
Selected masterpieces from Middle Ages to present; social, cultural, and stylistic features of different periods. Recommended as a first course in Spanish literature. Offered every 3 years. 3 credits.

SP 342 Introduction to Latin American Literature I
Prerequisite: SP 321, SP 323, SP 324 or instructor’s approval.
Study of the literature produced in Latin America from the pre-Columbian era until the first wars of independence. Offered every 3 years. 3 credits.
Spanish

SP 343 Poetry and Theatre of Spain’s Golden Age
Prerequisite: SP 321, SP 323, SP 324 or instructor’s approval.
Study of the poetry and drama created during the Renaissance and Baroque periods, known as the Golden Age of Spanish letters.
Offered every 3 years. 3 credits

SP 348 Contemporary Spanish Literature
Prerequisite: SP 321, SP 323, SP 324 or instructor’s approval.
Literary works from the generation of 1898 to the present.
Offered every 3 years. 3 credits.

SP 349 Spanish-American Literature
Prerequisite: SP 321, SP 323, SP 324 or instructor’s approval.
Representative works from South and Central American authors from the colonial period to the present.
Offered every 3 years. 3 credits.

SP/ED 355 Effective Teaching of a Foreign Language
Prerequisite: SP 321, SP 323, SP 324, ED 251, 270, 351 or 352 or instructor’s approval.
Examines and evaluates effective teaching techniques and strategies as well as second-language acquisition theory for middle/secondary foreign language classrooms.
Offered every 3 years. 3 credits

SP 390 Spanish for Native Speakers
This course will explore contemporary issues as a basis for further development of the Spanish language skills of native speakers.
Offered every 3 years. 3 credits

SP 401 Advanced Study: Special Topics
Prerequisite: For advanced students
Special topics in language, literature, civilization or field work of mutual interest to student and instructor.
Offered every year. 3 credits.

SP 402 Independent Study in Spanish
Prerequisite: Consent of instructor
Study of a special topic. Both content and eligibility are subject to departmental guidelines and approval.
Offered every year. 1-6 credits.

SP 403 Teaching Assistantship in Spanish
Prerequisite: Consent of instructor
Teaching Assistants in Spanish will regularly attend the beginning or intermediate-level Language courses to which they are assigned to assist the professor.
Offered every year. 3 credits.

SP 475 Internship in Spanish
Prerequisite: Consent of instructor and department
Provides majors practical experience in areas where their speaking, reading, and writing skills may be applied.
Offered every year. 3 credits.

Note: Courses in other foreign languages such as German, Latin, Russian, Chinese and Hebrew are offered when demand warrants and staffing permits.
Theatre
Department of Visual and Performing Arts

Faculty
John H. Hood, Professor (2004)
B.F.A., Arizona State University; M.F.A., University of Minnesota
Sam O’Connell (2010)
B.A., M.A., Washington University; Ph.D., Northwestern University
Adam Zahler, Associate Professor (2007), Department Chair
B.A., University of Vermont; M.F.A., University of Virginia

The theatre program offers courses in theatre history, theatre for young audiences, design and performance. Mainstage productions, some in cooperation with the music program, are produced on a regular basis. Advanced students are encouraged to stage their own laboratory shows and also to intern with local theatre companies. The theatre faculty teaches interdisciplinary courses with faculty from Art and Music.

Requirements for a Major
The newly instituted Interdisciplinary Visual and Performing Arts Major offers concentrations in Art, Music, or Theatre. See Visual and Performing Arts Department.

Requirements for Minor in Theatre: 18 credits comprised of the following courses: TH 191 Introduction to the Theatre; TH 245 Acting I; TH 275 Introduction to Stagecraft and Design; and TH 321 Rehearsal and Performance, and two other 3 credit-hour theatre courses.

Theatre Courses
For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

TH 135 Oral Interpretation of Literature
LASC—Creative Arts
Techniques of reading aloud and staging non-dramatic literature; e.g., short stories, poetry, etc. The student analyzes selections and then performs them in class.
Offered every year. 3 credits.

TH 191 Introduction to Theatre
LASC—Creative Arts
An overview of live performance, with the emphasis on audience appreciation. Performance arts and crafts are examined.
Offered every year. 3 credits.
Theatre

**TH 193 Special Topics in Theatre for First-Year Students**
All “193” courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval. Introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar. Offered every year. 3 credits.

**TH 226 Script Analysis**
Script analysis for theatre artists. How to take a script from initial reading to production. Offered every year. 3 credits.

**TH 236 History of Theatre I**
LASC—Creative Arts; Thought, Language and Culture
Survey of world theatre from Golden Age of Athens to Restoration England, including brief overview of Asian theatre. Offered every year. 3 credits.

**TH 237 History of Theatre II**
LASC—Creative Arts; Thought, Language and Culture
Survey of western theatre from eighteenth to twentieth century, with reference to roots and developments in other world cultures. Offered every year. 3 credits.

**TH 245 Acting I**
LASC—Creative Arts
Introductory acting theory and practice. Students present brief monologues and scenes on stage. Offered every year. 3 credits.

**TH 246 Voice and Movement**
Prerequisite: TH 191, TH 245
Training to strengthen the natural voice, develop diction, learn period movement and develop spatial awareness on and off stage. Offered every year. 3 credits.

**TH 270 History of American Entertainment I**
An historical survey of American popular entertainments from the Colonial period through the end of the nineteenth century. Offered every 2 years. 3 credits.

**TH 271 History of American Entertainment II**
An historical survey of American popular entertainments from the rise of film and radio through the great American musicals. Offered every 2 years. 3 credits.

**TH 272 History of Costume**
LASC—Creative Arts
The history of clothing from ancient times to the present. Lecture/discussion and a research project on a chosen era or culture. Offered every two years. 3 credits.

**TH 275 Introduction to Stagecraft and Design**
LASC—Creative Arts
Fundamentals of theatre production including scenic, costume and lighting, focused on the crafts and technology behind the scenes. 30-hour practicum required. Offered every year. 3 credits.

**TH 290 Theatre for Young Audiences**
Organization of children's theatre, script selection, visual design, rehearsal and performance. Investigation of creative drama as a teaching tool in elementary education. Offered every year. 3 credits.

**TH 292 Creative Dramatics**
Principles and techniques of leading improvised dramatic activities with children and adults. Involves sensory awareness, imagination, movement, and story dramatizations. Offered every year. 3 credits.
TH 321 Rehearsal and Performance  
LASC—Creative Arts  
Public performance of full-length stage productions under faculty direction. Students assume performance and/or production “roles” as described in departmental manual.  
Offered every year. 3 credits.

TH 335 History of American Theatre  
LASC—Creative Arts; United States and Its Role in the World  
The history of American theatre from its beginnings to the present day.  
Offered every two years. 3 credits.

TH 345 Acting II  
Prerequisite: TH 191, TH 245  
Further development of acting skills with emphasis on stage-acting technique.  
Offered every year. 3 credits.

TH 348 Stage Combat  
Prerequisite: TH 191, TH 245  
Training in armed and unarmed combat for the stage. Emphasis will be placed on safety and choreography of stage fighting.  
Offered every year. 3 credits.

TH 350 Playwrighting  
Prerequisite: EN 102  
Writing for the stage, both theory and practical exercises. Students complete a one-act play by the end of the course.  
Offered once a year. 3 credits.

TH 355 Theatre Practicum  
Practical work on Theatre production in various areas including acting, design, stage management, construction, etc.  
Offered every year. 1 credit

TH 360 Scenic Design for Theatre  
LASC—Creative Arts  
Scenic Design for Theatre will include research, drafting, drawing and rendering, model building, and presentation of scenic designs for assigned plays.  
Offered every year. 3 credits.

TH 370 Costume Design for Theatre  
LASC—Creative Arts  
Conceptualization, collaboration, research, figure drawing and rendering, swatching, organization, and presentation of costume designs for assigned plays.  
Offered every year. 3 credits.

TH 380 Directing  
Prerequisite: TH 245, TH 191  
Script selection, casting, scene analysis, blocking, rehearsal techniques, and other concerns of the theatrical director. Students direct short scenes and short plays.  
Offered every 2 years. 3 credits.

TH 390 Lighting Design for Theatre  
LASC—Creative Arts  
Study and exercises in conceptualization, previsualization, collaboration, design presentation, qualities and functions of light, drafting the light plot, and control of theatrical lighting.  
Offered every year. 3 credits.

TH 399 Special Topics in Theatre  
Will include study of topics on an as needed basis, (i.e., a course in conjunction with a production, or a course for advanced students who wish to pursue further study.  
Offered at the discretion of the department. 3 credits.
The goal of the Department of Urban Studies is to foster an understanding of the complex challenges that face our increasingly urban and metropolitan world. The field of Urban Studies uses an interdisciplinary approach to understand metropolitan life. It immerses students in an academically rigorous and personally challenging course of study that helps them discover who they are, and how they can become change agents in our global society. The Urban Studies Department cultivates the development of critical thinking skills necessary to function effectively in today's competitive world. Department graduates enjoy outstanding careers in a wide variety of occupations, such as, public administration, policy development, non-profit management, urban planning, business, law, human services, health care management, housing management, gerontology and social work.

Requirements for the Major: 36 credits. All Urban Studies majors are required to take the following courses:

- UR 101 Introduction to Urban Studies
- UR 212 American Metropolitan Evolution or
- UR 301 Cities and Suburbs
Students are encouraged to take community based experiential courses, including practicum and internship. These course credits may not exceed a total of 12, three of which may count towards the major. Students may take the internship after completing 18 credits in the major. The practicum can be taken at any time, upon permission of department.

### Sample Timetable for Completion of Degree: Urban Studies

#### YEAR ONE

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Semester Subtotal: 15

| Comments |

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Semester Subtotal: 15

| Comments |

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Semester Subtotal: 15

| Comments |
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Semester Subtotal 13-18

Comments

Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.

Requirements for a major in Urban Studies, Concentration in Public Administration and Planning: The required courses for the major, 3 credits in experiential learning (internship or practicum), and 3 of the following:

UR 201  Analysis of Urban Systems
UR 310  Power, Politics, and Decision-Making in Urban Communities
UR 311  Community Politics and Policies
UR 340  Urban Housing Dilemma
UR 360  Environmental Systems and Public Policy
UR 361  Public Policy and Environmental Issues
UR 370  Structure and Function of Urban Organizations
UR 380  Public Policy and Cultural Diversity
UR 430  Seminar in Current Urban Problems

Requirements for a Major in Urban Studies, Concentration in Social Work and Social Policy: The required courses for the major, 3 credits in experiential learning (internship or practicum), and 3 of the following:

UR 305  Group Conflict in the Urban Community
UR 306  Interviewing and Counseling Techniques
UR 321  Social Work in Urban Society
UR 325  Social Casework in the Urban Setting
UR 341  Urban Health and Social Policy
UR 350  Urban Youth in American Society
UR 351  Public Policy and Youth Services
UR 380  Public Policy and Cultural Diversity

Requirements for a major in Urban Studies, Concentration in Intergenerational and Community Service: The required courses for the major, 3 credits in experiential learning (internship or practicum), and 3 of the following:

UR 202  Aging and Metropolitan Society
UR 216  Women and Aging
UR 321  Social Work in Urban Society
UR 344  A Society for All Ages
UR 350  Urban Youth in American Society
UR 351 Public Policy and Youth Services
UR 352 Public Policy for an Aging Society

Requirements for a Major in Urban Studies with a concentration in Gerontology:
the required courses for the major
PS 322 Psychology of Aging
and 3 of the following:
UR 202 Aging in Metropolitan Society
UR 216 Women and Aging in the Urban Environment
UR 341 Urban Health and Social Policy
UR 352 Policy Planning for an Aging Society
Aging Policy for a Third Age (offered as part of the Consortium Gerontology Studies Program)

Requirements for a Minor: 18 credits including the following:
UR 101 Introduction to Urban Studies
UR 212 American Metropolitan Evolution
UR 213 Human Identity and the Urban Environment
Three additional UR 300-level courses

Requirements for a Minor in Intergenerational Studies and Community Service:
Choose 6 of the following for 18 credits:
UR 101 Introduction to Urban Studies
UR 320 Human Needs and Social Policy
UR 344 A Society for All Ages: Intergenerational Community Service
UR 400 Practicum in Urban Studies
UR 216 Women and Aging or
UR 202 Aging and Metropolitan Society
UR 350 Urban Youth in American Society or
UR 351 Public Policy and Youth Services

Requirements for a five-year Bachelor of Science in Urban Studies / Master of Science in Non-Profit Management:
Students who have completed 90 undergraduate credits may apply for admission into the special five-year BS/MS program if they have an overall GPA of not less than 3.0 and an urban studies major GPA of not less than 3.25. To be eligible, students must complete an undergraduate internship, independent study or capstone project that incorporates work with a community-based organization as part of their undergraduate work. Students must meet all the other requirements for admission to the Masters in Non-Profit Management. However, the standardized test scores (GRE, GMAT and MAT) requirement is waived for students with an overall GPA of 3.25 or higher.

In order to complete the joint degree, in the final year of their Bachelors work, students take three graduate-level courses (9-11 credits) which count toward both their undergraduate credit requirements and also toward requirements for the masters degree. Students must also take at least one summer class between the spring of their BS gradation and the fall in which they embark on fulltime graduate studies. This would allow students to complete course requirements for the Bachelors and Masters degrees in five years (60 months).
Urban Studies Courses (Undergraduate)

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

UR 101 Introduction to Urban Studies

LASC—Human Behavior and Social Processes; United States and Its Role in the World

A broad contextual overview of urban life that examines the relationship of people to their environment from an interdisciplinary perspective.

Offered every year. 3 credits.

UR 103 Introduction to Women's Studies

This course uses a variety of academic disciplines to study the situation of women around the world.

Offered every 2 years. 3 credits.

UR 191 Special Topics in Urban Studies

This introductory level course will cover topics in Urban Studies which are of special interest to first-year students.

Offered every year. 3 credits.

UR 193 Special Topics in Urban Studies for First-Year Students

All “193” courses are approved for LASC but may vary by section. See current course listing for specific LASC area approval. Introductory level course covering topics of special interest to first-year students. Offered only as a First-Year Seminar.

Offered every year. 3 credits.

UR 201 Analysis of Urban Systems

LASC—Human Behavior and Social Processes

Analysis of activities, programs, and policies designed to sustain and enhance the livability of individuals in an urban environment.

Offered every 2 years. 3 credits.

UR 202 Aging in Metropolitan Society

An introduction to gerontology stressing the social, economic and political aspects of aging in the urban environment.

Offered every 2 years. 3 credits.

UR 212 American Metropolitan Evolution

LASC—United States and Its Role in the World; Writing Across the Curriculum

Prerequisite: UR 101

Development of metropolitan America from a multi-disciplinary approach with emphasis upon dynamics of urban growth, internal development of cities, immigrations, socioeconomic stratification, metropolitanization and problems deriving from growth.

Offered every year. 3 credits.

UR 213 Human Identity and the Urban Environment

Prerequisite: UR 101

Study of factors affecting identity in contemporary urban settings including race, ethnicity, class, age, and sex categories and roles.

Offered every year. 3 credits.

UR 215 Information Management in Urban Studies

Prerequisite: UR 101

Designed to familiarize students with various methods of managing, creating and reporting information.

Offered every 3 years. 3 credits.

UR 216 Women and Aging in the Urban Environment

LASC—Human Behavior and Social Processes; Writing Across the Curriculum

Investigation of the Aging process for women in urban society, focusing on their great longevity, lower income status, and major caregiving role.

Offered every 2 years. 3 credits.

UR 230 Technology, Public Policy, and Urban Society

LASC—Human Behavior and Social Processes; Writing Across the Curriculum

Examination of high-technology and its impact on urban society; privacy, ethics, intellectual, property rights, sense of community, and access to information and services.

Offered every year. 3 credits.
Urban Studies

UR 240 Introduction to Qualitative Research Methods for the Social Sciences
LASC—Human Behavior and Social Processes; Writing Across the Curriculum
This introductory course provides and overview of the research process, and introduces students to commonly used qualitative methods in the social sciences.
Offered every year. 3 credits.

UR 245 Introduction to Survey Research Method for Social Science
LASC—Human Behavior and Social Processes
This introductory course provides an overview of the research process and introduces students to survey research methodology.
Offered every year. 3 credits.

UR 250 Introduction to Urban Planning
LASC—Individual and Community Well-Being
An exploration of planning theory, dynamics, and practice, and how they form the modern urban planning agenda.
Offered every 2 years. 3 credits.

UR 290 Gender and the City
LASC—Global Perspectives; Human Behavior and Social Processes; Writing Across the Curriculum
Exploration of ways in which gender, both male and female, structures responses of individuals to urban life and spaces.
Offered every 2 years. 3 credits.

UR 301 Cities and Suburbs
Prerequisite: UR 101
Multidisciplinary study of city-suburban growth patterns and problems both of the past, and those that hamper metropolitan cooperation and affect the quality of life of both city and suburban residents and businesses.
Offered every 2 years. 3 credits.

UR 305 Group Conflict in the Urban Community
Prerequisite: UR 101
Study of conflict and its resolution in contemporary urban settings. Personal, small group, and societal strategies for conflict resolution will be explored.
Offered every 2 years. 3 credits.

UR 306 Interviewing and Counseling Techniques
Prerequisite: Consent of instructor
Investigation of skills and process of interviewing and counseling with emphasis upon theory and practice, participant exercises, and development of helping skills and effective counseling relationships.
Offered every 3 years. 3 credits.

UR 310 Power, Politics, and Decision-Making in Urban Communities
Prerequisite: UR 101 or permission of instructor
Exploration from multi-disciplinary approach of social power and its relation to decision-making in urban communities. Emphasis on theories of power, understanding research methodologies, and policy implications.
Offered every 3 years. 3 credits.

UR 311 Community Politics and Policies
LASC—Human Behavior and Social Processes
Prerequisite: UR 101 or permission of instructor
Political behavior and perceptions in cities and towns from a multidisciplinary perspective with emphasis on how policy is initiated, developed and implemented in various governmental forms.
Offered every 3 years. 3 credits.

UR 320 Human Needs and Social Policy
LASC—Individual and Community Well-Being
Analysis of human needs as they change over a life span; why needs go unmet, and the role of social policy in meeting needs.
Offered every year. 3 credits.
UR 321 Social Work in the Urban Society  
Prerequisite: UR 101  
Overview of approaches used by social work professionals in assessing and meeting needs, including casework, community organization and planning.  
Offered every 2 years. 3 credits.

UR 325 Social Casework in the Urban Setting  
Prerequisite: UR 101  
Introduction to various social work approaches—client-centered, task-centered, Gestalt, Carhuff and reality therapy; role playing and counseling simulations utilized.  
Offered every 2 years. 3 credits.

UR 330 Justice in the Urban Society  
Prerequisite: UR 101  
Theoretical perspectives on the mission of the criminal justice system and the daily operation of its sub-components.  
Offered every 3 years. 3 credits.

UR 331 Crime and the City  
LASC—Human Behavior and Social Processes  
Prerequisite: UR 101  
Investigation of crime in contemporary urban society and the social, legal, economic, and cultural strategies for dealing with crime and deviance.  
Offered every 2 years. 3 credits.

UR 340 Urban Housing Dilemma  
Prerequisite: UR 101  
Analysis of the factors that shape the nature, location, and supply of urban housing with special focus on federal, state and local policies.  
Offered every 3 years. 3 credits.

UR 341 Urban Health and Social Policy  
Prerequisite: UR 101  
Analysis of urban health care, with special emphasis on the role of social policy in ensuring health care for all, particularly children and elders.  
Offered every 2 years. 3 credits.

UR 344 A Society for All Ages: Intergenerational Community Service  
Exploration of the necessary role of community service in civic life with emphasis on harnessing the power of intergenerational programs to address social concerns.  
Offered every year. 3 credits.

UR 350 Urban Youth in American Society  
Prerequisite: UR 101  
Role and problems of youth in urban societies viewed from a variety of social science perspectives with utilization of contemporary music and literature.  
Offered every 2 years. 3 credits.

UR 351 Public Policy and Youth Services  
Prerequisite: UR 101  
Role of theory, attitudes, and public opinion in the formation of policies concerning delinquency with exploration of current practices and innovative strategies.  
Offered every 2 years. 3 credits.

UR 352 Policy Planning for an Aging Society  
Prerequisite: Consent of instructor  
Analysis of current social policies in regard to elders and exploration of ways in which policies need to be altered to meet growing elder needs.  
Offered every 3 years. 3 credits.
UR 353 Aging in a Global Society  
LASC—Global Perspectives; Diversity Across the Curriculum
Explores the ramifications of unrelenting Global Aging, focusing on the questions, what are old people for and the connections across generations.  
Offered every 2 years. 3 credits.

UR 360 Environmental Systems and Public Policy  
Prerequisite: UR 101 or permission of instructor
Examination of urban ecosystems, focusing on land uses designed to effectively utilize water, open space and other natural resources.  
Offered every 2 years. 3 credits.

UR 361 Public Policy and Environmental Issues  
Prerequisite: UR 101 or permission of instructor
Investigation of the factors that determine the formation of public policy on the environment with consideration of the roles played by state and federal regulatory agencies.  
Offered every 2 years. 3 credits.

UR 370 Leadership in Nonprofit and Public Organizations  
LASC—Human Behavior and Social Processes  
Prerequisite UR 101
Advanced leadership seminar for students interested in pursuing management careers in public and nonprofit organizations.  
Offered every 3 years

UR 380 Public Policy and Cultural Diversity  
LASC—Human Behavior and Social Processes; United States and Its Role in the World  
Prerequisite: UR 101
This course will examine contemporary policy issues and problems deriving from cultural diversity. These will include areas such as immigration, population, demographics, affirmative action, public assistance, integration, separatism, political correctness, gender equity, and the role of organized religion in contemporary politics.  
Offered every 2 years. 3 credits.

UR 401 Research Seminar in Urban Studies/Capstone  
Prerequisite: UR 101
Research skills for urban-based projects including techniques in gathering, analyzing, and reporting data and various forms of field research.  
Offered every year. 3 credits.

UR 410 Assigned Research in Urban Affairs  
Prerequisite: UR 101
Individual or small group directed research into selected problems and issues in urban affairs.  
Offered every 3 years. 3 credits.
UR 411 Assigned Readings in Urban Affairs
Prerequisite: UR 101
Directed readings for students interested in special topics related to their academic program of study.
Offered every 2 years. 3 credits.

UR 421 Selected Topics in Urban Studies
Prerequisite: UR 101
In-depth examination of topical issues challenging the intellectual and creative interests of advanced students in urban studies.
Offered every year. 3 credits.

UR 422 Selected Topics in Gerontology
Prerequisite: Consent of instructor
In-depth examination of topical issues in gerontology which afford the advanced student the opportunity to pursue gerontological research.
Offered every 2 years. 3 credits.

UR 430 Seminar in Current Urban Problems
Prerequisite: UR 101
Individual and group investigation and research of selected and current urban problems.
Offered every 2 years. 3 credits.

UR 432 Demographic Research Seminar
Prerequisite: UR 101
Small group or individual research using various sources in gathering, interpreting, reporting and projecting policy implications of demographic data.
Offered every 3 years. 3 credits.

UR 440 Practicum in Urban Studies
Prerequisite: UR 101
Directed experiential study for advanced students.
Offered every year. Variable credit.

UR 450 Internship in Urban Studies
Prerequisites: Completion of 21 credits in Urban Studies
Supervised and intensive semester-long experience in community agencies.
Offered every year. 3-12 credits.

UR 451 Internship Seminar
Prerequisites: Completion of 21 Urban Studies credits or permission of instructor
Exploration of the challenges that emerge as 25 students engage in the professional world (recommended to be taken in conjunction with UR 450 Internship in Urban Studies).
Offered every year. 1 credit.
The visual and performing arts hold an essential place in our society, promoting cultural and economic growth, and fostering creative expression, community experience, and entertainment in a wide variety of media. The VPA Major provides students with coursework in Art, Music, and Theatre, serving as a foundation for interdisciplinary work in the arts. Core courses will promote critical thinking in all three disciplines, and prepare students intellectually and creatively for work on their capstone/senior thesis projects. Students will choose a concentration in Art, Music, or Theatre, taking courses that will provide knowledge, techniques, and models of thinking designed to enhance the creative process. Studies will be applied to the production, performance, and critical study of artistic work.
Concentration in Art
The Art concentration offers a program in the creation of visual art augmented by studies in art history. Courses in design, drawing, painting, printmaking, sculpture, digital arts, and integrated media provide the technical skills and concepts that form the basis for expression in visual art. Existing within the interdisciplinary major, the Art concentration presents extensive involvement in studio art while encouraging creative thinking and artistic production that are informed by and sometimes created with the performing arts of music and theatre.

Concentration in Music
The Music concentration offers a program of study in performance skills, music theory, and music history. Students will develop strong musical literacy, as well as expertise in a particular instrument or voice. By a thorough study of performance skills, music theory, and music history, graduates will be equipped to work as professional musicians or enter graduate programs in various areas of music. While a solid grounding in traditional performance will be stressed, the interdisciplinary nature of the major will encourage activity with artists, actors, directors, poets, and those in other creative fields.

Concentration in Theatre
The Theatre concentration will provide a basis in theatre arts and technical skills, preparing students for graduate level study or entry level work in theatre and related fields. Students will study acting, design, stagecraft and directing, applying those skills to departmental and self-generated productions. A solid grounding in theatre arts will be emphasized, and students will be encouraged to collaborate with those in the visual arts and music, and to explore their own impulses and talents in diverse artistic disciplines.

Requirements for a Major
Minimum requirement for the major is completion of a three course (9 credit) Foundation curriculum, a three course (9 credit) Interdisciplinary Core, and 27 credits in one of three concentrations. Students will declare concentration in Art, Music, or Theatre.

Interdisciplinary Foundation Courses

Foundation in Art 3 credits
- AR 112 World Art Survey I
  or
- AR 100 Cross Media Studio

Foundation in Music 3 credits
- MU 100 Music Fundamentals
  or
- MU 101 Fundamentals of Music and Aural Skills for music concentrators
  or
- MU 102 Applied Music
  or
- MU 115 Music Appreciation

Foundation in Theatre 3 credits
- TH191 Introduction to Theatre

Interdisciplinary Core Courses

- VP 200 Critical Thinking in the Arts 3 credits
- VP 300 Interdisciplinary Arts Seminar 3 credits
- VP 400 Arts Capstone/ Senior Thesis 3 credits

Foundation and Core Total 18 credits
**Visual and Performing Arts**

**Requirements for the Concentration in Art**

In addition to the three Foundation courses and three Interdisciplinary Core courses students will complete nine courses (27 credits) including:

- AR 100 Cross Media Studio  3 credits
  or
- AR 112 World Art Survey I  3 credits
- AR 140 Drawing I  3 credits
- AR 117 Visual Design: 2-Dimensions  3 credits
- AR 122 Visual Design: 3-Dimensions  3 credits
- AR 113 World Art Survey II  3 credits
- AR 225 Art Since Mid-Century  3 credits
- Additional AR courses*  9 credits

**Concentration Total**  27 credits

**Major Total**  45 credits

**Requirements for the Concentration in Music**

In addition to the three Foundation courses and three Interdisciplinary Core courses students will complete 18 credits of courses, lessons, and ensemble (or 17 credits if Class Piano is taken) including:

- MU 101 Fundamentals of Music & Aural Skills  3 credits
- MU 205 Harmony I  3 credits
- MU 281 Music History I  3 credits
- MU 282 Music History II  3 credits
- MU 102-202-302-402  4 Private lessons  4 credits
  *(four semesters @ 1 credit each)*
- Ensemble  2 credits
  *(credits earned after completion of four semesters of ensemble participation)*
- MU 190 Class piano (unless proficient)  1 credit
- Additional MU courses*  8 or 9 credits

Or, if MU101 Fundamentals of Music & Aural Skills is taken as Interdisciplinary Foundation

- MU 205 Harmony I  3 credits
- MU 210 Harmony II  3 credits
- MU 281 Music History I  3 credits
- MU 282 Music History II  3 credits
- MU 102-202-302-402  4 Private lessons  4 credits
  *(four semesters @ 1 credit each)*
- Ensemble  2 credits
  *(credits earned after completion of four semesters of ensemble participation)*
- MU 190 Class Piano (unless proficient)  1 credit
- Additional MU courses*  8 or 9 credits

**Concentration Total**  27 credits

**Major Total**  45 credits
Requirements for the Concentration in Theatre

In addition to the three Foundation courses and three Interdisciplinary Core courses students will complete nine courses (27 credits) including:

- TH 275 Introduction to Stagecraft 3 credits
- TH 245 Acting I 3 credits
- TH 355 Theatre Practicum 3 credits
  *(3 at one credit each)*

and one of the following:

- TH 360 Scene Design for Theatre 3 credits
- TH 370 Costume Design for Theatre 3 credits
- TH 390 Lighting Design for Theatre 3 credits

Additional TH courses* 15 credits

**Concentration Total** 27 credits

**Major Total** 45 credits

*With advisement, electives within a concentration may be selected from the other disciplines. For description of required and elective courses see entries in individual disciplines of Art, Music, and Theatre.

Requirements for Double Major in Elementary Education

Students who double major in elementary education may concentrate in Art, Music, Theatre or Visual and Performing Arts. They will fulfill the Interdisciplinary Foundation and Core requirements plus requirements in their concentration for a total of 36 credits.

**Emphasis in Art for Students who double major in Elementary Education**

- Interdisciplinary Foundation and Core requirements 18 credits
  
  **plus**
  
  - AR 112 or 113 or 225 World Art Survey I 3 credits
  
  **or**
  
  - World Art Survey II 3 credits
  
  **or**
  
  - Art Since Mid-Century 3 credits
  
  - AR 140 Drawing I 3 credits
  
  - AR 117 Visual Design: 2-D 3 credits
  
  - AR 122 Visual Design: 3-D 3 credits
  
  - AR 260 Visual Arts in the Schools 3 credits
  
  - Electives in Art 3 credits
  
  **Concentration Total** 18 Credits

**Major Total** 36 Credits
Emphasis in Music for Students who double major in Elementary Education

Interdisciplinary Foundation and Core requirements 18 credits

plus
MU 101 Fundamentals of Music and Aural Skills (unless taken for foundation) 3 credits
or
MU 205 Harmony I 3 credits
MU 115 Music Appreciation (unless taken for Foundation) 3 credits
or
MU 281 Music History I 3 credits
or
MU 282 Music History II 3 credits
MU 190 Class Piano and MU 195 Class Guitar and participation in 2 Ensembles at .5 credits each 3 credits
MU 237 Music in Elementary School 3 credits
MU 102/103, Private Lessons (unless MU 190 and MU 195 taken) and Participation in 2 Ensembles 3 credits
Electives in Music 3 credits

Concentration Total 18 Credits
Major Total 36 Credits

Emphasis in Theatre for Students who double major in Elementary Education

TH 245 Acting I 3 credits
TH 275 Introduction to Stagecraft 3 credits
TH 290 Theatre for Young Audiences 3 credits
TH 292 Creative Dramatics 3 credits
TH 321 Rehearsal and Performance 3 credits
Electives in Theatre 6 credits

Concentration Total 18 Credits
Major Total 36 Credits

Emphasis in Visual and Performing Arts for Students who double major in Elementary Education

AR 260 Visual Arts in the Schools 3 credits
MU 237 Music in Elementary School 3 credits
TH 290 Theatre for Young Audiences 3 credits
TH 292 Creative Dramatics 3 credits
Electives in Art, Music, Theatre, and Visual and Performing Arts 6 credits

Concentration Total 18 Credits
Major Total 36 Credits
Sample Timetable for Completion of Degree: Visual and Performing Arts, Interdisciplinary

### YEAR ONE

#### Semester One

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
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<tr>
<td>LASC</td>
<td>First-Year Seminar</td>
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<tr>
<td>EN 101</td>
<td>English Composition I</td>
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<td>AR</td>
<td>Foundation Choice, Art</td>
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<td>TH-191</td>
<td>Introduction to Theatre</td>
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**Semester Subtotal** 15

#### Semester Two

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<td>Foundation Choice, Music</td>
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<td>LASC</td>
<td>Creative Arts (CA)</td>
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<td>LASC</td>
<td>Thought, Language and Culture (TLC)</td>
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**Semester Subtotal** 15

### YEAR TWO

#### Semester Three

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<td>Critical Thinking in the Arts</td>
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<td>LASC</td>
<td>Natural Systems and Processes (NSP)</td>
<td>4</td>
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<tr>
<td>LASC</td>
<td>The United States and Its Role in the World (USW)</td>
<td>3</td>
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<tr>
<td>LASC</td>
<td>Quantitative Reasoning (QR)</td>
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**Semester Subtotal** 16

#### Semester Four

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<td>Concentration Requirement</td>
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<td>LASC</td>
<td>Global Perspectives (GP)</td>
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<td>LASC</td>
<td>Human Behavior and Social Processes (HBS)</td>
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**Semester Subtotal** 15
### YEAR THREE

#### Semester Five

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<tr>
<td>LASC</td>
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Semester Subtotal 15

#### Semester Six

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<td>Concentration Elective</td>
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<td>LASC</td>
<td>Individual and Community Well-Being (ICW)</td>
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<tr>
<td>VP 300</td>
<td>Interdisciplinary Arts Seminar</td>
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Semester Subtotal 15

### YEAR FOUR

#### Semester Seven

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<td>Creative Arts (CA)</td>
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<tr>
<td>LASC</td>
<td>Thought Language and Culture (TLC)</td>
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<tr>
<td>LASC</td>
<td>Human Behavior and Social Processes (HBS)</td>
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<td>Natural Systems and Processes (NSP)</td>
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Semester Subtotal 15

#### Semester Eight

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<td>LASC/ VP 400</td>
<td>Arts Capstone/Thesis</td>
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Semester Subtotal 15

Once LASC requirements are satisfied, students may select general requirements. Students are required to meet with their department advisor to review their upcoming semester academic choices. A minimum of 120 credits is required for graduation.
Visual and Performing Arts Courses

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

VP 200 Critical Thinking in the Arts
LASC—Creative Arts; Thought, Language and Culture
The experience of art, music, and theatre to develop individual critical thinking in the similarities and differences among the arts.
Offered every year. 3 credits

VP 210 Contemporary Dance Styles I
LASC—Creative Arts
The study and movement of dance vocabularies in one or more contemporary and modern styles.
Offered every year. 3 credits

VP 300 Interdisciplinary Arts Seminar
Prerequisite: VP 200
Examines examples of contemporary modes of interdisciplinary works of music, theatre, and visual art with the goal of developing an individual, creative aesthetic.
Offered every year. 3 credits

VP 310 Contemporary Dance Styles II
LASC—Creative Arts
Prerequisite: VP 210
The study and movement of contemporary dance vocabularies at the intermediate to advanced level.
Offered every year. 3 credits.

VP 375 Special Topics
A course that varies according to specific student and faculty interest.
Offered as needed. 3 credits

VP 400 Capstone/Senior Thesis
Prerequisites: VP 200, VP 300
Students research, design, and create works of art, music, and theatre for public presentation and evaluation by a faculty board of review.
Offer every year. 3 credits

VP 405 Independent Study in the Arts
Prerequisite: Permission of instructor.
An opportunity for students to examine topics not ordinarily covered in other arts courses.
Offered every year. 1-3 credits

VP 435 Internship in the Arts
Prerequisites: 2 relevant arts courses
Advanced students gain practical experience in a working arts environment.
Offered every year. 3-12 credits.
Faculty

Guillermina Elissondo, Professor (1999)
B.A., Universidad Católica de Mar del Plata, Argentina; M.A., Michigan State University; Ph.D., University of North Carolina – Greensboro

Judith Jeon-Chapman, Professor (1993)
B.A., College of St. Benedict; M.A., Ph.D., University of Washington

Jeanne Laplatney, Assistant Professor, (2013)
B.A., University of North Carolina; M.A., Ph.D., University of Virginia

Juan Orbe, Professor (1996)
Universidad Nacional de La Plata, Argentina; M.A., Ph.D., Michigan State University

Ana Pérez-Manrique, Associate Professor (2006)
B.A., Universidad de Málaga, Spain; M.A., University of South Carolina; Ph.D., Florida State University

Dennis Quinn, Professor (1996), Acting Department Chair
B.A., Worcester State College; M.A., Assumption College; Ph.D., University of Massachusetts

Courses

For information on the Liberal Arts and Sciences Curriculum (LASC), see page 36.

WL 101 Beginning World Language I
LASC—Global Perspectives
Beginning level I instruction in world languages that are not otherwise offered by the Department of World Languages.
3 credits

WL 102 Beginning World Language II
LASC—Global Perspectives
Beginning level II instruction in world languages that are not otherwise offered by the Department of World Languages.
3 credits

WL 210 Intermediate World Language I
Intermediate level I instruction in world languages that are not otherwise offered by the Department of World Languages.
3 credits

WL 211 Intermediate World Language II
Intermediate level II instruction in world languages that are not otherwise offered by the Department of World Languages.
3 credits
Professors Emeriti

Helen G. Agbay, Spanish 1974
Dr. Joshua U. Aisiku, Education 2009
Francisco Alcala, Spanish 1996
Dr. M. June Allard, Psychology 2005
Francis I. Amory, Urban Studies 2009
Dr. Eleanor Ashton, Psychology 2004
Charles D. Avedikian, Mathematics and Computer Science 1990
James R. Ayer, Languages and Literature 2000
Vera M. (Dowden) Baldwin, Education 1974
Nora M. Barraford, English 1984
Dr. Elizabeth T. Binstock, Education 2002
Edwin A. Boger, Biology 2000
Arnold J. Bornfriend, Business Administration and Economics 2000
Dr. Nancy Brewer, Health Science 2012
Francis L. Brooker, Sociology 2012
Dr. Anne M. Brown, Nursing 2002
Josefina S. Bunuan, Education 1999
Michael A. Burke, Health Science 1998
Dr. Philip J. Burns, English 2013
William Byers, Communications 2002
Dr. Jean A. Campaniello, Psychology 2002
Jacqueline G. Casale, Art 1991
Jennie M. Celona, French 1996
Louis J. Celona, Music 1992
Harold L. Chapman, Physics 1988
Carol Chauvin-Fortier, Biology 1993
Yvonne Chen, Health Sciences 2001
Kee Il Choi, Business Administration and Economics 1992
Anna B. Cohen, Communication Disorders 1999
Phyllis A. Crowley, English 1996
Dr. Joyce Cummings, Psychology 2002
Philip S. Dalton, History and Political Science 2000
Aldona Daly-Boxshus, Psychology 1995
Krishna DasGupta, Library 2011
Paul Davis, Media, Arts and Philosophy 1992
Vincent R. DeBenedictis, Foreign Languages 1990
Clement S. Delaney, History and Political Science 2008
Barbara A. Desrosiers, Psychology 1998
Daniel E. Dick, Natural and Earth Sciences 1989
John R. Dowling, Education 1998
Helen B. Duquette, Physical Education 1992
Francis T. Dyson, Physical Education 1993
Alfred F. Eddy, English 1990
Robert P. Ellis, English 1995
Dr. Leonard F. Farrey, Business Administration and Economics 2002
Dr. Arthur Ferguson, Chemistry 2006
Dr. Vivian C. Fox, History and Political Science 2004
Florence Fraumeni, Education 1985
Linda Fuller, Communications 2000
Yvonne Gallant-Martel, French 1977
Dr. Geoffrey J. Garrett, Physical and Earth Science 2004
Professors Emeriti

Dr. C. Kenneth Gibbs, English 2010
James E. Girouard, Physical Education 1985
Bernard Goldsmith, History and Political Science 1995
Merrill H. Goldwyn, Languages and Literature 1998
Dr. John Goodchild, Chemistry 2013
Dr. Linda S. Gordon, Languages and Literature 2003
Loren N. Gould, Natural and Earth Sciences 1993
Dr. Terry E. Graham, Biology 2003
Emmet J. Grandone, Languages and Literature 1998
Ruth E. Greenslit, Library 1989
Sandra A. Hall, Nursing 2002
Nancy E. Harris, Education 1999
Dr. Robert J. Hartwig, Business Administration and Economics 2004
Mary T. Hayes, Education 1974
Bruce Henry, Mathematics and Computer Science 2001
Mary Ellen Herx, English 1989
Dr. Nancy Hicks, Physical and Earth Science 2005
Dr. W. Mack Hill, Mathematics 2004
David W. Hilton, Computer Science 1999
Dr. Donald D. Hochstetler, Library 2012
Paul A. Holle, Biology 1989
Richard G. Hunt, Physical and Earth Science 2007
Ronald W. Hurd, Physical and Earth Science 2004
Marion J. Jennings, Education 1978
Alfred C. Johnson, Mathematics 2004
Jean E. Johnson, English 1990
Nancy A. Johnson, Education 1995
Dr. Joline N. Jones-Matheson, Psychology 2006
Dr. Donna M. Joss, Occupational Therapy 2004
Donald L. Joyal, Business Administration and Economics 2008
Dr. Joan K. Juralewicz, Education 2002
Richard S. Juralewicz, Business Administration and Economics 2001
Robert G. Kane, History 1999
George T. Kelley, Economics 1997
Robert F. Kelley, Physics 1988
Baheej B. Khleif, Sociology 1994
Margaret A. Kittredge, Spanish 1995
Sandra Kocher, Art 1992
Dr. Ellen V. Kosmer, Visual and Performing Arts 2004
Professor Marshall J. Kotzen, Mathematics 2013
Jerome L. Langer, Business Administration 1982
Edward H. Leonard, Physics 1984
Robert E. Lingner, Physical and Earth Sciences 2005
Mary Lou Lovering, Nursing 2000
Carol E. Lysaght, Communication Disorders 1996
Dr. Gordon S. Matheson, Psychology 2004
Gary W. McEachern, Business Administration and Economics 1998
Bernard L. McGough, Media 1994
Robert F. McGraw, History 1991
Pamela McKay, Senior Librarian, Library 2013
John F. McLaughlin, Communication Disorders 1996
Professor, Catherine McNeil, Occupational Therapy 2013
Dr. Mary Ellen Meegan, Education 2009
Dr. Melvin Merken, Chemistry 2010
Michel D. Merle, Visual and Performing Arts 2005
A. Gibbs Mitchell, History 1996
John P. Mockler, Physical Education 1992
Dennis P. Moore, Business Administration and Economics 2012
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B.S., Worcester State University

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Directions to the Campus

By Auto

From Massachusetts Turnpike (I-90):
Take Exit 10 (Auburn) to Rt. 290 East. (see from 290 East)

From Rt. 495:
Take Exit 25 to Rt. 290 West. (see from 290 West)

From Rt. 9 West:
Follow Rt. 9 West into Worcester. (see from Highland Street)

From Rt. 146 North:
Take Rt. 146 North to Rt. 290 East. (see from 290 East)

From Rt. 190 South:
Take Rt. 290 West. (see from 290 West)

From Rt. 290 West:
Take Exit 18 (Rt. 9 West); turn right off exit ramp and stay in center lane, following directions for Rt. 9 West. Turn right onto Rt. 9 West, also known as Highland Street. (see from Highland Street)

From Rt. 290 East:
Take Exit 17 (Rt. 9 West); turn left onto Rt. 9 West which will turn into Highland Street at the bottom of the hill. Proceed up the hill onto Highland Street. (see from Highland Street)

From Highland Street:
While on Highland Street, stay in the right lane. Stay on Highland Street for 1.5 miles. (You’ll pass Elm Park and Doherty High School on the left.) At the rotary, take the third right onto June Street. At the second light, turn right onto May Street. The main entrance to the University will be three blocks ahead on your left.

For more information on public transportation, airport and carpooling, visit www.worcester.edu/directions